



SERIES #56 PROPRIETARY TRADER / LIMITED REPRESENTATIVE STUDY PROGRAM

ABOUT THE SERIES #56 EXAMINATION

The Series #56 Proprietary Trader Examination, created by the options exchanges, is required for any individual that is a proprietary trader in options and equities. The exam is weighted heavily towards options trading rules, but also includes equity trading rules. This exam is not recognized by FINRA, which has its own Series #55 OTC Equity Trader Exam that has no options coverage.

The examination is administered by computer on weekdays through the PROCTOR System at Prometric Learning Centers or Pearson Vue Centers. The #56 examination consists of 100 multiple choice questions to be completed within 2 1/2 hours. (The exam also includes 5 trial questions per test, which are not included in the grading.) In the study outline, the CBOE did not publish a passing grade. Most exams have a 70% passing score, but some exams require higher scores. When the definitive passing score is determined, we will include it here.

ABOUT THIS STUDY PROGRAM

The **PassPerfect** Series #56 Study Program is designed to cover all items that are tested on the examination while making the most efficient use of a candidate's time. The preparer of this material, Edward Fleur, has spent over 25 years developing and writing training materials for all securities examinations and has personally trained thousands of individuals in class for the securities licensing examinations. His in-depth knowledge of the material is presented in this course in an organized, concise, and clear format.

The course is divided into 5 chapters. Each chapter and the approximate number of questions included on the Series #56 test for that chapter are:

EQUITY SECURITIES.....	5
OPTIONS STRATEGIES.....	25
TRADING MARKETS.....	15
TRADING PRACTICES.....	40
TRADING SYSTEMS.....	15
TOTAL NUMBER OF QUESTIONS	100

(If you compare our breakdown to the study outline for this exam, they will not match. We divide our course material into a learning order that is different than the outline, but all content areas in the outline are covered.)

Each chapter is followed by a chapter examination with detailed answers and explanations. Separate from the course material is a "Final Examinations" segment containing 4 practice tests.

HOW TO USE THIS STUDY PROGRAM

To prepare for the examination, each chapter must be studied thoroughly, and each chapter examination must be completed within the text. The examinations are very important because they reinforce your knowledge of the material and highlight any weak areas that you might have. Before proceeding to the next chapter, review those areas where questions were answered incorrectly.

Certain areas of the examination are weighted more heavily than others and should be emphasized when studying. The most important chapters by test weight are: Chapter 2: Options Strategies and Chapter 4: Trading Practices These 2 chapters comprise 65% of the exam.

The 4 Final Exams are weighted similarly to the actual exam. A grade of 75% on each of these should be achieved before attempting to take the real test.

The total study time needed to complete the course is about 32 hours for the text and 12 hours for the Final Examinations. Since a person can only study effectively for about 4 hours a day, about 11 days of study are needed to complete the material.

OTHER COURSES

PassPerfect training materials are available for other examinations that you may need in the future. The current list includes:

Registered Representative Programs

- # 3 - Commodities / Futures Representative
- # 6 - Investment Company / Variable Annuity Representative
- # 7 - General Securities Representative
- # 11 - Sales Assistant / Order Processor
- # 17 - General Securities Representative for An Individual Holding A British Securities License
- # 55 - OTC Equity Trader
- # 56 - Proprietary Options / Equity Trader
- # 62 - Corporate Securities Representative
- # 63 - Uniform State Law Agent Examination
- # 65 - Registered State Investment Adviser
- # 66 - Combined State Agent and Investment Adviser
- # 82 - Private Securities Offerings Representative



Principal Programs

- # 9 / 1 0 - General Sales Supervisor
- # 1 4 - Compliance Officer
- # 2 4 - General Securities Principal
- # 2 6 - Investment Companies / Variable Annuities Principal
- # 2 7 - Financial and Operations Principal
- # 2 8 - Limited Financial and Operations Principal
- # 4 - Registered Options Principal
- # 5 1 - Municipal Fund Securities Limited Principal
- # 5 3 - Municipal Securities Principal

In addition, many of our programs are available in various computer-based formats, including virtual classroom training. For information about our materials or classes: For information about our products or classes, call toll free:

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COMMENTS AND QUESTIONS

We welcome your comments on the material and any recommendations you may have for improving this product. Our address is:

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EQUITIES

TADS





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SECTION 1: COMMON STOCK

1a. ISSUANCE OF COMMON STOCK

Common Is Equity

Issued By Regular Corporations And Investment Companies

Authorized Stock

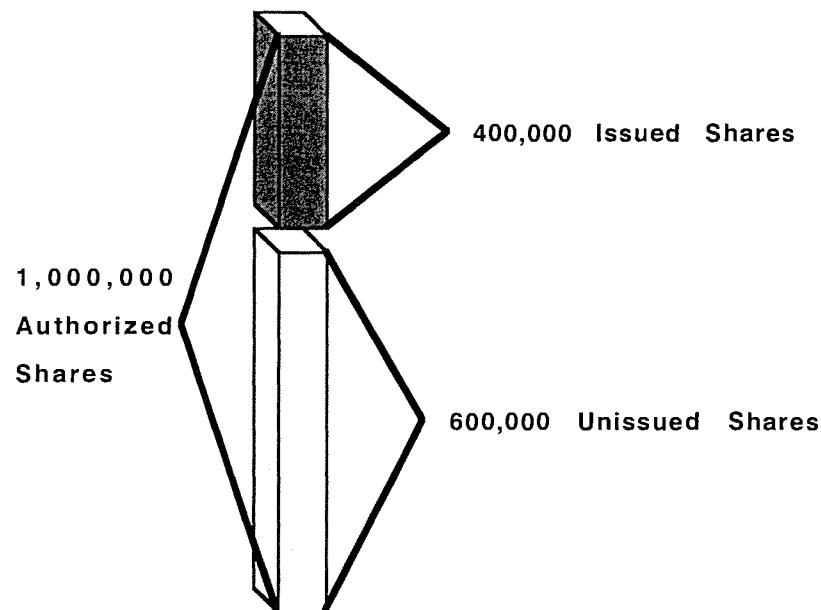
Arbitrary Low Par Value

Issued Stock

A common stockholder is an "owner" of a corporation. Owners are considered to have an equity position in the corporate structure. Therefore, common stock is an "equity" security. Aside from regular corporations, issuers of common stock include investment companies, such as mutual funds and real estate investment trusts.

When a corporation is formed, its corporate charter authorizes that a fixed number of common shares may be issued. This is called "authorized" stock. The stock is assigned an arbitrary par value, which is typically set quite low. For example, common stock might be assigned a par value of 10 cents a share or \$1 per share. Sometimes, par value is even set at zero, which is termed no par common stock. Par value for common has no bearing on the market price of the stock. Market value is based on investor expectations about the future of the company. The reason why par value is set so low is that many states tax corporations based on the par value of their shares.

Assume that a corporation is authorized under its charter to sell 1,000,000 common shares with a \$1 par value. The corporation does not "issue" all of its authorized shares. It sells only part of the authorized amount to the public so that it has the ability to sell more shares at a later date without having to amend its corporate charter. If this corporation issues 400,000 shares, it still has 600,000 shares available for issuance at a later date. This looks as follows:



Outstanding Shares

This corporation now has 400,000 shares outstanding in the hands of the public. These are the shares that trade in the market. After issuance, the corporation may "buy back" shares that are trading in the market. Repurchased shares are called "Treasury Stock" and are no longer outstanding in the hands of the public. Corporations will repurchase shares because:

Treasury Stock - Repurchased Shares

The market price is low and the corporation feels that the stock is a "good buy" at that price;

As Treasury stock is repurchased, the number of outstanding shares is reduced. Because earnings per share is based on outstanding shares, with fewer shares outstanding, earnings per share will rise;

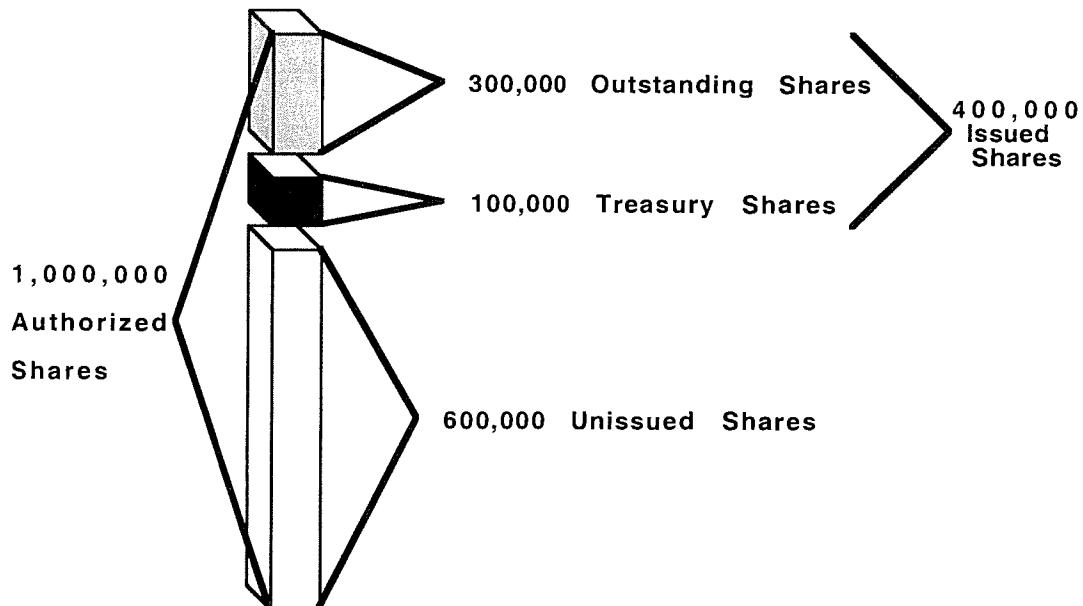
The shares can be used to fund pension plan and stock option plan obligations;

The shares can be used at a later date as "payment" for an acquisition or merger.

Treasury Stock Does Not Vote Or Receive Dividends

Treasury shares do not have the usual privileges accorded to outstanding common shares. For example, Treasury shares cannot vote and do not receive dividends. (These rights of a common shareholder are covered in Section 1c.)

Assume that our sample corporation has repurchased 100,000 common shares for its Treasury. The common stock structure of the corporation is:





1b. SHAREHOLDER RECORDKEEPING

Registered In Owner's Name

The corporation must keep detailed records of the number of shares outstanding and the names and addresses of the owners of the shares. These shares are "registered" in the name of the owner. All equity securities are registered, so that the corporation can send dividends and other mail to the proper owners.

Registrar

The corporation hires an outside firm (usually a bank or trust company) to act as registrar. The registrar maintains a record of all shareholder names and addresses and is given the responsibility to make sure that the company does not issue more shares than authorized under its charter.

Transfer Agent

The corporation also hires an outside firm, a bank or trust company, to act as transfer agent. Every day, as trades of the stock settle (meaning payment takes place), a report is made to the transfer agent. The transfer agent then cancels old shares which have been sold and issues new shares in the name of new buyers of the stock. The transfer agent keeps an accurate record of the shareholders updated daily. Because it maintains the shareholders' names and addresses, the transfer agent usually handles the mailings to shareholders (e.g., dividends, corporate reports and voting materials).

Record Book Of Stockholders

The registrar acts as a watchdog over the transfer agent. Transfer agents can, and have, made mistakes, such as canceling 100 shares and transferring those shares to the new owner as 1000 shares. The registrar is supposed to catch these mistakes and assure correction.

Book-Entry Certificate

Instead of physically issuing and canceling certificates, a newer method of recording owners is through "book-entry" certificates. When securities are issued "book-entry," no certificates are issued. Instead, the ownership record is simply kept by the transfer agent and by the clearing corporation that settles trades.

1c. RIGHTS OF A COMMON SHAREHOLDER

Common shareholders enjoy limited liability as owners of the company (the most they can lose is their investment) and have a number of rights. These rights are:

Right To Vote

Right to Vote: Common stockholders vote at the company's annual meeting. They vote for the Board of Directors (most corporate charters have half the Board come up for election each year) and on matters that affect the shareholder's "ownership interest."

For example, the common shareholders must approve the issuance of convertible bonds, since these securities can be converted into more common shares. If conversion occurs, with more shares outstanding, each existing shareholder's "ownership interest" will be diluted. Shareholders do not vote on management or dividend decisions - these are made by the Board.

Items That Require Shareholder Vote

Voting rules may vary, to some degree, from state to state. Generally, shareholder approval is required if the corporation wishes to:

- Declare a stock split;
- Declare a reverse stock split;
- Issue convertible bonds or preferred stock;
- Issue stock options to officers on a preferential basis.

The logic for requiring shareholder approval for these items is simple. The issuance of convertible securities is highly "dilutive," resulting in the issuance of many more common shares, reducing each existing shareholder's ownership interest. Issuing "preferential" stock options to officers benefits a select group of individuals, and could be viewed as "self-dealing" by these persons - hence shareholder approval is required. Stock splits and reverse stock splits have a major impact on the number of shares outstanding and the resultant share price, so shareholder approval is required.

Items That Do Not Require Voting

Shareholder approval is **not** required if the corporation wishes to:

- Declare a cash dividend;
- Declare a stock dividend;
- Declare a rights distribution (discussed later in this section);
- Repurchase shares for its Treasury.

Dividend decisions are made at the sole discretion of the Board of Directors - no shareholder vote is required. This is true for both cash dividends and stock dividends (defined as any stock distribution that is less than 25% of the outstanding shares). Rights distributions preserve a shareholder's ownership interest, so no voting is required. Finally, repurchase of Treasury shares results in fewer common shares outstanding, increasing each shareholder's percentage ownership, so no voting is required.

1 Vote Per Share

Each shareholder gets 1 vote per share. An owner with 100 shares gets 100 votes on each item being voted on that year. The corporation will use one of two voting methods - either statutory voting or cumulative voting. Assume that



6 directorships are open (6 voting items), with a choice of one of three persons for each directorship. Voting for a 100 share owner works as follows:

Statutory Voting

Statutory Voting: 100 votes maximum are allowed for **each** directorship. In total, 600 votes are cast.

Cumulative Voting

Cumulative Voting: 6 directorships x 100 votes = 600 votes which may be cast in **any manner**. For example, 300 could be cast for one director, 200 for a second, 100 for a third, with no votes for the remaining three directors.

Most corporations use statutory voting. Cumulative voting is considered to be an advantage for the "small investor" since he or she can vote disproportionately and can achieve more influence in the election of "selected" directors.

If a shareholder does not attend the annual meeting, he or she cannot vote. For this reason, many companies are infamous for having the meetings in places like East Gulch, Texas. If the only people who show up at the meeting are management (who usually hold large positions) and only they vote, they get to do whatever they want with the company.

Proxies - Completed By Shareholders Who Do Not Attend Annual Meeting

To stop this, shareholders not attending the meeting are required to receive voting cards from the company. By filling out these cards and mailing them to the company, at the annual meeting these votes will be counted. These cards are called "proxies" since a person at the annual meeting is acting as the shareholder's "proxy" (stand-in) and voting for them. Many shareholders receiving proxies do not respond. If this happens, management controls the voting at the annual meeting.

Common Stock With Different Classes

Some companies issue different classes of stock with different voting rights. For example, a family-owned company may go public by issuing Class A stock for family members and Class B stock for the public. Class A stock will have all voting privileges or "concentrated" privileges. Class B stock does not vote or has limited voting ability.

Right To Inspect Books And Records

Right To Inspect Books and Records: Common shareholders may inspect the books and records of a company. In practice, this doesn't happen since audited financial statements are required to be sent to shareholders annually by the Securities and Exchange Commission under the Securities Act of 1934.

Right To Transfer Ownership

Right To Transfer Ownership: Common shareholders have the right to sell their shares to anyone else without restriction. The shares are "negotiable" securities. They

Negotiable

can be traded. Certain securities are "non-negotiable." They cannot be traded. As an example, mutual fund shares are non-negotiable. Instead, they are redeemed with the issuer at a calculated value.

Preemptive Right

Preemptive Right: If the corporation wishes to issue more shares, common stockholders have the right to buy these shares before anyone else. Thus, they can maintain their proportionate ownership interest in the company. The offer of these shares to existing shareholders is called a "rights offering" and is discussed in Section 1e.

Right To Corporate Distributions

Right To Corporate Distributions: The Board of Directors decides if the corporation will pay a cash dividend, a stock dividend, or if it will "split" its stock (usually done when the market price of the stock rises too high for an average investor to buy the shares; by splitting the stock, the number of shares is increased and the price reduced, making the issue more accessible to investors). The common shareholder has the right to his pro-rata share of these distributions. Most corporations declare and pay common dividends quarterly.

Right To Corporate Assets Upon Dissolution

Right To Corporate Assets Upon Dissolution: If the corporation goes bankrupt or is dissolved, the common stockholder is paid **last** (if any assets remain).

1d. CORPORATE DISTRIBUTION PROCEDURES

When a corporation decides to make a distribution (for example, a cash dividend) or if the corporation is going to issue "preemptive rights" to its existing shareholders, it makes an announcement which is published in such newspapers as The Wall Street Journal. Below is a sample:

Monday, March 31, 200x

The Board of Directors of Acme Manufacturing Company today declares a dividend of 50 cents per share to stockholders of record on April 15, 200x. The dividend will be paid on April 30th, 200x.

The Board of Directors has set the:

Declaration Date

Declaration Date: The date the dividend is declared;

Record Date

Record Date: The date on which the corporation takes the shareholder names and addresses from the transfer agent records for mailing the dividend;

Payable Date

Payable Date: The date the dividend checks will be mailed by the corporation's transfer agent.



These dates show on the calendar as:

April 200X							
S	M	T	W	T	F	S	
Declaration Date	3 1	1	2	3	4	5	
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30			
				Record Date			Payable Date

Regular Way Settlement - 3 Business Days

Must Settle By Record Date To Receive Dividend

If Trade Settles After Record Date, Do Not Receive Dividend

Once the distribution is announced, the exchange where the stock trades has some work to do. To be an owner of record for the distribution, a customer must have paid for the stock by the close of business on the 15th (the record date). If the trade settles on the record date or before, the buyer will be on record as of the evening of the 15th and will be mailed the dividend.

Regular way settlement occurs 3 business days after trade date, so that the last day to buy and get the dividend is 3 business days prior to the record date. If the stock is bought after this date, the trade will settle after the record date and no dividend is received.

April 200X							
S	M	T	W	T	F	S	
Last Day To Buy Stock Regular Way And Receive Dividend	3 1	1	2	3	4	5	
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30			
				Record Date			

Cum-Dividend

If a customer buys on the 10th or before in a regular way trade, he or she will get the dividend. The stock is trading with the dividend - "cum-dividend."

Ex-Dividend

If the customer buys on the 11th or later, he does not get the dividend - the stock is now trading "ex-dividend."

April 200X							
S	M	T	W	T	F	S	
Last Day	3 1	1	2	3	4	5	
To Buy Stock	6	7	8	9	10	11	12
Regular Way			15	16	17	18	19
And Receive	13	14					
Dividend	20	21	22	23	24	25	26
	27	28	29	30			
Record Date							
First Day							
Stock Trades							
Without							
Dividend							

If a customer buys on the 9th, the trade will settle on the 14th, regular way, and the customer will get the dividend. If the customer buys on the 10th, the trade will settle on the 15th, and since the record book list is taken that night, the customer will get the dividend. If the customer buys on the 11th, the trade will settle on the 16th, and the customer will not be on the record book for the dividend, since the list was taken the previous night.

On Ex-Date The Exchange Reduces Price Of Stock

As of April 11th, any purchaser in a regular way trade does not get the dividend. The exchange sets this date as the "ex-dividend" date and reduces the price of the stock by the amount of the distribution when the stock opens for trading, since purchasers no longer qualify for the payment.

April 200X							
S	M	T	W	T	F	S	
Last Day	3 1	1	2	3	4	5	
Stock Trades	6	7	8	9	10	11	12
Cum-Dividend			15	16	17	18	19
	13	14					
	20	21	22	23	24	25	26
	27	28	29	30			
Record Date							
Ex-Date							

Ex-Date For Cash Dividends Is 2 Business Days Prior To Record Date

The "ex-date" is set by the exchange as 2 business days prior to the record date. (Remember, if one buys the stock 3 business days prior to the record date, the trade will settle on the record date and that person will get the distribution.)



Assume that Acme stock was trading at \$20 on the 10th. As of the 11th (the "ex"- date), the stock will open for trading at a price reduced by the \$.50 dividend, so it opens at \$19.50. Reduction on ex-date is done for a very simple reason. It stops traders from making windfall profits. If there was no reduction, a day trader could buy the stock on the 10th (getting on the record book for the 15th) and then sell on the 11th (going off the record book on the 16th) and be on the record book for the one day necessary to get a \$.50 dividend check. If there is no reduction, he could buy at \$20 and then sell at \$20 the next day and get a \$.50 check for 1 day's investment.

With the reduction, he buys at \$20 and sells at \$19.50, but receives the \$.50 dividend, so the end result is a "wash."

Ex-Dates For Cash Dividends, Stock Dividends And Splits, And Rights Offerings

Ex-dates (adjustment dates) are set not only for cash dividends, but also for stock dividends, stock splits, and rights offerings (discussed in the next section). For example, a corporation is splitting its stock 2 for 1. Just prior to the ex-date, the stock is trading at 44. As of the morning of the ex-date, the exchange will open the stock at 22 (\$44 / 2).

As another example, a corporation declares a 20% stock dividend. Just prior to the ex-date, the stock is trading at \$48. As of the ex-date, the exchange will open the stock at \$40 (\$48 / 1.20).

1e. RIGHTS DISTRIBUTIONS

We know that shareholders have the "preemptive" right to maintain proportionate ownership in the company. If a company wants to issue new shares, it gives its existing shareholders "first chance" on the issue.

Existing Owners Can Subscribe At A Lower Price

The existing shareholders are able to buy these shares for less than the current market price. The discount reflects the amount that would have to be paid to an underwriter to handle the offering if the issue were being sold to the general public. By selling directly to its existing shareholders, the company avoids using an underwriter and can pass the savings on to the existing shareholders.

Rights Agent

To handle the mechanics of the offering, the corporation hires a "rights agent." This is usually the existing transfer agent of the issuer. The rights agent issues the additional shares upon presentation of the rights certificates with the appropriate dollar subscription amount.

Rights Expire In 30 - 60 Days

Since the existing shareholders can buy the stock for less than the current market price, their subscription rights

have value. Shareholders are free to exercise their subscription rights or they can sell them to someone else. Since these rights typically last for 30 to 60 days and then expire, shareholders must decide quickly. Below is a sample rights announcement:

Monday March 31, 200x

The Board of Directors of Acme Manufacturing Corporation today declares a rights distribution to stockholders of record on April 15th, 200x. The rights will be distributed on April 30, 200x.

Under the terms of the offer, 5 rights are necessary to subscribe to one new share at a price of \$14 per share. Any residual rights totaling less than 5 can be rounded to 5 rights to purchase 1 additional share. The offer expires Midnight May 31, 200x.

The current market price of Acme stock is \$20.

1 Right Per Share

Assume that a customer owns 100 shares of Acme stock. He will receive 100 rights from Acme on April 30th. These come as a physical certificate which can be sent to Acme with money to buy ("subscribe") more shares or they can be traded in the open market until expiration.

Cum Rights

Assume that it is March 31st and the customer wants to know how much the rights will be worth in the market. The stock is still trading "cum rights," since any purchaser will settle before the record date of April 15th and will receive the rights.

In theory the value of the right is included in the current market price of the stock. The formula for the value of the right is:

Value Of Right (Cum Rights)

$$\text{Value of Right (cum)} = \frac{\text{Market Price} - \text{Subscription Price}}{N + 1}$$

where N = number of rights to buy 1 share

$$= \frac{\$20 - \$14}{5 + 1} = \frac{\$6}{6} = \$1 \text{ Value Per Right}$$

The right is worth \$1 and theoretically can be sold for this amount.

When the stock trades "ex rights," any purchaser will no longer get the distribution. The market price will be reduced by \$1 ($\$20 - \$1 = \19 new market price). As of the ex-date, the formula to calculate the value of a right is:



$$\text{Value Of Right (Ex Rights)} \quad \text{Value of Right (ex)} = \frac{\text{Adjusted Market Price} - \text{Subscription Price}}{N}$$

$$= \frac{\$19 - \$14}{5} = \frac{\$5}{5} = \$1 \text{ Value Per Right}$$

Please notice that the theoretical value did not change. This is not an accident - the values must always be the same.

This shareholder receives 100 rights which are worth \$100. He can send his certificate for 100 rights to Acme with a check for \$280 and receive 20 shares of stock (remember, it takes 5 rights to buy 1 share, so 100 rights buys 20 shares at \$14 subscription price = \$280). Or the rights can be traded in the market and the customer should get about \$100 for them. The shareholder must act fast though, since the rights expire in 2 months.

Fractional Shares Rounded To Whole Shares

If the customer had 104 shares, he would get 104 rights. Under the terms of the offer, he can "round up" to 105 rights and buy 21 shares at \$14.

COMMON STOCK SECTION EXAMINATION

1.

The definition of Treasury Stock is:

- a. issued stock minus authorized stock
- b. issued stock minus outstanding stock
- c. authorized stock minus outstanding stock
- d. outstanding stock minus authorized stock

2.

Which of the following have an equity position?

- I Common Shareholders
- II Preferred Shareholders
- III Convertible Bondholders
- IV Warrant Holders

a. I and II

b. II and III

c. I, II, IV

d. I, II, III, IV

3.

The market price of common stock will be influenced by which of the following?

- I The par value of the shares
- II Expectations for future earnings of the company
- III Expectations for future dividends to be paid by the company
- IV Book value of the company

a. I and IV

b. II and III

c. I, II, III

d. II and IV

4.

Which are true statements regarding the activities of the registrar?

- I The registrar cancels old shares
 - II The registrar transfers shares to new owners
 - III The registrar accounts for the number of shares issued
 - IV The registrar keeps the shareholder record
- a. I and II
 - b. II and IV
 - c. III and IV
 - d. I, II, III, IV

5.

Cumulative voting is considered to be an advantage to the:

- a. large investor
- b. institutional investor
- c. small investor
- d. novice investor

6.

Which are functions of the transfer agent?

- I Mails dividend payments to shareholders
- II Cancels old share and issues new shares
- III Prepares and mails proxies
- IV Sets the Declaration Date

a. I and II

b. III and IV

c. I, II, III

d. I, II, III, IV

7.

Which of the following terms describes common stock?

- a. negotiable
- b. redeemable
- c. non-negotiable
- d. callable

**8.**

The Board of Directors of a company will set all of the following **EXCEPT**:

- a. declaration date
- b. record date
- c. ex-date
- d. payable date

9.

The regular way ex-date for cash dividends is set at:

- a. 1 business day before record date
- b. 2 business days before record date
- c. 3 business days before record date
- d. 3 business days after record date

10.

ABC Corporation has declared a 5:4 stock split to shareholders of record on November 10th. A stockholder of record with 100 shares will receive how many additional shares?

- a. 20
- b. 25
- c. 120
- d. 125

11.

Referring to the previous question, the price of the stock will be reduced on ex-date by:

- a. 20%
- b. 25%
- c. 30%
- d. 50%

Use the following information to answer the next 3 questions

ABC Corporation has declared a rights offering to stockholders of record on Wednesday, December 10th. Under the offer, shareholders need 10 rights to subscribe to 1 new share at a price of \$19. Fractional shares can be rounded up to purchase 1 full share.

12.

A customer owning 111 shares wishes to subscribe. The market price of the stock is currently \$30. The customer can buy:

- a. 11 shares for \$209
- b. 12 shares for \$228
- c. 11 shares for \$341
- d. 12 shares for \$372

13.

As of Monday December 1st, the stock is trading at \$30. The value of the right is:

- a. \$.90
- b. \$1.00
- c. \$1.10
- d. \$1.25

14.

After the ex-date, the stock is trading at \$29. The value of the right is:

- a. \$.90
- b. \$1.00
- c. \$1.10
- d. \$1.25

15.

Shareholder approval is needed for all of the following **EXCEPT**:

- a. declaration of a stock split
- b. declaration of a stock dividend
- c. declaration of a reverse stock split
- d. issuance of convertible preferred stock

16.

Which of the following statements are true regarding Treasury stock?

- I Treasury stock receives dividends
 - II Treasury stock votes
 - III Treasury stock reduces the number of shares outstanding
 - IV Treasury stock purchases are used to increase reported Earnings Per Share
- a. I and II
b. III and IV
c. II, III, IV
d. I, II, III, IV

20.

In a corporate liquidation, common stockholders are paid:

- a. before bondholders and preferred stockholders
- b. after bondholders and preferred stockholders
- c. after bondholders but before preferred stockholders
- d. before all creditors

17.

All of the following are rights of a common shareholder **EXCEPT**:

- a. right to vote
- b. right to receive a dividend
- c. right to manage
- d. right to transfer shares

18.

Common dividends are usually paid:

- a. monthly
- b. quarterly
- c. semi-annually
- d. annually

19.

A customer owns 200 shares of ABC stock. ABC is having a rights offering where 20 rights are needed to subscribe to 1 new share. The customer will receive:

- a. 1 right
- b. 10 rights
- c. 100 rights
- d. 200 rights



COMMON STOCK EXAMINATION EXPLANATIONS

1. The best answer is b. Treasury stock consists of issued shares that have been repurchased by the corporation. Repurchased shares are no longer "outstanding," so the definition of Treasury Stock is issued shares minus outstanding shares.
2. The best answer is a. "Owners" have an equity position - and the only owners of a company are shareholders - both common and preferred. Convertible bondholders are creditors of a company. Their position only becomes equity **if** they convert to common shares. Warrant holders have long-term options to buy stock (covered in Section 3 of this chapter). They only become equity holders if they exercise their options.
3. The best answer is b. The market price of common stock is determined by investor expectations about the future of the company. Par value and book value have no bearing on the market price of the common.
4. The best answer is c. The transfer agent cancels old shares and issues new shares, keeping a record of current shareholder names and addresses. The registrar insures that all shares are properly accounted for and **also** keeps a record of the shareholders' names and addresses.
5. The best answer is c. Cumulative voting allows a disproportionate voting weight to be placed on selected directors and is considered to be an advantage for the small investor who wishes to have specific directors elected.
6. The best answer is c. The declaration date is set by the Board of Directors of the company. The transfer agent cancels old shares and issues new shares, mails voting materials (proxies), annual reports, and dividend payments to the shareholders.
7. The best answer is a. Common stock is a negotiable (transferable) security. It is not redeemable with the issuer nor is it callable by the issuer.
8. The best answer is c. The ex-date is set by the exchange where the stock trades once the Board of Directors sets the Record date. The Board of Directors, when it announces a dividend, sets the Declaration date, Record date, and Payable date.
9. The best answer is b. The regular way ex-reduction date is set at 2 business days prior to the record date. If the stock is bought **before** this date in a regular way trade (3 business day settlement), settlement will occur on the record date or before; and the purchaser will be on the record books for the distribution.
10. The best answer is b. A 5:4 stock split is a $5/4 = 1.25 = 25\%$ split. The shareholder with 100 shares will get 25% more shares or 25 additional shares.
11. The best answer is a. This is a very tricky question. Since the stockholder has 1.25 times the number of shares after the split, the market price will be reduced on ex date by a factor of 1.25. Assume the market price of the stock is \$50 before the split. After the split, the new market price is $\$50/1.25 = \40 . The new price is \$10 less than the original \$50. $\$10/\$50 = 20\%$ reduction from the original price.

12. The best answer is **b**. The subscription offer allows fractional shares to be rounded up to buy 1 whole share. Since 10 rights are needed to buy 1 new share, the customer receiving 111 rights can buy $111/10 = 11.1$ shares which rounds up to 12 shares at \$19 each = \$228 total for 12 shares.

13. The best answer is **b**. Since the record date is Wednesday, December 10th, a customer buying on Monday December 1st would settle prior to the record date and would be on the record books for the distribution. (The trade would settle on December 4th - 3 business days after the December 1st trade date.) Therefore, the stock is trading cum rights. The value of a right "cum rights" is:

$$\frac{\text{Market Price} - \text{Subscription Price}}{N + 1} = \frac{\$30 - \$19}{10 + 1} = \frac{\$11}{11} = \$1 \text{ Value "Cum Rights"}$$

14. The best answer is **b**. After the stock is trading "ex-rights," any purchaser is not entitled to the rights distribution. As of the ex-date, the price of the stock has been reduced on the exchange where the stock trades, so the price of \$29 already reflects the adjustment. The value of a right "ex rights" is:

$$\frac{\text{Adj. Market Price} - \text{Subscription Price}}{N} = \frac{\$29 - \$19}{10} = \frac{\$10}{10} = \$1 \text{ Value "Ex Rights"}$$

Notice that the market price of \$29 was **already** adjusted on the ex-date by the exchange where the stock trades. Do not try and reduce the price again!

15. The best answer is **b**. Stockholder approval is not required for a corporation to declare either a cash or stock dividend, nor is it required if a corporation wishes to issue rights or to repurchase shares for its Treasury. Stockholder approval is required if the corporation wishes to split its stock (or perform a reverse split); if the corporation wishes to issue convertible securities; or if the corporation wishes to issue preferential stock options to its officers.

16. The best answer is **b**. Treasury stock does not vote or receive dividends. Treasury stock is deducted from outstanding shares, and since outstanding shares are reduced, Earnings Per Share increases.

17. The best answer is **c**. The common shareholder does **not** manage the company - this is the domain of the Board of Directors and corporate officers. The common shareholder does have the right to vote, receive a dividend, and to sell his shares.

18. The best answer is **b**. Common dividends are usually declared and paid quarterly.

19. The best answer is **d**. The customer receives a right for each common share held. Since he owns 200 shares, he gets 200 rights. 20 rights are needed to buy 1 new share, so 200 rights / 20 rights per share allows the purchase of 10 new shares.

20. The best answer is **b**. In a liquidation, common shareholders are paid **last**, after creditors, bondholders, and preferred stockholders.



SECTION 2: PREFERRED STOCK

2a. ISSUANCE OF PREFERRED STOCK

Senior Security

Preferred stock is termed a "senior" security because it has priority over the common stock issued by the company. If the company declares a dividend, preferred shareholders must receive the dividend before the common dividend can be paid. If the company liquidates, preferred shareholders are paid before common shareholders.

\$100 Par

Preferred stock is typically issued at \$100 par with a stated dividend rate. For example, a company issues \$100 par 10% preferred stock. The annual dividend is 10% of \$100 par = \$10 per year. Preferred dividends are paid semi-annually by many companies (similar to bond interest payments), so each 6-month payment will be \$5. Please note that there are a large number of companies that pay preferred dividends in a similar fashion to common dividends. These companies pay both common and preferred dividends quarterly, if declared by the Board.

Fixed Dividend Rate

Semi-Annual Or Quarterly Payments

Recent Issues Of Preferred Stock Are \$50 Par Or \$25 Par

A recent trend in preferred stock issuance is the offering of \$50 par preferred stock and \$25 par preferred stock. Many issuers are using these lower par values, because they make a "round lot" (100 shares) more affordable to investors (\$5,000 for a round lot of \$50 par preferred or \$2,500 for a round lot of \$25 par preferred, as opposed to \$10,000 for a round lot of \$100 par preferred).

Preferred differs from common in that it pays a **fixed** dividend rate. Common dividends are a discretionary decision made by the Board of Directors. If the company's earnings improve, the Board may vote to increase the common dividend. Preferred shareholders do not enjoy this increase - they always get the same dollar dividend - a fixed percentage of par value.

The benefit for preferred shareholders is the known dividend rate and the priority of claim over common shareholders. But if the Board of Directors votes to omit a dividend, the preferred dividends are **not** paid and the preferred shareholders have no recourse.

Bought By Corporations With Excess Funds - 70% Of Dividends Received Are Not Taxable To Small Corporate Investor

The typical purchaser of preferred shares is a corporate treasurer with excess funds on hand. The tax code gives the corporate treasurer a big incentive to invest in stock. If the treasurer were to buy bonds, all of the interest income is taxable to the corporate owner of the bonds. But if the corporation buys stock and receives dividends, 70% of the dividends received are excluded from tax (if the

position held is less than 20% of the outstanding stock. If more than 20% is held, the exclusion increases to 80%). Unfortunately, individuals do not get this loophole.

Cash Dividends Received By Individual Investors Taxed At A Maximum 15% Rate

However, under tax law revisions of 2003, cash dividends received by individuals who hold either common or preferred stock are taxed at a preferential rate (15% maximum); as opposed to a maximum tax rate on ordinary income of 35%. Thus, there is now a strong tax incentive to invest in stock that pays cash dividends (taxed at a maximum 15% rate) as opposed to, say, investing in bonds that pay interest (taxed at a maximum 35% rate).

Price Of Preferred Influenced By Interest Rate Moves

Once the preferred shares are issued, they trade in the market as does any other negotiable security. Unlike common stock, preferred stock price movements are not based on future expectations for the company. This makes sense since preferred does not share in earnings increases. Because preferred gets a fixed return, its price movement is influenced by interest rate movements.

2b. INTEREST RATE MOVEMENTS AND PREFERRED STOCK PRICES

Preferred Is Priced At Par At Issuance

When preferred stock is issued, the dividend rate printed on the issue is set at a level comparable with the market rate of interest at the time. For example, assume that the market rate of interest for similar securities is 10%. The market is "pricing" these securities to give a 10% rate of return. Therefore, a new preferred issue will be priced in the market to give a yield of 10%.

For preferred shares we can derive the theoretical market price from the Current Yield formula:

Current Yield

$$\text{Current Yield} = \frac{\text{Annual Income From Security}}{\text{Market Price of Security}}$$
$$10\% = \frac{\$10 \text{ Annual Dividends}}{? \text{ Market Price}}$$

Restated, the formula for the theoretical market price of the preferred stock is:

Theoretical Market Price

$$\text{Theoretical Market Price} = \frac{\text{Annual Income}}{\text{Market Yield}} = \frac{\$10}{10\%} = \$100$$



**Interest Rates Rise
Theoretical Price
Must Fall**

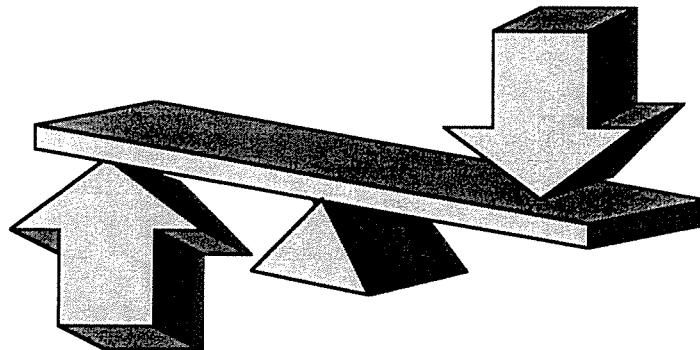
Therefore, this issue should sell in the market for \$100. Since the issuer prints "\$100 par" on the preferred shares, the issue sells at its par value.

Once the issue is outstanding in the market, assume that interest rates in general rise to 20%. If this occurs, any new preferred issues will be sold with 20% dividend rates. To be competitive with the market, a holder of the old 10% preferred wishing to sell, must drop his price. The price must fall to a level where the old preferred will give a current yield of 20%. The new theoretical price is:

$$\text{Theoretical Market Price} = \frac{\text{Annual Income}}{\text{Market Yield}} = \frac{\$10}{20\%} = \$50$$

If interest rates double (as in this example), the price of the issue drops in half.

Preferred Stock Prices

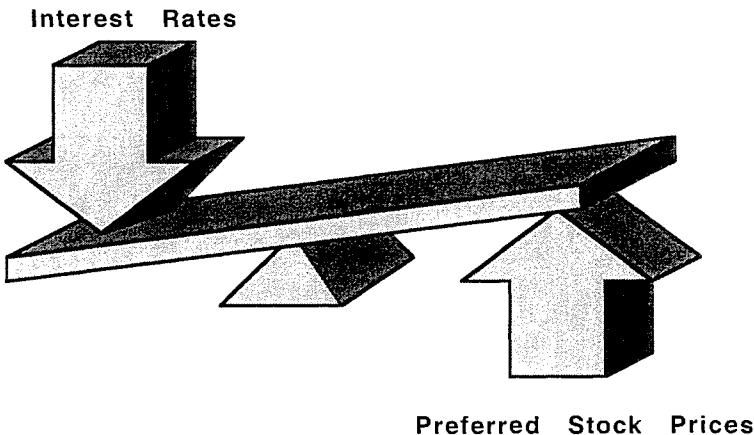


**Interest Rates Fall
Theoretical Price
Must Rise**

On the other hand, assume that market interest rates fall to half the original level and are now at 5%. If this occurs, any newly issued preferred shares will be sold with 5% dividend rates. To be competitive with the market, a holder of old 10% preferred shares wishing to sell will get more than par. The price will rise to a level where the issue gives a current yield of 5%. The new theoretical price is:

$$\text{Theoretical Market Price} = \frac{\text{Annual Income}}{\text{Market Yield}} = \frac{\$10}{5\%} = \$200$$

If interest rates drop in half (as in this example), the price of the issue doubles.



The inverse relationship between interest rate movements and preferred stock prices also holds true for bond prices since they also make fixed payments.

2c. PREFERRED STOCK FEATURES

No Voting Or Preemptive Rights

Unlike common stock, preferred stock does not vote and does not have preemptive rights (since issuance of additional preferred shares does not dilute existing preferred holders' returns). We already know that the owner has preference to dividend distributions (paid semi-annually, though many preferred issues now pay dividends quarterly), and to company assets upon liquidation.

Preferred Stock Has Similar Features To Bonds

In reality, preferred stock is very similar to a bond. Bondholders also receive a fixed interest rate, paid semi-annually, and do not have voting or pre-emptive rights.

The differences are:

Bonds mature on a set date while preferred stock has an indefinite life;

Bondholders have priority of claim to interest payments and corporate assets upon liquidation before preferred shareholders;

Bondholders have a legal right to the interest payments; preferred dividends are only paid if declared by the Board of Directors.

Bondholders who receive interest payments from issuers are taxed at a maximum rate of 35%; while holders of preferred (and common) stock who receive cash dividends are taxed at a maximum rate of 15%.



Preferred stock features are very similar to bond features. These features are:

Cumulative

Cumulative Preferred: If the issuer omits dividend payments, they "accumulate" and are paid if the issuer can ever resume making dividend payments. All accumulated preferred dividends must be paid, of course, in order to make a common dividend distribution.

Callable

Callable Preferred: The issuer has the right to "call in" the shares after a set date, usually at par. Issuers will call in the shares if interest rates have fallen. After retiring the old high rate shares, new preferred shares can be issued at the current lower rates.

Convertible

Convertible Preferred: The preferred shareholder can "convert" his shares into the common stock of the issuer based on a predetermined price. If the market price of the common rises, the convertible's value is pushed up as well (since it can be turned into the common stock). In addition to the fixed dividend rate, convertible holders can enjoy capital gains if the price of the common stock moves up. The issuer can sell convertibles at lower dividend rates because of the value of the conversion feature.

Conversion Ratio

For example, an issuer sells \$100 par convertible preferred stock, convertible at \$25, when the market price of the common is \$10 per share. The preferred stockholder has the right, at any time, to convert 1 preferred share at \$100 par, into common at a price of \$25 per share. Thus, the conversion ratio is: \$100 par preferred/\$25 conversion price = 4 common shares per preferred share.

To summarize, the formula for the conversion ratio is:

Conversion Ratio = Par

Conversion Price

Thus, this preferred stockholder can always convert into 4 shares of common. Also note that at issuance, the conversion feature has no value, since the preferred stockholder can convert based upon a common price of \$25 per share; and the common is worth \$10 per share at issuance. For the conversion feature to have value, the price of the common must rise above \$25 in the market.

Parity Price

If the price of the common rises above \$25 per share, the price of the preferred will rise; not because interest rates have fallen; but because the preferred is equivalent to 4 of

those common shares. Thus, the preferred will trade at "parity" with the common.

Continuing from the previous example, if the common stock price rises to \$30 per share, the preferred must be trading at a price equal to 4 times this amount, since each preferred share can be converted into 4 common shares. Thus, the preferred will be trading at $4 \times \$30 = \120 per share, not because interest rates have fallen, but because the price of the common has increased.

To summarize, the formula for the parity price of the preferred stock is:

$$\text{Parity Price Of Preferred} = \frac{\text{Market Price Of Common}}{\text{x Conversion Ratio}}$$

Forced Conversion

When the price of the convertible preferred stock rises due to an increase in the market value of the common, if the issuer originally made the convertible preferred stock callable, then the issuer can "force conversion" of the preferred.

Continuing from the previous example, assume that the convertible preferred stock is callable at \$110 per share by the issuer; and that the preferred is trading in the market at the current parity price of \$120. If the issuer calls in the preferred stock, the preferred stockholder who tenders his or her shares will get \$110 per share. If the preferred stockholder converts, he or she will get 4 shares of common, currently worth \$30 each, receiving common stock with a total value of \$120. This is the better deal for the customer, who is "forced" to convert, since if he does nothing, once the preferred is called, dividend payments cease.

By forcing conversion, the issuer eliminates the preferred stock on which it pays a higher fixed dividend rate; and replaces it with common shares on which it pays a lower dividend rate. Note that conversion can only be forced if the convertible preferred is trading at a premium to the call price.

Participating

Participating Preferred: In addition to the fixed dividend rate, the preferred "participates" in any "extra" dividends declared by the Board of Directors. For example, assume that ABC pays a \$1.50 quarterly common dividend. After having an exceptionally strong year, the Board declares a special year-end dividend of \$5.00. The preferred as well as



the common will receive this dividend if the preferred has a "participating" feature.

**Also Known As
Performance
Preferred Stock**

Sometimes, participating preferred stock is referred to as "performance preferred," because the preferred shareholders are able to receive a higher dividend amount if the company's performance is better than usual.

**Adjustable Rate
(Reset)**

Adjustable Rate Preferred: This is a relatively new type of preferred stock. Instead of paying a "fixed" dividend rate, the dividend rate is "reset" periodically (usually once a year) to an index of market rates. If interest rates rise, the rate will increase at the reset date. If interest rates fall, the rate will decrease at the reset date. Sometimes this type of issue is called "reset" preferred.

**Variable Rate
Security Price
Stays At, Or Close
To, Par**

Please note that with any "variable rate" security, because the interest or dividend rate is continually reset to the market, the price of the security stays at, or very close to, par. The inverse relationship between preferred stock prices and market interest rate levels does not hold for a variable rate security because as market interest rates move, the rate on the security is moved in tandem, so the price stays at par.

PREFERRED STOCK SECTION EXAMINATION

1.

Which of the following statements are true about preferred stock?

- I Dividends are paid before common
 - II Dividends are paid monthly
 - III Dividends are based on corporate earnings
 - IV Preferred shareholders have a prior claim to common shareholders
- a. I and II
 - b. I and IV
 - c. II, III, IV
 - d. I, II, III, IV

2.

A customer buys 100 shares of preferred at \$80 per share. The par value is \$100. The dividend rate is 10%, with dividends paid semi-annually. The customer will receive how much in each dividend payment?

- a. \$400
- b. \$500
- c. \$800
- d. \$1000

3.

Which investment gives the highest after-tax return to a **small** corporate investor in the 50% tax bracket?

- a. 10% Corporate Bond
- b. 10% Preferred Stock
- c. 15% Corporate Bond
- d. 5% Preferred Stock

4.

All of the following are terms associated with preferred stock **EXCEPT**:

- a. callable
- b. cumulative
- c. redeemable
- d. convertible

5.

ABC Company has issued 10% cumulative preferred stock. Two years ago, ABC paid a 6% preferred dividend. Last year, ABC paid a 7% preferred stock dividend. This year, ABC wishes to pay a common dividend. The preferred shareholders must receive:

- a. 0%
- b. 7%
- c. 10%
- d. 17%

6.

ABC 10% \$100 par preferred is trading at \$120 in the market. The current yield is:

- a. 5%
- b. 8.33%
- c. 10%
- d. 125

7.

As interest rates rise, preferred stock prices will:

- a. remain unaffected
- b. rise
- c. fall
- d. fluctuate



8.

Which statement is best regarding participating preferred stock?

- a. The dividend rate is fixed
- b. The dividend rate varies depending on the decision of the Board of Directors
- c. The dividend rate is fixed as to maximum but not as to minimum
- d. The dividend rate is fixed as to minimum but not as to maximum

9.

Callable preferred stock is likely to be redeemed by the issuer if:

- a. interest rates rise
- b. interest rates fall
- c. the common stock price rises
- d. the common stock price falls

10.

All of the following are the same for preferred stock and bonds **EXCEPT**:

- a. fixed payment rate
- b. periodic payments to owners
- c. can be callable
- d. fixed maturity date

PREFERRED STOCK EXAMINATION EXPLANATIONS

1. The best answer is b. Preferred dividends are paid before common dividends can be paid and preferred holders have a prior claim to assets in a liquidation before common. Preferred dividends are set at a fixed rate and are paid semi-annually or quarterly.
2. The best answer is b. Preferred dividends are based on a stated percentage of par value. The stated rate is 10% of \$100 par = \$10 annual dividend per preferred share. Since there are 100 shares, the annual dividend is \$1000. Remember, though, that preferred dividends are typically **paid** twice a year, so each payment will be for \$500.
3. The best answer is b. Interest received by a small corporate investor is 100% taxable. Dividends received by a small corporate investor are 30% taxable (70% is excluded from tax). The after-tax return of each choice is:

Annual Income (A)	Taxable Portion (B)	Tax Rate (C)	Effective Tax (B x C) = D	Tax Amount (D x A) = E	After Tax (A - E)
\$100 - Corporate Bond	100%	50%	50%	\$50	\$50
\$100 - Preferred Stock	30%	50%	15%	\$15	\$85
\$150 - Corporate Bond	100%	50%	50%	\$75	\$75
\$50 - Preferred Stock	30%	50%	15%	\$7.50	\$42.50

4. The best answer is c. Preferred stock is not redeemable - it is a negotiable security. It cannot be redeemed with the issuer - an investor who wishes to liquidate must sell the stock in the market. Preferred stock can be callable, cumulative, and convertible.
5. The best answer is d. Since this is cumulative preferred stock, all missed dividends must be paid before a common dividend can be paid. Two years ago, 4% was missed, last year 3% was missed; and this year's preferred dividend of 10% must be paid before the common dividend is paid. The total preferred dividend to be paid is 17%.
6. The best answer is b. The formula for current yield is:

$$\frac{\text{Annual Income}}{\text{Market Price}} = \frac{\$10}{\$120} = 8.33\%$$

7. The best answer is c. Preferred stock prices move inversely with interest rates. As interest rates rise, preferred stock prices fall.
8. The best answer is d. Participating preferred pays a fixed dividend rate but also participates in "extra" dividends declared by the Board of Directors. Therefore, the dividend rate is fixed as to minimum but not as to maximum.
9. The best answer is b. If interest rates fall, issuers can "call in" old high rate preferred and replace it by selling new preferred at the lower current rates. Thus, calls take place when interest rates have fallen.
10. The best answer is d. Preferred stock has no maturity - its life is indefinite. Bonds have a stated maturity date. Both preferred and bonds are fixed rate, can be callable, and make periodic payments of interest or dividends to owners.



SECTION 3: SPECIAL SECURITIES

3a. WARRANTS

Warrant Attached To New Stock Or Bond Issue

A warrant is a long term option to buy stock at a fixed price. Warrants are typically attached to the sale of a new stock or bond issue as a "sweetener" to make the issue more attractive.

Long-Term Option To Buy Stock

For example, a new issue is being sold as a "unit" consisting of 1 common share and 1 warrant to purchase an additional common share. The common stock is valued at \$20 and the warrant allows the purchase of the additional share at \$30. The warrant expires in 5 years.

The warrant usually has a "wait" period before it can be exercised (e.g., 1 year). After the wait period, it can be exercised at the set price until expiration. It makes no sense to exercise unless the market price of the stock rises, in this case to at least \$30.

Thus, warrants have an indeterminate value at issuance. But they are worth something and allow the issuer to raise the price (if it is stock) or lower the interest rate (if it is debt) of the issue to which the warrant is attached.

Exercise Price Set At Premium To Market Price At Issuance

Warrants are almost always issued at a substantial premium to the stock's current market price and only gain additional value if the common stock price rises. For example, assume that this warrant is valued in the market at \$1. If the market price of the stock moves to \$35, the warrant will be worth at least \$5 since it allows the purchase of the stock at \$30 per share.

Perpetual Warrant

Warrants usually have a life of 5 years, but sometimes perpetual warrants are issued. They trade separately from the common stock on the exchange where the stock is listed.

Index Warrant

A derivative of the stock warrant is the "index warrant." This is a long-term option to either buy or sell an underlying index or currency. These are traded on stock exchanges, but behave like options, so they are covered in the Options Chapter of this text.

3b. RIGHTS

Very Short Term

A right is a short-term option to buy stock at a fixed price. Typically, rights are issued for 30-60 days and then expire.

Rights are issued under an offering of new common shares to existing shareholders under their pre-emptive rights. Rights offerings were covered in Section 1e. Rights trade separately from the stock on the exchange where the stock is listed.

3c. AMERICAN DEPOSITORY RECEIPTS (ADRs)

ADRs Are A Vehicle For Trading Foreign Securities In U.S.

Foreign companies can "list" their shares for trading on stock exchanges in the U.S. For example, one can buy Sony stock or British Telecom stock. When one buys these "shares," instead of getting stock certificates, the buyer gets American Depository Receipts.

Foreign companies do not want their actual shares traded in the U.S. because the shares have to be registered in the U.S. with the Securities and Exchange Commission, and the company must follow SEC reporting rules. This is time consuming and expensive.

Bank Holds Foreign Securities In Country Of Origin

These companies let someone else bother with all of these requirements - usually Morgan Bank or another large bank with offices in the country where the company is headquartered. The bank will buy up blocks of the stock and place it in trust in the country of origin. The bank then issues American Depository Receipts which are backed by the securities held in trust. The ADRs are registered with the SEC and sold in the U.S. As dividend payments are received, the bank passes these on to the receipt holder. But the receipt holder does not have voting or preemptive rights. The bank votes the shares that it owns and it will sell off preemptive rights and remit the money to the receipt holder.

Bank Then Issues Receipts In U.S. Backed By The Foreign Securities

An ADR can represent one share of the underlying stock, multiple shares, or fractional shares. All exchange listed ADRs are "sponsored," that is, the foreign company "sponsors" the issue to increase its worldwide ownership base. Sponsored ADRs only use one depository bank (such as Morgan), which is appointed by the issuer. Issuers that sponsor ADRs provide quarterly and annual financial reports to shareholders in English. Sponsored ADRs are often called American Depository Shares or ADSs.

No Voting Or Preemptive Rights

Sponsored ADRs

Commonly Known As American Depository Shares

Non-Sponsored ADRs

Non-sponsored ADRs are assembled by banks and broker-dealers without the issuer's participation. An unsponsored program may have more than one depository bank, since the issuer does not participate in any way. Holders of non-sponsored ADRs receive annual reports only in the language of the issuer. Non-sponsored ADRs trade "over-the-counter."



The major stock exchanges have been aggressively pursuing large foreign companies to list their ADRs. As of the beginning of 2011, there were approximately 500 ADR issues listed on the NYSE and about another 300 on the NASDAQ stock market. In total, there are approximately 1200 ADR issues traded in the United States on all of the exchanges and in the "over-the-counter" market.

Dividends Declared In Foreign Currency

Also, please note, dividends on ADRs are declared by the foreign company in the local currency, and are then converted into U.S. dollars and remitted to the receipt holders by the intermediary bank. The market prices of ADRs will therefore be influenced not only by the performance of the company's stock, but also by foreign currency exchange fluctuations.

Dividends Converted And Paid In Dollars

On dividends received from ADRs, the country of origin can withhold local taxes, but such taxes can be claimed as a credit against U.S. taxes due on dividends received.

Exchange Risk

Foreign Taxes Withheld - Credit On U.S. Return

3d. EXCHANGE TRADED FUNDS (ETFs)

The Investment Company Act of 1940 defines a "management company" as an investment company. A management company has an investment adviser to manage the fund to meet the fund's stated investment objective.

Management companies can either be "open-end" or "closed-end."

Open End Management Company

An "open end" management company is a mutual fund. A mutual fund continuously issues and redeems its own shares, so it is "open" to new investment. There is no trading of mutual fund shares. The shares are bought directly from the fund and are redeemable with the fund.

Closed End Management Company

A "closed end" management company differs in its capital structure. It has a 1-time stock issuance like any other public company; the company's books are closed to new investment; and the shares are listed and trade like any other stock. These are called publicly traded funds or exchange traded funds.

Furthermore, management companies can either be actively managed or passively managed. An actively managed fund uses the investment adviser to decide which investments to buy or sell. A passively managed fund simply has the investment adviser match the fund portfolio to a recognized market index. Such funds have much lower management fees.

Originally, the closed end fund structure was used for portfolios of illiquid securities, where the fund manager did not have the ability to easily meet large redemption requests because positions were hard to liquidate. The closed-end structure was extended to index funds in the early 1990s.

Exchange Traded Funds - ETFs

ETFs represent shares of ownership in portfolios of common stock that track the performance of a specific index. ETFs started in the early 1990s with the creation of the Standard and Poor's 500 Index Fund, traded on the American Stock Exchange. Called a "SPIDER" - which stands for "Standard and Poor's Depository Receipt" - often abbreviated SPDR - this is a very successful product.

As compared to an Index Mutual Fund, ETFs offer the following advantages:

ETFs are continuously priced on the exchange based on the changes in value of the stocks held in the index and trade similar to any other common stock. A customer placing an order buys at that moment's price - in contrast, mutual funds are only priced 1 time per day. Any orders to buy a mutual fund are filled at that day's closing NAV (plus a sales charge, if applicable).

ETFs are purchased without a sales charge. However, a regular stock trading commission is charged to buy or sell ETFs.

ETFs can be purchased on margin; whereas mutual funds are generally not marginable. In addition, ETFs can be sold short, whereas mutual funds cannot be sold short.

The expenses associated with running ETFs are comparable to, or lower than, those of similar mutual funds.

ETFs are "tax-efficient" because they are not obligated to distribute capital gains to shareholders annually, as is the case with a mutual fund. As the shares appreciate, there is no annual tax bill on the appreciation. The tax becomes due when the shares are sold.

The most successful ETFs are:

Spiders - SPDR

SPDRs - Standard and Poor's 500 Depository Receipts, which are often referred to as "Spiders."



Diamonds - DIA	DIA - Dow Jones Industrial Average (30 Stocks), often referred to as "Diamonds."
Qubes - QQQQ	QQQs - NASDAQ 100 Index, often referred to as "Qubes."
Sector SPDRs	ETFs have been extremely successful and "SPDR" has been extended into a "brand" with the introduction of the Mid-Cap SPDR, as well as Sector SPDRs. There is also a complete line of international sector index ETFs, and specialized index ETFs (such as shares based on the Russell 2000 index) known as "I-Shares" (Index Shares), issued in partnership with Barclays Bank.

Variants of ETFs have proliferated and the following must be known:

Narrow-Based ETF: An ETF that invests in an underlying portfolio that consists of 9 or fewer stocks.

Broad Based ETF: An ETF that invests in an underlying portfolio of 10 or more stocks.

Leveraged ETF: Because closed-end funds are capitalized like any other company, they can sell bonds and use the proceeds to make equity investments (bond debt is called leverage because it allows the issuer to magnify gains (and unfortunately, losses as well) on the underlying portfolio). For example, a 200% leveraged ETF has issued \$2 of bonds for every \$1 of net assets; and has used the proceeds to make additional equity investments. The price movements of leveraged ETFs are much more volatile than traditional ETFs - great in bull markets; horrible in bear markets.

Gild (GLD) ETF: An ETF (part of the SPDR family) that, instead of investing in securities, invests in gold bullion. It is marketed as a more efficient means of investing in gold, since the investor does not have to deal with the logistics of buying, storing and insuring the gold. The share price directly tracks the price of gold bullion.

3e. EXCHANGE TRADED NOTES (ETNs)

Structured Products-Derivative Security	Structured products are securities based on, or derived from, a basket of securities, an index, or other securities, commodities or currencies. There are many types of structured products, but generally they consist of a "bond" portion, which pays interest based on the performance of
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a well known index such as the S & P 500 Index. In addition, they have a derivative component (an embedded option) that allows the holder to sell the security back to the issuer (at par) at maturity. These are often marketed as debt instruments, but that is not really the case. Structured products are created by many different banks and brokerage firms and each firm's version is somewhat different.

Structured products are "equity-linked" securities because they give a return based on an equity index. For example, the structured product may give the return of the S & P 500 index, but the maximum annual return might be capped at, say, 12%. Thus, in a year when the index "zooms up," the holder is capped to a maximum return of only 12% for that year. On the other hand, these products include a "floor" in the form of a guaranteed minimum annual return. For example, the return might be guaranteed at a minimum of 3%. If the reference index drops dramatically during the year, the investor still gets 3%.

The attraction of the product is clear - the investor gets equity returns in good years (subject to the cap); with no exposure to losses. This is done by using options collars on the index (covered in the next chapter), but such a collar comes at a cost. Furthermore, these are "buy and hold" products that typically have a 7 year life. Early redemption with the sponsor incurs a penalty (to pay for the options collar).

ETN - Exchange Traded Note

A variation on a "structured product," first introduced in 2006, was created to eliminate the liquidity risk of the security. This is the "ETN" - Exchange Traded Note. An ETN gives a return linked to a market index, has a set maturity date, and is backed by the credit rating of the issuing bank. They are listed on an exchange and trade, so an investor can "get out" at any time at the current market price.

The ETN is a debt instrument, but it does not make periodic interest payments. The value "grows" based on the performance of the underlying index, and the difference between the purchase price and the sale price (or redemption price at maturity) is taxable. A major tax benefit of the ETN is that under current IRS rules for this type of synthetic structured product, the gain is treated as a taxable capital gain, taxed at preferential rates (15% maximum instead of 35% maximum).

ETN Has Tax Advantage As Compared To Other Debt Instruments

Thus, the main advantages of an ETN as compared to a structured product are:

No Liquidity Risk; and

Tax Efficiency.



**ETN Investors Can
Get Access To Exotic
Investment
Strategies**

A variety of ETNs have been created by banks to give investors access to returns tied to "more exotic" indexes. For example, ETNs have been created that give returns tied to commodity indexes and to indexes based on the performance of stocks in Third World countries (e.g., an India Index or a Brazil Index).

**ETN Has No Relation
To An ETF**

Do not confuse an ETN with an ETF - an Exchange Traded Fund. An ETN has no underlying portfolio - the issuer is promising to give a return tied to the index, but the investments in that index may, or may not, be owned by the issuer. The ETN is really only backed by the credit rating of the issuing bank.

SPECIAL SECURITIES SECTION EXAMINATION

Use the following information to answer the next 2 questions:

A corporation is offering a new issue consisting of 100,000 units at \$200 each. Each unit consists of 2 shares of preferred stock and a warrant to buy one half additional common share. 2 warrants allows the purchase of an additional common share at \$5.

1.

How much money does the corporation raise from this issue?

- a. \$500,000
- b. \$10,000,000
- c. \$20,000,000
- d. \$40,000,000

2.

If all the warrants are exercised, the corporation will have:

- a. 100,000 preferred shares and 100,000 common shares
- b. 200,000 preferred shares and 100,000 common shares
- c. 200,000 preferred shares and 50,000 common shares
- d. 50,000 preferred shares and 100,000 common shares

3.

The exercise price of a warrant is set at issuance at:

- a. a discount to the market price of the common stock
- b. a premium to the market price of the common stock
- c. the market price of the common stock
- d. any price designated by the issuer

4.

ADRs are used to:

- a. facilitate trading of domestic securities in foreign countries
- b. facilitate trading of foreign securities in the United States
- c. allow trading of rights on exchanges
- d. allow trading of warrants on exchanges

5.

All of the following statements are true about ADRs **EXCEPT**:

- a. ADRs trade on national stock exchanges
- b. ADR holders receive dividends
- c. ADR holders can vote for the Board of Directors
- d. ADR holders receive the cash value of pre-emptive rights

6.

An ETN offers an investor all of the following benefits **EXCEPT**:

- a. lack of liquidity risk
- b. lack of credit risk
- c. tax-efficiency
- d. access to returns of foreign investments



7.

SPDRs are based on the:

- a. Standard and Poor's 100 Index
- b. Standard and Poor's 500 Index
- c. Standard and Poor's 1000 Index
- d. Standard and Poor's 5000 Index

10.

All of the following statements are **TRUE** about ETNs **EXCEPT**:

- a. ETNs can be traded in the market like any other stock
- b. ETNs offer an investment return tied to a benchmark index
- c. ETNs are an equity security
- d. ETNs are tax-advantaged

8.

Exchange traded index funds:

- I have comparable or lower expense ratios than index mutual funds
 - II can be traded anytime during exchange trading hours at net asset value
 - III can be redeemed at net asset value computed at the close of the market
 - IV can be traded at no commission cost to the customer
- a. I and II only
b. III and IV only
c. I, II, III
d. I, II, III, IV

9.

When comparing an ETN to an ETF, which statements are **TRUE**?

- I ETNs are a type of investment company offering
 - II ETFs are a type of investment company offering
 - III ETNs are a debt instrument
 - IV ETFs are a debt instrument
- a. I and III
b. I and IV
c. II and III
d. II and IV

SPECIAL SECURITIES EXAMINATION EXPLANATIONS

1. The best answer is c. The corporation is selling 100,000 units at \$200 each, so it is raising \$20,000,000.
2. The best answer is c. Each unit consists of 2 preferred shares x 100,000 units equals 200,000 preferred shares issued and a warrant for 1/2 common share. If the warrants are exercised, 100,000 units x 1/2 common share = 50,000 common shares issued.
3. The best answer is b. At issuance, the exercise price of a warrant is set at a premium to the stock's current market price.
4. The best answer is b. ADRs are the means by which foreign securities are traded in the United States.
5. The best answer is c. ADRs do not vote. The bank that actually owns the shares votes. The bank passes through dividends to receipt holders and sells off pre-emptive rights, sending the cash to the receipt holders. ADRs are listed on stock exchanges and trade like any other stock.
6. The best answer is b. An ETN is an Exchange Traded Note. It is a type of structured product offered by banks that gives a return tied to a benchmark index. The note is a debt of the bank, and is backed by the faith and credit of the issuing bank. Thus, if the bank's credit rating is lowered, the value of the ETN will fall as well - so it has credit risk. ETNs are listed on an exchange and trade, so they have minimal liquidity risk. Their return can be based on "exotic" indexes, such as a Brazil or India index, so they can give investors access to the returns of foreign markets. Finally, ETNs make no interest or dividend payments. Their value grows as they are held based on the growth of the benchmark index, with any gain at sale or redemption currently taxed at capital gains rates. Thus, they are tax-advantaged as compared to conventional debt instruments.
7. The best answer is b. SPDR is the acronym for the Standard and Poor's 500 Index Depository Receipt. This is an Exchange Traded Fund - and ETF.
8. The best answer is a. Exchange Traded Funds (ETFs) can be traded anytime during the day, whereas mutual funds are purchased or redeemed at that day's closing net asset value. The expense ratios for ETFs are similar to, or lower than, those for comparable index mutual funds. The purchase or sale of an ETF incurs a commission cost; and ETFs can be purchased or sold short on margin.
9. The best answer is c. An ETN is an Exchange Traded Note. It is a type of structured product offered by banks that gives a return tied to a benchmark index. The note is a debt of the bank, and is backed by the faith and credit of the issuing bank. An ETF is an Exchange Traded Fund. It is an investment company that owns an underlying portfolio of securities. The shares of the ETF are listed and trade like any other stock.
10. The best answer is c. An ETN is an Exchange Traded Note. It is a type of structured product offered by banks that gives a return tied to a benchmark index. The note is a debt of the bank, and is backed by the faith and credit of the issuing bank. They are not an equity security - they are a debt instrument. ETNs are listed on an exchange and trade, so they have minimal liquidity risk. Finally, ETNs make no interest or dividend



payments. Their value grows as they are held based on the growth of the benchmark index, with any gain at sale or redemption currently taxed at capital gains rates. Thus, they are tax-advantaged as compared to conventional debt instruments.

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SECTION 4: SECURITIES ACTS OF 1933 AND 1934 AND RULES

4a. OVERVIEW

**Securities Act
Of 1933
Primary Market**

Federal regulation of the securities markets started after the stock market crash of 1929. Congressional investigations into the causes of the crash revealed that an overly speculative new issue market fed by hype and rumor was one cause of the "speculative bubble" that burst. To tame the new issue marketplace, the Securities Act of 1933 was passed regulating the primary market - issuance of new issues.

**Securities And
Exchange Act
Of 1934
Secondary Market**

Various forms of manipulation of the trading markets were also revealed in the Congressional investigations. To eradicate manipulative activities, the Securities and Exchange Act of 1934 was passed regulating the secondary market - trading of issued securities.

4b. SECURITIES ACT OF 1933

The Securities Act of 1933 was passed at the end of 1933 to curb the excesses found to be present in the new issue market. It was common for new issues to be sold with little or no disclosure to investors. The Act of 1933 required that new issue purchasers be provided with a detailed prospectus before a purchase was completed. It was common for new issues to be purchased on margin. This was banned to limit speculation in new issues.

**Applies To Non-
Exempt Issues**

The Securities Act of 1933 states that, unless a new issue security is exempt from the Act, or the security is sold in an exempt transaction, the sale must comply with the provisions of the Act of '33. The Act of 1933 requires that:

**Registration
Statement Form S-1
For Initial Public
Offerings**

A registration statement - Form S-1 - must be filed with the SEC for initial public offerings before any sales related activities can take place. It is the issuer's responsibility to file the registration statement, which is primarily a copy of the proposed prospectus.

**Information In
Registration
Statement**

Included in the registration statement is the general character of the business; the uses of the proceeds of the offering; historical audited financial statements; biographical data on officers and directors as well as their percentage holdings; legal issues; the proposed price of the issue; underwriting spread; a copy of the proposed prospectus; and any other relevant information.

20-Day Cooling Off Period	Once the registration statement is filed, the issue enters into the "20-day cooling off" period. During this time, the SEC reviews the filing for "full and fair disclosure." If the SEC feels that the disclosure is adequate, there is no problem. If the SEC feels that there is not sufficient disclosure, the issuer gets a "deficiency letter" from the SEC asking for more disclosure. Until disclosure is adequate, registration is not "effective."
"Full and Fair Disclosure"	
Prohibitions During Cooling Off Period	During the "20-day cooling off" period, the issue: cannot be sold; cannot be advertised; and cannot be recommended.
Preliminary Prospectus	Soliciting orders to buy the issue is also prohibited. However, the underwriters are allowed to distribute a "preliminary prospectus" to interested parties. This is called a "red herring." The "red herring" is not considered to be "offering" the securities to investors, so it is allowed.
Allowed Activities During Cooling Off Period	During this period, lists of interested customers may be drawn, but no orders can be taken and no sales can be made. This is termed "taking indications of interest."
Effective Date	After the "20 day cooling off" period ends, and the issuer has complied with additional information requests from the SEC (if any), registration is effective. The issue can now be sold; orders to buy can be solicited, as long as the offer is made through the final prospectus that is now available. Any purchaser of the issue must get the final prospectus at or prior to the confirmation of sale.
Prospectus Delivered At Or Prior To Confirmation	The problem with the Act for issuers is that it is time-consuming and expensive. The registration statement and prospectus are prepared by lawyers; the prospectus must contain certified financial statements prepared by accountants. The red herring and final prospectus are printed by financial printers. All of these costs are borne by the issuer, and can be very costly. The filing procedure with the SEC can take as little as 20 days; however if a deficiency letter is issued, it can take much longer. Given a choice, an issuer would avoid the whole process, and this can be done if an exemption is available.
Exempt Issues	Certain securities are exempt from the requirements of the Act and certain transactions are exempt from the Act.
Exempt Transaction	For example: U.S. Government issues are exempt securities. No registration or disclosure is required to offer them. As a general rule, issues of governments or private issuers covered under other laws are exempt.



**Section 4 -
Exempt Transactions**

If a common stock issue (a non-exempt security) is sold in a "private placement," registration is not required because this transaction is exempt from the Act. The following section covers exempt securities and exempt transactions included in the exam.

4c. SECURITIES AND TRANSACTIONS EXEMPT FROM THE SECURITIES ACT OF 1933

Exempt Issues

The issues which are exempt from registration under the Act of 1933 are:

Direct obligations of the U.S. Government.

Obligations of Agencies sponsored or owned by the U.S. Government (e.g., Fannie Maes, Ginnie Maes, Federal Home Loan Bank Bonds).

Municipal obligations.

Foreign government obligations.

Banker's Acceptances and Commercial Paper as long as the maturity does not exceed 270 days.

Insurance company offerings such as life insurance policies and fixed annuities, **EXCEPT** for variable annuities (covered under state insurance laws which predate the Act of '33).

Bank issues (covered under state banking laws which predate the Act of '33).

Common carrier issues such as railroads, trucking companies (covered under Interstate Commerce Commission - I.C.C.- laws that predate the Act of '33).

Issues of Benevolent organizations (non-profit corporations such as farmer's cooperatives).

Issues of Small Business Investment Companies (SBICs).

These are the principal exempt securities. On the exam, it is expected that you know the major exempt securities, which are Governments, Agencies and Municipals. It is not necessary to memorize the entire listing.

**Offering Of Non-
Exempt Securities
Requires Prospectus**

By examining the listing, you will notice that the securities that are non-exempt include: corporate stocks and bonds; options; investment companies; and limited

Offerings Of Non-Exempt Securities In Exempt Transactions Do Not Require Registration

Obtaining An Exemption Reduces Time And Cost

Exempt Transactions

Regulation D - Private Placement Exemption

Maximum Of 35 Non-Accredited Investors

Unlimited Number Of Accredited Investors

No Dollar Limit; No Limit On Units

partnerships. Initial offerings of these issues must be sold through a prospectus.

However, if new issues of non-exempt securities are offered through an exempt transaction, no prospectus is required. For example, if a new issue of common stock (a non-exempt security) is sold in a private placement (an exempt transaction), no registration is required.

Obtaining an exemption from registration means that the issuer can avoid the very costly and time-consuming registration process with the SEC. If an issuer can take advantage of an exemption, it will certainly do so.

The only exempt transaction included in the exam is a private placement under Regulation D.

Regulation D - Private Placements: If an issue is offered "privately," it is not considered to be a "public" offering and the transaction is exempt from SEC registration. The SEC sets its requirements of what it considers to be a "private" offering under Regulation D.

Under Regulation D, an issue can be sold to a maximum of 35 "non-accredited" investors and an unlimited number of accredited investors.

Generally, an accredited investor is a wealthy investor. An accredited investor is defined under Rule 501 as a purchaser who meets one of the following tests:

Individual with a net worth of \$1,000,000.

Individual with annual income of \$200,000 a year for the past 2 years; or married couple with a joint income of \$300,000; and a reasonable expectation of continuing to earn that level of income in the future.

Individual who is an officer or director of the issuer.

Financial Institutions such as banks, insurance companies, mutual funds, with assets in excess of \$5,000,000.

Non-profit institutional investors such as pension plans and college endowment funds with assets in excess of \$5,000,000.

There is no limit on the dollar amount sold, the number of units sold, or the number of states in which the offering is made.



4d. THE EFFECTIVE DATE

If an exemption is not available, then the new securities issue must be registered with the SEC and must complete the "20 day cooling off period." At the end of 20 days, given that there are no problems, registration is "effective." This is the first day that the issue can be sold with the prospectus; and it is also the first day that the issue can start trading in the secondary market.

Initial Public Offering

If this is an "IPO" - an Initial Public Offering, then the stock never traded previously in the market. When it starts trading in the market, the price might stay right around the P.O.P. in the prospectus. However, it could also rise above the "Public Offering Price" (P.O.P.) in the prospectus, making the issue a so-called "hot issue." If the price starts falling in the secondary market, then the issue is a so-called "sticky issue" because it can be stuck in the hands of the underwriters.

Add On Offering

In contrast, if this is an "Add-On Offering" - also called a secondary share offering - then the issuer already has publicly traded shares outstanding. This publicly-traded issuer is raising additional capital, say to buy out another company. Such a company has a market price already and the offering is priced on the effective date at that market price.

Let's use an example of a common stock issue that has a P.O.P. of \$20 per share. The company qualifies for trading on NASDAQ, and as of the effective date, the first quote on the NASDAQ system for the stock is 28-29. Anyone who can purchase the stock at the P.O.P. from the syndicate can immediately resell at the bid price of \$28 and enjoy a fine profit.

This is a **HOT** issue. Any registered representative in the syndicate handling this issue would have an idea that this issue might be hot because he or she collected indications during the cooling off period for, say, 10,000 shares and when the registration went effective, the representative was informed that he or she was allocated 500 shares to sell. To whom would the representative like to sell those shares? To him- or herself, of course! This is prohibited.

FINRA Prohibits Industry "Insiders" From Buying Any IPO

Rule 5130

FINRA does not allow industry "insiders" to buy common equity IPOs (initial public offerings) from underwriters, specifically to insure that this practice does not occur. The rule, known as Rule 5130, is actually quite restrictive, because it applies to all equity IPOs - not just to those that become "hot."

Persons Restricted From Buying IPOs The "restricted persons" who are prohibited from buying IPOs of common stock are broadly defined into 4 groups:

FINRA Member Firms, Officers, Employees And Immediate Family

1. Member firms for their own accounts, officers of member firms, associated persons, or any other employee of a member firm are restricted. Also prohibited are "agents" of broker-dealers; and immediate family members of the officers and employees of broker-dealers.

Fiduciaries To FINRA Member Firms

2. Fiduciaries to member firms are restricted, such as lawyers, accountants and financial consultants who provide services to member firms.

Portfolio Managers

3. Portfolio managers who have authority to buy or sell securities for institutional investors are restricted.

Passive Owners Of Broker-Dealers

4. Passive owners of broker-dealers that are not included in Category 1 are restricted as well.

The intent of the rule is that a "bona-fide" public offering of new issues must be made; the issue cannot be placed in the hands of favored individuals who are essentially "insiders."

Green Shoe Clause

To reduce the degree of potential price rise on "oversold" issues, many underwriting agreements contain a "Green Shoe" clause. This states that the underwriters may request up to 15% additional shares to cover overselling. (The name comes from the first underwriting to do this - The Green Shoe Company.)

Sticky Issue

Now consider what happens if an issue were to open in the trading market at an immediate discount to the Public Offering Price. Assume that the P.O.P. is set at \$20 per share and the opening quote on NASDAQ is 17 - 18. Anyone who buys from the syndicate takes an immediate loss of 3 points. Sale of the issue by the syndicate at the P.O.P. would become nonexistent! The issue would be "stuck" on the hands of the underwriters.

Stabilizing Bid

To prevent this, the manager of the syndicate is allowed to "stabilize" the price of the issue in the trading market. Before the issue opens for trading, the manager will enter a "Stabilizing Bid" in the NASDAQ System, let us say at \$20. This sets a minimum price of \$20 for the issue in the trading market. Anyone who wishes to sell can receive \$20 from the manager.

At Or Just Below P.O.P. Never Above

Stabilizing bids are entered at or just below the P.O.P. It is prohibited to enter a stabilizing bid above the P.O.P. because this would create an instant hot issue. The risk to



the manager is that he may wind up buying back the entire issue placed by the syndicate. This will occur if the syndicate members sold the issue to customers who were looking for a quick price rise, and if this didn't happen, dumped the issue. The manager wants the issue placed in the hands of long-term investors who are not looking for immediate profits.

Penalty Bid Clause

To influence the syndicate to sell only to long-term investors, not speculators, the manager will put a "syndicate penalty bid clause" into the syndicate agreement. This clause states that if the manager buys back too many shares (too many people "hitting the stabilizing bid") placed by any single syndicate member, that member loses his underwriter's concession on those shares.

4e. SEC REGULATION M

Regulation M (Rules 101 - 105)

Regulation M governs the activities of underwriters, market makers, issuers, and selling shareholders that have an interest in the outcome of a prospectus offering of securities. One of the concerns of the SEC is that, in additional issue offerings, market makers who are also syndicate members, could manipulate the price of underwritten security upwards prior to the effective date.

The SEC deals with this potential market manipulation through Regulation M. Only securities that can be readily manipulated are subject to Regulation M - that is, securities that are not actively traded or have a small number of shares outstanding. Actively traded securities are not subject to the regulation, nor are investment grade non-convertible debt, preferred stock and asset-based issues. The rules under Regulation M are:

Rule 101 - Restrictions On Syndicate Members Who Are NOT Market Makers

Rule 101: This rule applies only to Add-On offerings. The worry of the SEC is that members of the syndicate might attempt to "push up" the price of a secondary offering during the 20 day cooling off period, which would give the underwriters a larger spread. To stop this manipulation, Rule 101 was created.

Syndicate members who are not market makers in that stock are subject to a restricted period for secondary offerings, of either 1 business day or 5 business days prior to the effective date, where they are prohibited from purchasing, making a bid for, or inducing the purchase of, the underwritten security. Note that they can accept unsolicited orders to buy the security. The rule states that:

**Tier 1 Issue -
Actively Traded
No Restrictions**

If the security is actively traded (average daily trading volume of \$1,000,000 or more and public float of at least \$150,000,000), there are **no** restrictions placed on market makers trading the issue prior to the distribution. The idea here is that this issue is too big for the price to be manipulated. This is called a "Tier 1" issue.

**Tier 2 Issue -
Moderate Trading
1 Day Restriction**

If the security has an average daily trading volume of \$100,000 and a public float of at least \$25,000,000 the restricted period is the business day prior to the effective date. This is called a "Tier 2" issue.

**Tier 3 Issue -
Inactive Trading
5 Day Restriction**

Any other security not meeting these minimums is a "Tier 3" issue and is subject to a restricted period of 5 business days prior to the effective date.

Regulation M - Trading Restrictions On Syndicate Members That Are NOT Market Makers

	Average Daily Trading Volume	Public Float
5 Day Restricted Period	Zero	Zero
	\$100,000	\$25,000,000
1 Day Restricted Period	Over \$100,000	Over \$25,000,000
	\$1,000,000	\$150,000,000
No Restricted Period	Over \$1,000,000	Over \$150,000,000

Again, note that these restrictions are in place for the time window prior to the effective date and syndicate members who are not market makers are



prohibited from buying, making a bid for, or inducing the purchase of the underwritten security.

**Rule 102 -
Restrictions On Issuers
And Selling Shareholders**

Rule 102: Places similar restrictions as Rule 101, but applies to issuers and selling shareholders.

**Rule 103 -
Restrictions On
Syndicate Members
Who Are Market Makers**

Rule 103: Syndicate members who are market makers in that security may either:

seek an excused withdrawal from making a market in that security - that is, get permission of FINRA to stop making a market during this period; or

may elect to operate as a "passive" market maker - that is, they may bid for that security at no higher than the highest current independent bid. Thus, they cannot push the price up in the market. If they elect to operate as passive market makers, any bids are identified as "PSMM" - as in passive market maker

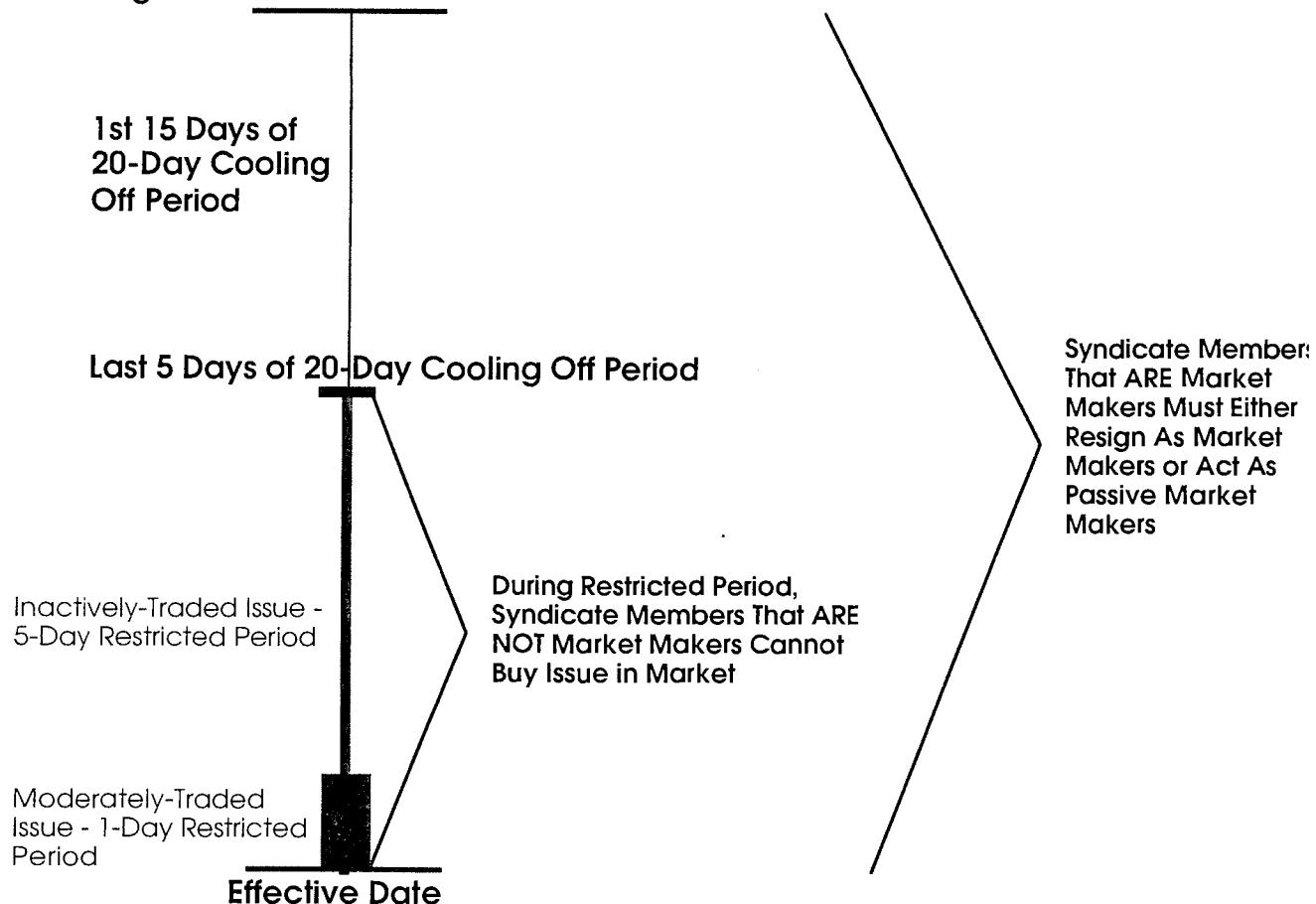
Note that again, under Rule 103, unsolicited customer orders to buy may be accepted at any price.

In addition, passive market makers are limited as to the amount of "net purchases" of that security (orders from all sources) that can be made on any day during the restricted period. The limit is 30% of that market maker's average daily trading volume (ADTV) over the preceding month or 200 shares (net purchases), whichever is greater. Once this limit is reached for the day, it must obtain an excused withdrawal from making a market from FINRA.

A chart that compares the restrictions of Rules 101 to Rule 103 is presented following.

Regulation M "Add-On" Offering Restrictions During Underwriting Period

Registration Statement Filed with SEC



Rule 104 - Stabilization Rules

Rule 104: Details the requirements for stabilization of a new issue in the aftermarket. The SEC recognizes that stabilization in the aftermarket can be necessary to have a successful distribution of securities. If the price of the issue were to drop precipitously after a distribution, primary market sales could be seriously affected.

Rule 104 exempts stabilization from being viewed as manipulation - as long as the following are met:

Notice Of Stabilization

A "Notice of Stabilization" must appear on the inside front cover of the prospectus. This notice states that the underwriter may start stabilizing the issue and may stop stabilizing the issue at any time **and** that when stabilization stops, the price of the issue may **drop** in the aftermarket. In this manner, purchasers are placed on notice about the possible effects of stabilization activities.



Only 1 Stabilizing Bid

**Stabilizing Bid Is A
"One-Sided" Quote**

**At Or Below The POP -
Never Above**

Never Higher Than

**If There Is An
Independent Market, Bid
Can Be No Higher Than
Last Reported Trade As
Long As Current Ask
Is The Same Or Higher**

**Otherwise, Bid No Higher
Than Current Independent
Bid**

**Bid Cannot Be Entered
Prior To Effective Date**

**Public Orders To Buy
Have Priority**

**No Stabilization For
"At The Market"
Offerings**

Only one stabilizing bid is allowed per market or market maker. The syndicate agreement will state that the manager is the sole firm that can effect stabilizing transactions. Stabilizing bids are entered as "one-sided quotes" - only the bid side shows with an identifier that it is a stabilizing bid (e.g., on NASDAQ, the bid is identified as a stabilizing bid).

Prior to placing a stabilizing bid, the syndicate manager must submit a request to the exchange, such as NASDAQ, for the entry of a 1-sided bid.

A stabilizing bid can only be placed at or below the Public Offering Price. A stabilizing bid can never be placed above the public offering price (since this would make an instant "hot" issue).

If a current independent market exists for the security at the time that the stabilizing bid is placed, the rules change.

The bid cannot be entered any higher than the last reported trade, as long as the current ask price is equal to, or higher than, the last reported trade.

If these conditions cannot be met, then the stabilizing bid cannot be entered at any price higher than the current independent bid.

The stabilizing bid can only be entered on the effective date of the offering, not before (for an IPO). To take effect, there must be other independent market makers placing bids aside from the stabilizing bid.

Any orders to buy from the public have priority over stabilizing orders to buy at that price or lower.

Stabilization is not allowed for "at the market" offerings. There must be an established Public Offering Price stated in the prospectus. The definition of an "at the market" offering is one where the shares are sold into an existing trading market through an exchange or a market maker at "other than a fixed price." Thus, the market price for the issue prevails.

No time limit or numerical limit is placed on stabilization activities. However, stabilization must stop when the manager disbands the syndicate.

All records of stabilization must be retained by the manager for 3 years.

Rule 105 -
Impedes Short Sellers
From Pushing Down
A Security's Price
Prior To The Effective
Date

Rule 105: This rule applies when a registration statement has been filed for an equity offering and there are already shares of that company's stock outstanding. Prior to the adoption of this rule, a common trading practice was for overly aggressive independent traders to short that stock in the market - pushing the price down during the 20 day cooling off period.

The fall in the market price would force the underwriters to lower the Public Offering Price of the issue. Thus, when registration became effective, the independent trading firms could buy the issue from the underwriters at the lower P.O.P., cover their short positions, and have a nice profit. The problem is, however, that this activity is clearly manipulative.

The SEC takes a dim view of this activity, and under Rule 105, prohibits broker-dealers from purchasing shares of stock from the underwriters at the offering price to cover short positions established within 5 business days of the effective date.

Transactions
Exempt From
Regulation M

Finally, certain transactions by market participants in an add-on offering are not likely to have an impact of the price of the covered security and are exempted from the provisions of Regulation M. These are:

Odd lot trades (since these are usually accommodation orders and their small size will not impact the stock's price);

Unsolicited customer orders to buy that are not effected through another broker-dealer (since the stock is trading in the market, these unsolicited customer orders can be filled, but solicitation of customer orders to buy is prohibited); and

Exercises of options, warrants, rights or conversion privileges (since these do not go through the market, they do not affect the market price).



SECURITIES ACTS SECTION EXAMINATION

1.

All of the following activities are prohibited during the "cooling off" period **EXCEPT**:

- a. accepting an order for the issue in registration
- b. confirming a certain amount of the issue to a customer
- c. accepting a check from a customer for part of an issue
- d. accepting an indication of interest from the customer for part of the issue

4.

A registered representative has prepared a research report about a new stock issue that is being underwritten by his firm and that is currently in registration. The registered representative wishes to send the report to customers. Which statement is true?

- a. The report can be mailed without restriction
- b. The report constitutes an "offer" under the '33 Act and cannot be sent
- c. The report can only be mailed if approved or prepared by a Supervisory Analyst
- d. The report can only be sent if accompanied or preceded by a preliminary prospectus

2.

A new issue offering to a maximum of 35 non-accredited investors that has not been registered with the SEC:

- a. is exempt under Regulation A
- b. is exempt under Regulation D
- c. is exempt under Rule 144
- d. is not exempt and must be registered

3.

If the SEC sends a deficiency letter to the issuer regarding an issue in registration:

- a. it disapproves of registering the issue
- b. disclosure is not considered to be adequate
- c. the underwriters have failed to establish the Public Offering Price
- d. due diligence has not been performed by the underwriters

5.

Under the Securities Act of 1933, a non-exempt issue must be registered if:

- a. the mails or other means of interstate commerce are used to offer the security
- b. the issue is offered in more than 2 states
- c. the dollar amount raised exceeds \$100,000 within 12 months
- d. the issue is offered to more than 10 investors within 12 months

6.

Which of the following are considered to be "accredited investors" under Regulation D?

- I A financial institution
 - II A limited partnership formed by 10 investors with capitalization of \$1,000,000
 - III An individual who consistently earns \$250,000 per year
 - IV A director of the issuer who earns \$100,000 per year
- a. I and II only
 - b. III and IV only
 - c. I, III, IV
 - d. I, II, III, IV

8.

A broker-dealer outside the underwriting group that sells short the outstanding shares of a company over-the-counter 2 business days prior to the effective date for an additional issue offering for that company. The broker-dealer:

- a. has committed a manipulative practice under the Securities and Exchange Act of 1934
- b. is prohibited from buying the common shares of that company through the underwriters at the offering
- c. can cover the short sale by purchasing common shares from selling group members at the offering
- d. must sell short on an uptick or zero-uptick

9.

The SEC regulation that deals with potential manipulation in the trading market related to additional issue offerings is:

- a. Regulation A
- b. Regulation D
- c. Regulation M
- d. Regulation S

7.

Which of the following statements are true regarding stabilization?

- I Only 1 stabilizing bid is permitted
 - II A stabilizing bid can only be placed if there is an independent bid for that security
 - III Any stabilizing bid cannot be higher than the highest current independent bid for the security
- a. I only
 - b. I and III only
 - c. II and III only
 - d. I, II, III

10.

Under Regulation M, Tier 1 securities are those with a minimum:

- I daily trading volume of \$100,000
 - II daily trading volume of \$1,000,000
 - III market float of \$25,000,000
 - IV market float of \$150,000,000
- a. I and III
 - b. I and IV
 - c. II and III
 - d. II and IV



SECURITIES ACTS SECTION EXAMINATION EXPLANATIONS

1. The best answer is d. During the cooling off period, an offer or sale of the issue is prohibited. Sending a preliminary prospectus or accepting an indication of interest does not constitute an "offer" under the Act of 1933. Accepting an order, confirming a certain amount of the issue, or accepting a check from a customer are all considered to be "sales" and are prohibited until registration is effective.
2. The best answer is b. Regulation D allows a "private placement" exemption if an issue is sold to a maximum of 35 "non-accredited" investors. The issue can be sold to an unlimited number of "accredited" investors under this exemption and still be considered a private placement.
3. The best answer is b. An SEC "deficiency letter" indicates that there is not adequate disclosure in the registration documents to allow investors to make an informed decision. The deficiency must be cured before the SEC will allow the registration to be effective.
4. The best answer is b. During the "cooling off" period, the only items that do not constitute an "offer" or "sale" are the sending of a preliminary prospectus and the acceptance of an indication of interest. Anything more, such as sending a research report, is considered to be an "offer," which is prohibited until the registration is effective.
5. The best answer is a. The Securities Act of 1933 requires that all non-exempt new issues must be registered, if the mails or other means of interstate commerce are used to offer the security.
6. The best answer is c. Financial institutions; individuals who have earned \$200,000 for at least the last 2 years and who expect to continue to earn that level of income; and officers and directors of the issuer are all accredited investors. Individuals who have a net worth of \$1,000,000 or more are also accredited. However, individuals cannot be "grouped" together to take advantage of the \$1,000,000 limit. The 10 purchasers that are forming the limited partnership count as 10 individual investors and are non accredited unless individually each has income of \$200,000 or a net worth of \$1,000,000.
7. The best answer is d. All of the statements are true regarding stabilizing activities - only one stabilizing bid is permitted, usually placed by the manager. A stabilizing bid cannot be placed unless other market makers are also bidding for that security. Stabilizing bids can not be placed higher than the highest current independent bid for the security - and can never exceed the Public Offering Price.
8. The best answer is b. Rule 105 of Regulation M prohibits broker-dealers from buying shares from underwriters to cover short positions in that stock established in the 5 business day time window prior to the effective date.

9. The best answer is c. Regulation M deals primarily with manipulation of securities being underwritten in the marketplace by syndicate members. Regulation A is an SEC exemption from registration for small dollar offerings. Regulation D is an SEC exemption from registration for private placements. Regulation S is an SEC exemption from registration for securities sold outside the United States.

10. The best answer is d. Rule 101 of Regulation M covers syndicate members who are not market makers in that stock that are in an underwriting group for an “add on” stock offering. The intent is to make sure that they do not try and manipulate the price of the security upwards prior to the effective date, so that a higher POP could be set. They are subject to a restricted period for secondary offerings, of either 1 business day or 5 business days prior to the effective date, where they are prohibited from purchasing, making a bid for, or inducing the purchase of, the underwritten security. If the security is very actively traded, there is no restricted period. Note that they can accept unsolicited orders to buy the security. The rule states that:

Tier 1 Issue - if the security is actively traded (average daily trading volume of \$1,000,000 or more and public float of at least \$150,000,000), there are **no** restrictions placed on market makers trading the issue prior to the distribution. The idea here is that this issue is too big for the price to be manipulated. This is called a “Tier 1” issue.

Tier 2 Issue - if the security has an average daily trading volume of \$100,000 and a public float of at least \$25,000,000 the restricted period is the business day prior to the effective date. This is called a “Tier 2” issue.

Tier 3 Issue - any other security not meeting these minimums is a “Tier 3” issue and is subject to a restricted period of 5 business days prior to the effective date.

OPTIONS

TAR





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SECTION 1: OPTIONS BASICS

1a. DEFINITION OF AN OPTION

Option Contract

An option is a contract entered into between two parties. The buyer of the contract is called the option **holder**. The seller of the contract is called the option **writer**.

Holder / Writer

Other terminology is used as well to describe the holder and writer of a contract. The holder is said to be the **buyer** of the contract and is "long" the contract. The writer is said to be the **seller** of the contract and is "short" the contract.

Contract Holder = Contract Buyer = Long Position

Contract Writer = Contract Seller = Short Position

Call Contract

Two types of contracts exist. The first type of contract allows the holder to **buy** a security from the writer at a fixed price at any time during the life of the option. This type of option allows the holder to "call away" the security from the writer and hence is termed a "**call**" option. If the writer is "called," the contract obligates the writer to deliver the securities to the holder at the fixed price.

Put Contract

The second type of contract allows the holder to **sell** a security to the writer at a fixed price at any time during the life of the option. This type of option allows the holder to "put" the security to the writer and hence is termed a "**put**" option. If the securities are "put" to the writer, the contract obligates the writer to buy the securities at the fixed price.

Strike Price

The fixed price specified in the contract at which the holder can either "call away" the security or "put" the security is called the **strike price** or **exercise price**. The life of the contract is specified by the expiration date of the contract. The amount of the underlying security covered by the contract (termed the "**multiplier**") differs depending on the underlying security.

Multiplier Depends Upon Underlying Instrument

If the underlying instrument is stock, the contract covers 100 shares. Options are also available for other underlying instruments, including stock indexes; interest rate indexes; and foreign currencies. The multiplier for stock and interest rate indexes is 100; while for foreign currencies, the multiplier differs for each currency type.

For example, a customer buys 1 XXX Jan 120 Call.

The customer has the right to buy 100 shares of XXX stock at \$120 a share until the contract expires in January, no matter what happens to XXX's market price.

For example, a customer buys 1 XXX Jan 120 Put.

The customer has the right to sell 100 shares of XXX stock at \$120 a share until the contract expires in January, no matter what happens to XXX's market price.

Premium

In order to secure the contract, the holder will pay a "**premium**" to the writer. The premium is really the price of the contract. Do not confuse the premium with the strike price of the underlying security. If a customer buys 1 XXX Jan 120 Call @ \$5, he is paying a premium of \$5 per share (\$500 for the contract).

The holder of a contract has 3 choices regarding the contract - it can be exercised, it can be left to expire, or it can be traded.

Contract Exercised

If a call contract is exercised, the holder buys the underlying security at the strike price from the contract writer. Thus, the writer is obligated to sell the underlying security upon exercise.

If a put contract is exercised, the holder sells the underlying security at the strike price to the contract writer. Thus, the writer is obligated to buy the underlying security upon exercise.

Contract Expires

If the holder of a contract allows the contract to expire, he loses the premium paid. Conversely, the writer earns the premium received.

Contract Traded

If a holder trades his contract, he sells it to someone else prior to expiration. He will profit if the premium received exceeds that which he originally paid for the contract.

1b. TRADING OF OPTIONS AND THE PREMIUM

Trading Of Options On Exchanges

Option contracts are traded on exchanges. The exchange where the option trades is usually different from the exchange where the underlying security trades. For example, IBM stock is listed on the New York Stock Exchange, but IBM option contracts trade on the Chicago Board Options Exchange (CBOE).



Also, please note that until mid-1999, each major option contract was only traded on 1 exchange. For example, IBM options were traded on the CBOE only; they were not traded on the AMEX or PHLX exchanges. However, in response to a Justice Department inquiry on anti-competitive practices in listing options contracts, this "exclusive" listing arrangement was abandoned. All of the options exchanges now compete and options contracts are multiple listed.

Premium Is Market Price Of Option

Just as the market price of IBM stock is continuously determined on the floor of the NYSE, the market price of IBM Calls and Puts is determined on the floor of the CBOE. The market price of an option is called the "**premium**." To buy a contract, the holder pays the premium. Conversely, the writer of a contract receives the premium.

Longer "Time" Increases Premium

The premium or "price" of a contract is influenced by a number of factors. First, the longer the contract has until expiration, the greater the chance that the underlying security's price will move in the desired direction. This will increase the option premium.

Greater Volatility Increases Premium

Second, the more volatile the underlying security, the greater the chance that the underlying security's price will move in the desired direction. This will also increase the option premium.

"Intrinsic Value" Increases Premium

Third, at the time of the trade, the contract may have "intrinsic value." If the contract has intrinsic value, this amount is included in the premium. The higher the intrinsic value, the higher the premium.

1c. INTRINSIC VALUE - "IN THE MONEY" AND "OUT THE MONEY"

The strike price of an option contract is set in a standardized fashion that makes the contracts easy to trade. When a new contract is issued, it would seem to make sense that the current market price of the stock would be the strike price of the contract. Doing this would make options very difficult to trade. For every point a stock rises, there would be 100 different contracts issued with prices in increments of cents. If a stock rose 5 points, there would be 500 different contracts trading. With trading spread among so many contracts, the market would become very thin for each contract and marketability risk would increase.

Standardized Option Contracts

Instead, options strike prices are standardized. For most stocks (those with market prices between \$25 and \$200), options may only be issued with strike prices having 5 point intervals nearest to where the stock is currently

trading. When a stock is trading at \$43, contracts can be issued having \$40 and \$45 strike prices. When the stock moves up to \$46, contracts can be issued at 45 and 50. If the price moves to \$52, contracts can be issued at 50 and 55, etc.

**Strike Price Fixed
At Issuance**

Premium Varies

"In The Money"

Time Premium

"Out the Money"

Once the contract is issued, the strike price is fixed. As the market price of the stock now fluctuates, the premium or "price" of the contract adjusts to reflect the changing value.

Assume that a customer wants to buy 1 ABC Jan 50 Call when the market price of ABC is \$52 per share. This contract has "intrinsic value" of \$2 per share since the holder has the right to buy stock at \$50 when the stock is worth \$52. The call contract is said to be "in the money" by \$2. The \$2 of intrinsic value represents the minimum premium for the contract. Assume that the writer of the ABC Jan 50 Call is willing to sell the contract for a premium of \$5 per share. Of the total \$5 premium, \$2 represents the "in the money" amount, while the remaining \$3 is called the "time" premium. This is the amount above intrinsic value that the buyer pays for the remaining time to expiration of the contract.

Assume a customer wants to buy 1 ABC Jan 50 Call at a \$3 premium when the market price of ABC stock is \$50 per share. This contract has **no** intrinsic value (the holder can buy stock at 50 which is worth 50). The total premium of \$3 is all time value. This contract is said to be "at the money".

Assume a customer wants to buy 1 ABC Jan 50 Call at a \$1 premium when the market price is \$47 per share. This contract has no intrinsic value. As a matter of fact, this contract won't be worth very much at all since the holder has the right to buy stock at \$50 which is currently worth \$47. This contract is "out the money" by \$3. Because the contract is "out the money," the premium is quite low (\$1) and really represents the time value of the contract reduced in the market by the out the money amount. The total premium of an out the money contract is considered to be "time" premium.

For example, a customer buys 1 ABC Jan 50 Call @ 4 when the market price of ABC is \$51. How much of the premium is time value?

Answer: Since the contract is in the money by \$1 per share (the holder can buy stock for \$50 when it is worth \$51), the remaining \$3 per share is the time premium.

For example, a customer buys 1 ABC Jan 50 Call @ 2 when the market price of ABC is \$49. How much of the premium is time value?



Answer: Since the contract is out the money by \$1 per share (the holder can buy stock for \$50 when it is worth \$49), the entire premium of \$2 is time value.

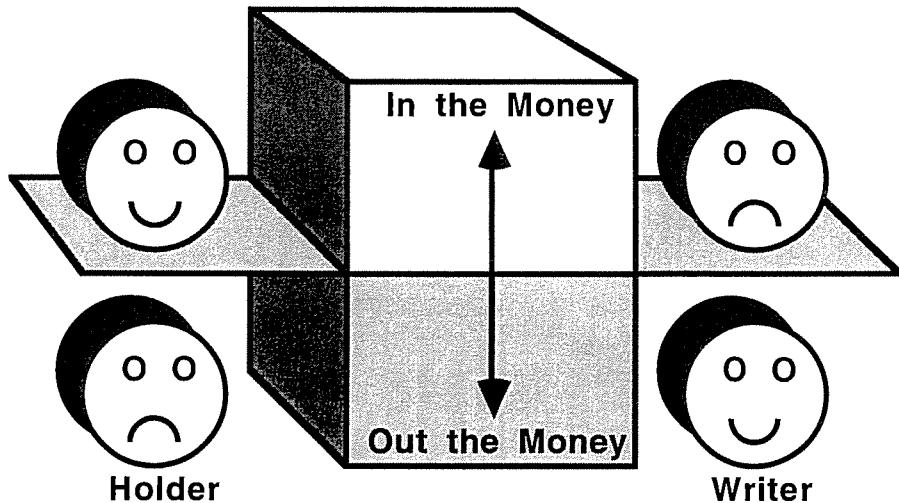
**As Contract Goes
"In The Money" -
Premium Increases**

As a contract moves "in the money," the premium increases in the market to reflect the increased value. As a contract moves "out the money," the premium falls in the market to reflect the decreased value.

**As Contract Goes
"Out The Money" -
Premium Decreases**

In the money and at the money amounts are always looked at from the holder's perspective. An in the money contract is one which can be exercised to the profit of the holder. An out the money contract is one which would not be exercised so that the writer keeps the entire premium. Thus, holders are happy when contracts go "in the money;" writers are unhappy about this. Conversely, holders are unhappy when contracts go "out the money;" writers are happy about this.

**"In" And "Out"
Always Holder's
Perspective**



CALLS

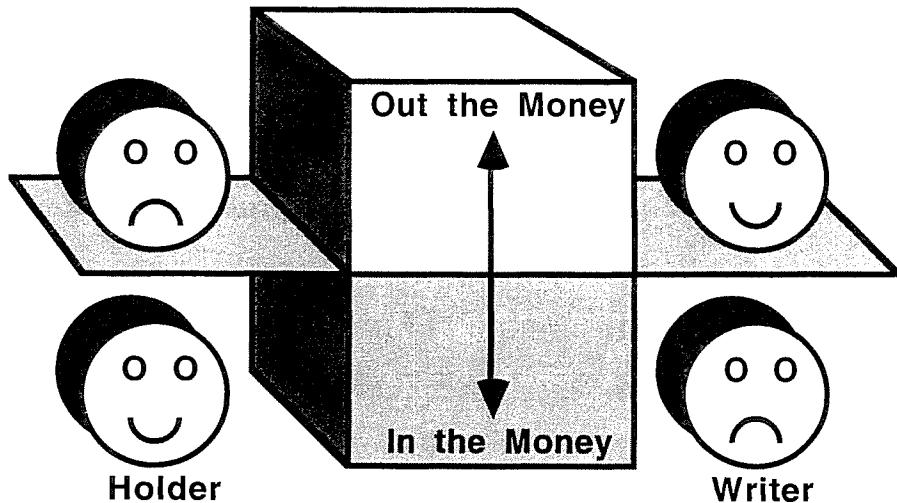
To summarize for call contracts:

Calls are "in the money" when the market price is HIGHER than the strike price.

Calls are "at the money" when the market price is the SAME as the strike price.

Calls are "out the money" when the market price is LOWER than the strike price.

The situation is reversed for put contracts.



PUTS

To summarize for put contracts:

Puts are "in the money" when the market price is LOWER than the strike price.

Puts are "at the money" when the market price is the SAME as the strike price.

Puts are "out the money" when the market price is HIGHER than the strike price.

Examples of "in" and "out" for put contracts are below:

A customer buys 1 ABC Jan 50 Put @ \$5 when the market price of ABC stock is \$48. Since the holder has the right to sell stock for \$50 when it is worth \$48 in the market, the contract has intrinsic value of \$2 per share. The put is "in the money" by \$2. Since the total premium is \$5, the \$3 excess premium above intrinsic value is the time premium.

A customer buys 1 ABC Jan 50 Put @ \$3 when the market price of ABC stock is \$50. The holder can sell stock for \$50 which is worth \$50 in the market. This contract is "at the money" and has no intrinsic value. The entire premium is "time premium."

A customer buys 1 ABC Jan 50 Put @ \$1 when the market price of ABC stock is \$52. The holder can sell stock for \$50 which is currently worth \$52. This contract is "out the money" by \$2 per share. The low premium of \$1 reflects this and is all "time premium".

Parity

Another term that must be known for options contracts is "parity." When the market premium exactly equals the



intrinsic value of the option, the contract is said to be trading at parity. For example, an ABC Jul 50 Call @ \$3 is at "parity" when the market price of ABC stock is at 53. An ABC Jul 50 Put @ \$3 is at "parity" when the market price of ABC stock is at 47.

1d. OPENING AND CLOSING POSITIONS

Opening Purchase

We have already stated that there are two parties to an option contract, the holder and the writer. To establish the contract, the holder is said to make an "opening purchase" of the contract.

Closing Sale

The holder can choose to exercise the contract, resulting in a stock transaction, can let the contract expire, or can trade the contract. If the holder trades the contract to someone else, he closes his position with a "closing sale."

Opening Sale

The writer of that contract makes an "opening sale" of the contract. The term "opening" is used because a new short position is being created. (Please note that when any security is traded, one does not have to buy first and then sell second. One can also sell first (a "short sale") and buy back second.)

Closing Purchase

The writer is passive in that he can not choose to exercise the contract - that is decided by the holder. But, the writer can trade the contract to someone else. If the writer trades the contract to someone else, he closes the position with a "closing purchase."

Open Interest

The number of open contracts is termed the "open interest."

If both the holder and writer "open" a position at the same time, the open interest in that contract has been increased by 1 contract;

If both the holder and the writer "close" a position at the same time, the open interest in that contract has been decreased by 1 contract;

If a holder "opens" a position against a writer who is "closing;" or vice-versa;, there is no change in open interest. In essence, the person who is opening a position is assuming the existing contract of the person who is closing that position, so there is no change in the number of contracts outstanding.

As contracts get close to expiration, closing transactions increase, reducing the "open interest." At expiration, the

open interest is zero since all remaining open contracts are void.

The larger the "open interest" in a specific option, the greater the number of existing contracts available to trade. Thus, professional traders are more likely to trade contracts with a large "open interest," since their market is more liquid, than those less-liquid contracts with a small "open interest."



OPTIONS BASICS SECTION EXAMINATION

1.

Which of the following influence the premium of a listed option?

- I Length of time until expiration of the contract
 - II Volatility of underlying security
 - III Market price of underlying security
- a. I only
 - b. II only
 - c. III only
 - d. I, II, III

2.

"Intrinsic value" is defined as the:

- a. excess of premium over the underlying security's market price
- b. excess of time premium over the "in the money" amount
- c. difference between the strike price and market price of the underlying security, if exercise is profitable to the holder
- d. maximum potential gain on a contract

3.

A customer buys 1 Swiss Franc October 80 Call @ 6 when the Franc is trading at 85. The contract is:

- a. trading at parity
- b. "in the money"
- c. "out the money"
- d. "at the money"

Use the following information to answer the next 2 questions:

A customer buys 1 XMI Feb 250 Put @ 4 when XMI closes at 247.

4.

The time value in the premium is:

- a. 1 point
- b. 2 points
- c. 3 points
- d. 4 points

5.

The intrinsic value of the contract is:

- a. 1 point
- b. 2 points
- c. 3 points
- d. 4 points

6.

To establish a short call position, an order ticket must be marked:

- a. opening purchase
- b. opening sale
- c. closing purchase
- d. closing sale

7.

To liquidate a long put position, the order ticket must be marked:

- a. opening purchase
- b. opening sale
- c. closing purchase
- d. closing sale

8.

All of the following are standardized for listed option contracts **EXCEPT**:

- a. strike price
- b. contract size
- c. premium
- d. expiration

9.

Which of the following will decrease "open interest"?

- I Opening Purchase
- II Opening Sale
- III Closing Purchase
- IV Closing Sale

- a. I and II
- b. III and IV
- c. I and IV
- d. II and III

10.

Which contract will likely have the highest premium when ABC closes at \$38.

- a. ABC Jan 35 Call
- b. ABC Jan 35 Put
- c. ABC Jan 40 Call
- d. ABC Jan 30 Put



OPTIONS BASICS SECTION EXAMINATION EXPLANATIONS

1. The best answer is d. The longer the life of the option, the higher the premium; the greater the volatility of the underlying security, the higher the premium; the higher the market price of the stock, the higher the premium on a call contract (since it goes further "in the money"). The lower the market price of the stock, the higher the premium on a put contract (since it goes further "in the money"). Therefore, all 3 choices influence the premium.
2. The best answer is c. Intrinsic value is the amount by which an option contract is "in the money". It is the difference between the market price and exercise price, if exercise is profitable to the holder.
3. The best answer is b. Calls go "in the money" when the market price rises **above** the strike price. Since the market price is 85 while the contract allows the customer to buy at a strike price of 80, the call is "in the money" by 5 points.
4. The best answer is a. Since the put contract allows the holder to sell XMI at 250 when XMI is worth 247 the contract is "in the money" by 3 points. Remember, puts go "in the money" when the market drops. Of the total 4 point premium, 3 points are "intrinsic value." The balance of the premium (1 point) is "time premium."
5. The best answer is c. See explanation to question 4.
6. The best answer is b. To establish a short option position, the order ticket must be marked "opening sale." To liquidate this position, the order ticket is marked "closing purchase."
7. The best answer is d. To establish a long option position, the order ticket is marked "opening purchase." When this order is executed, a contract has been purchased for a holder. To liquidate this position, the order ticket is marked "closing sale." When this order is executed, the contract is sold to someone else.
8. The best answer is c. Exchange traded option contracts have standardized contract sizes (e.g. 100 shares of stock), expiration dates, and strike prices. The premium or "price" of the option is determined minute by minute in the trading market.
9. The best answer is b. "Open Interest" is the number of option contracts (both calls and puts) outstanding. An opening purchase and opening sale creates a new contract and increases open interest. A closing sale and closing purchase liquidates an existing contract and decreases open interest. An opening purchase and closing sale (or vice-versa) has no effect on open interest, since this is simply a transfer of ownership of an existing contract. The greater the open interest, the greater the likely trading volume in the issue.
10. The best answer is a. The contract with the highest premium is likely to be the one that is the most "in the money." With the market price at \$38, the 35 call is "in the money" by 3 points. The 35 put is "out the money" by 3 points. The 40 call is "out the money" by 2 points. The 30 put is "out the money" by 8 points.

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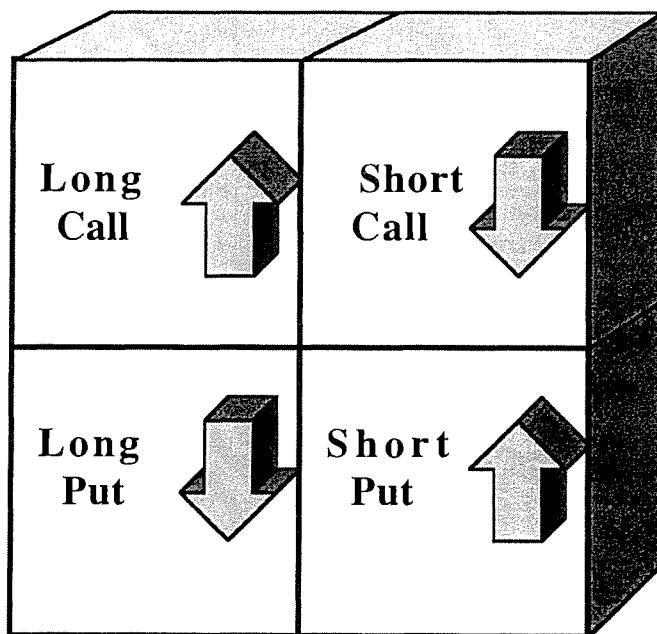
SECTION 2: SPECULATIVE OPTIONS STRATEGIES

2a. SPECULATIVE STRATEGIES OVERVIEW

Bull And Bear Strategies

A speculative option strategy is one which attempts to profit if the market price of the underlying security rises or falls. Strategies which profit from a rising market are "bull" strategies. Strategies which profit from falling markets are "bear" strategies.

There are four speculative strategies. They are:



The purchase of a call (long call) or the sale of a put (short put) will give the speculator a profit in a rising market. These are the bull strategies.

The purchase of a put (long put) or the sale of a call (short call) will give the speculator a profit in a falling market. These are the bear strategies.

2b. LONG CALL STRATEGY

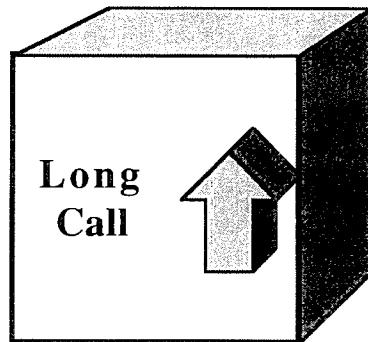
Holder Has "Right To Buy" Underlying Security

Assume that a customer buys 1 ABC Jan 50 Call @ \$5 when the market price of ABC stock is at \$51. The customer has the right to buy ABC stock at \$50 during the life of the option, and he pays a premium of \$5 per share for this right.

Unlimited Upside Gain Potential

If the market rises, the customer can exercise the option and buy the stock for \$50. He could then sell the stock in the market for its true value. Since the stock can rise an unlimited amount, he has theoretically unlimited gain potential as the contract goes further and further "in the money."

Call Holder Gains When Market Rises



Maximum Loss Premium Paid

On the other hand, if the market drops below \$50, it would not make sense to exercise the option since the contract is now "out the money". The customer would let the contract expire and would lose the premium paid. This represents the maximum potential loss.

**Breakeven =
Strike Price +
Premium**

To breakeven, the customer has to recover the \$5 premium paid. He will do this when the market price rises to \$55. At this point, the contract is "in the money" by \$5, yielding a profit on the stock that exactly offsets the premium paid.

The best way to calculate maximum potential gain, maximum potential loss, breakeven, as well as any true gain or loss on an option contract is by setting up the problem on a "T" diagram. If this is done properly, all of these facts stand out.

For example, a customer buys 1 ABC Jul 60 Call @ \$5 when the market price of ABC is \$51. What is the maximum potential loss? What is the maximum potential gain? What is the breakeven point?

To handle this problem, we set up the "T".

Option	Stock
Buy -\$5	



The customer pays a \$5 per share premium. This amount is put on the "option" side of the "T" as a negative number. If nothing else happens and the contract expires, he loses the \$5 premium for a \$500 total loss.

The next step to find both maximum potential gain and breakeven is to assume that the option has been "exercised." If this occurs, the customer buys the stock at the strike price. The "T" now shows:

Option	Stock
Buy -\$5	Buy -\$60 Breakeven = \$65

If the customer exercises, he has paid \$60 for the stock in addition to the \$5 for a total of \$65. To breakeven, he must recover the \$65 paid when he liquidates the stock position. Since the stock can rise an unlimited amount, the gain potential is unlimited as well. Assume that the customer is able to sell the stock in the market for \$75. What is his net gain or loss?

Option	Stock
Buy -\$5	Buy -\$60 Breakeven = \$65

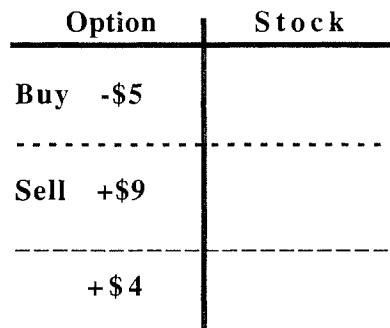
	Sell +\$75

-\$5	+\$15 Net Gain = \$10

For the stock, the customer makes \$15 per share profit, offset by the \$5 premium paid. The net gain is \$10 per share or \$1000 on the hundred shares covered by the call contract.

Instead of exercising, the customer could have simply traded the call contract to someone else. In doing so, he closes out his interest in the contract prior to expiration. Assume that the customer sells this contract in a closing sale transaction to

someone else for a \$9 premium. What is his net gain or loss? The "T" should show:



Because the contract was never exercised, there is no transaction in the underlying security (the stock). The option was simply closed out by trading the contract, resulting in a net gain of \$4 per share or \$400 for the contract.

To summarize the characteristics of buying a call:

Long Call	Bullish Market Direction
Maximum Gain	Unlimited
Maximum Loss	Premium Paid
Break-even Point	Strike Price + Premium

2c. SHORT CALL STRATEGY

Writer Has Obligation To Deliver (Sell) At The Strike Price Assume that a customer sells 1 ABC Jan 50 Call @ \$5 when the market price of ABC stock is at \$51. The customer is obligated to deliver (sell) ABC stock at \$50 during the life of the option, and he receives a premium of \$5 per share for this obligation.

Maximum Potential Loss - Unlimited

If the market rises, the customer will be exercised and must deliver the stock for \$50. He would then have to buy the stock in the market for its true value to be able to deliver on the sale. Since the stock can rise an unlimited amount, he has theoretically unlimited loss potential as the contract goes further and further "in the money." Because of the exposure to unlimited risk, this call writer is termed "naked" - exposed to substantial risk.

Naked Call Writer

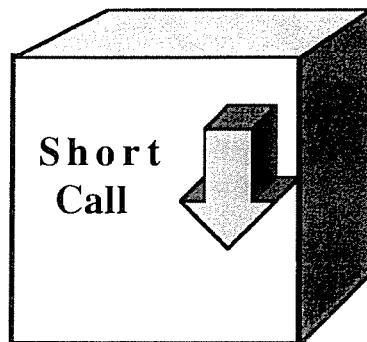
On the other hand, if the market drops below \$50, it would not make sense to exercise the option since the contract is now "out the money." The contract would expire and the

Maximum Potential Gain = Premium Received



writer would keep the premium received. This represents the maximum potential gain.

Call Writer Gains When Market Falls

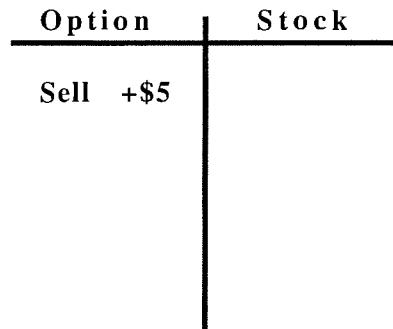


**Breakeven = Strike
Price + Premium**

To breakeven, the customer has to lose the \$5 premium received. He will do this when the market price rises to \$55. At this point, the contract is "in the money" by \$5, yielding a loss on the stock that exactly offsets the premium received.

For example, a customer sells 1 ABC Jul 60 Call @ \$5 when the market price of ABC is \$51. What is the maximum potential gain? What is the maximum potential loss? What is the breakeven point?

To handle this problem, we set up the "T".



The writer receives a \$5 per share premium, so this is placed on the "option" side of the "T". If nothing else happens, meaning the contract expires, he gains the \$5 premium for a \$500 total gain.

The next step to find both maximum potential loss and breakeven is to assume that the option has been "exercised." If this occurs, the customer sells the stock at the strike price. The "T" now shows:

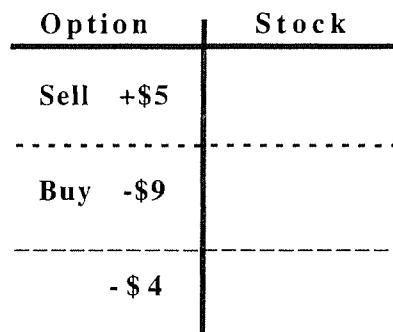
Option	Stock
Sell +\$5	Sell +\$60 Break-even = \$65

If the writer is exercised, he has received \$60 for selling the stock in addition to the \$5 premium for a total of \$65. To breakeven, he must lose the \$65 received when he purchases the stock position for delivery on the sale. Since the stock can rise an unlimited amount, the loss potential is unlimited as well. Assume that the writer is able to buy the stock in the market for \$75. What is his net gain or loss?

Option	Stock
Sell +\$5	Sell +\$60 Break-even = \$65
	Buy -\$75
+\$5	-\$15 Net Loss = \$10

On the stock, the writer loses \$15 per share, offset by the \$5 premium received. The net loss is \$10 per share or \$1000 on the hundred shares covered by the call contract.

Instead of waiting to be exercised, the writer could have simply traded the call contract to someone else. In doing so, he closes out his interest in the contract prior to expiration. Assume that the customer buys this contract back in a closing purchase transaction from someone else for a \$9 premium. What is his net gain or loss? The "T" should show:



Because the contract was never exercised, there is no transaction in the underlying security (the stock). The option was simply closed out by trading the contract, resulting in a net loss of \$4 per share or \$400 for the contract.

To summarize the characteristics of selling a call:

Short Naked Call	=	Bearish Market Direction
Maximum Gain	=	Premium Received
Maximum Loss	=	Unlimited
Break-even Point	=	Strike Price + Premium

2d. LONG PUT STRATEGY

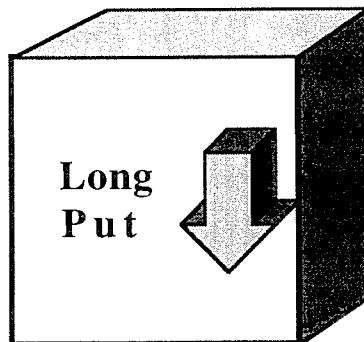
Holder Has "Right To Sell" At The Strike Price

Assume that a customer buys 1 ABC Jan 50 Put @ \$5 when the market price of ABC stock is at \$49. The holder has the right to sell ABC stock at \$50 during the life of the option, and he pays a premium of \$5 per share for this right.

Potential Gain Increases As Market Falls - Maximum Is Strike Price - Premium

If the market falls, the holder can exercise the option and sell the stock for \$50. He could then buy the stock in the market for its true value to deliver on the sale. Since the stock can fall to a value of "0", he has increasing gain as the contract goes further and further "in the money."

Put Holder Gains When Market Falls



Maximum Potential Loss = Premium Paid

Breakeven = Strike Price - Premium

On the other hand, if the market rises above \$50, it would not make sense to exercise the option since the contract is now "out the money." The customer would let the contract expire and would lose the premium paid. This represents the maximum potential loss.

To breakeven, the customer has to recover the \$5 premium paid. He will do this when the market price falls to \$45. At this point, the contract is "in the money" by \$5, yielding a profit on the stock that exactly offsets the premium paid.

For example, a customer buys 1 ABC Jul 60 Put @ \$5 when the market price of ABC is \$59. What is the maximum potential loss? What is the maximum potential gain? What is the breakeven point?

To handle this problem, we set up the "T".

Option	Stock
Buy -\$5	

The customer pays a \$5 per share premium, so this is shown on the "option" side of the "T". If nothing else happens and the contract expires, he loses the \$5 premium for a \$500 total loss.

The next step to find both maximum potential gain and breakeven is to assume that the option has been "exercised." If this occurs, the customer sells the stock at the strike price. The "T" now shows:



Option	Stock
Buy -\$5	Sell +\$60 Breakeven = \$55

If the customer exercises, he has received \$60 for selling the stock, offset by the premium paid of \$5, for a net price of \$55. To breakeven, he must pay the same \$55 to buy the stock position for delivery on the sale. Since the stock can fall to zero, the maximum gain occurs at this point. At a value of "0", the gain as shown on the "T" is:

Option	Stock
Buy -\$5	Sell +\$60 Breakeven = \$55
	Buy -\$ 0
- \$ 5	+ \$ 60 Net Gain = \$55

The maximum gain is \$55 per share or \$5500 for the contract. This assumes the customer can buy the stock for "nothing" to deliver on the sale.

Assume that the stock has fallen to \$45 and is bought to make delivery on the sale. The customer's position now shows:

Option	Stock
Buy -\$5	Sell +\$60 Breakeven = \$55
	Buy -\$45
- \$ 5	+ \$ 15 Net Gain = \$10

On the stock, the customer makes \$15 per share, offset by the \$5 premium paid. The net gain is \$10 per share or \$1000 on the hundred shares covered by the put contract.

Instead of exercising, the holder could have simply traded the put contract to someone else. In doing so, he closes out his interest in the contract prior to expiration. Assume that the holder sells this contract to someone else in a closing sale transaction for a \$9 premium. What is his net gain or loss? The "T" should show:

Option	Stock
Buy -\$5	
Sell +\$9	
	+\$4

Because the contract was never exercised, there is no transaction in the underlying security (the stock). The option was simply closed out by trading the contract, resulting in a net gain of \$4 per share or \$400 for the contract.

To summarize the characteristics of buying a put:

Long Put	=	Bearish Market Direction
Maximum Gain	=	(Occurs When Stock Price Falls to Zero) and Equals Strike Price - Premium
Maximum Loss	=	Premium Paid
Break-even Point	=	Strike Price - Premium

2e. SHORT PUT STRATEGY

Writer Has Obligation To Buy At The Strike Price

Assume that a customer sells 1 ABC Jan 50 Put @ \$5 when the market price of ABC stock is at \$49. The customer has the obligation to buy ABC stock at \$50 during the life of the option, and he receives a premium of \$5 per share for this obligation.



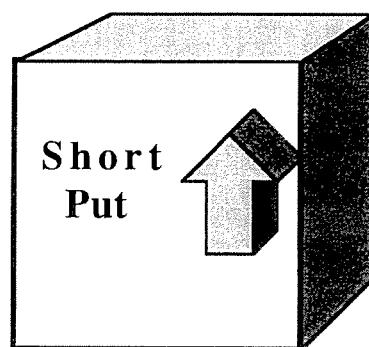
Potential Loss Increases As Market Falls. Maximum Loss Is Strike Price - Premium

Maximum Potential Gain = Premium Received

If the market falls, the contract will be exercised and the customer will buy the stock for \$50. He could then sell the stock in the market for its true value. Since the stock can fall to a value of "0", he has increasing loss as the contract goes further and further "in the money."

On the other hand, if the market rises above \$50, the contract would not be exercised since it is now "out of the money." The contract would expire and the writer will earn the premium received. This represents the maximum potential gain.

Put Writer Gains When Market Rises

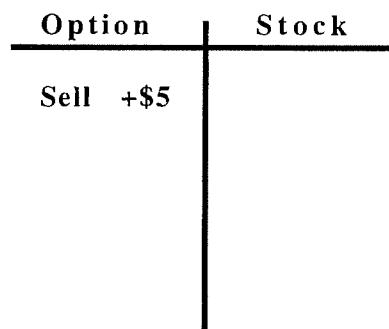


Breakeven = Strike Price - Premium

To breakeven, the customer has to lose the \$5 premium received. He will do this when the market price falls to \$45. At this point, the contract is "in the money" by \$5, yielding a loss on the stock that exactly offsets the premium received.

For example, a customer sells 1 ABC Jul 60 Put @ \$5 when the market price of ABC is \$59. What is the maximum potential gain? What is the maximum potential loss? What is the breakeven point?

To handle this problem, we set up the "T".



The customer receives a \$5 per share premium, so this is placed on the "option" side of the "T". If nothing else happens, the contract expires, and he earns the \$5 premium for a \$500 maximum gain.

The next step to find both maximum potential loss and breakeven is to assume that the option has been "exercised." If this occurs, the customer buys the stock at the strike price. The "T" now shows:

Option	Stock
Sell +\$5	Buy -\$60 Breakeven =\$55

If the customer is exercised, he pays \$60 to buy the stock, offset by the premium received of \$5. To breakeven, he must sell the stock for \$55 in the market. Since the stock can fall to zero, the maximum loss occurs at this point. At a value of "0", the loss as shown on the "T" is:

Option	Stock
Sell +\$5	Buy -\$60 Breakeven =\$55
	Sell +\$ 0
+\$ 5	-\$ 60 Net Loss = \$55

The maximum loss is \$55 per share or \$5500 for the contract. This assumes the customer sells the stock for "nothing" in the market. Because the writer is exposed to substantial risk, he is termed a "naked" put writer.

Assume that the stock has fallen to \$45 and is sold in the market. The customer's position now shows:

Option	Stock
Sell +\$5	Buy -\$60 Breakeven =\$55
	Sell +\$45
+\$ 5	-\$ 15 Net Loss = \$10



On the stock, the customer loses \$15 per share, offset by the \$5 premium received. The net loss is \$10 per share or \$1000 on the hundred shares covered by the put contract.

Instead of being exercised, the customer could have simply traded the put contract to someone else. In doing so, he closes out his interest in the contract prior to expiration. Assume that the customer buys in this contract in a closing purchase transaction for a \$9 premium. What is his net gain or loss? The "T" should show:

Option	Stock
Sell +\$5	
Buy -\$9	
	- \$ 4

Because the contract was never exercised, there is no transaction in the underlying security (the stock). The option was simply closed out by trading the contract, resulting in a net loss of \$4 per share or \$400 for the contract.

To summarize the characteristics of selling a put:

Short Naked Put	=	Bullish Market Direction
Maximum Gain	=	Premium
Maximum Loss	=	(Occurs When Stock Price Falls to Zero) and Equals Strike Price - Premium
Break-even Point	=	Strike Price - Premium

2f. DELTA, GAMMA, VEGA

When an individual is speculating using options, he or she is hoping to profit from a favorable premium movement. The rate of change of the premium of an option contract will vary, depending on the relationship between the market price of the stock and the strike price of the contract.

Delta: Rate Of Premium Change As Stock Price Moves

For example, assume that an ABC Jan 50 Call is purchased when the market price of ABC is \$30 per share for a premium of \$.05.

If the price of the stock moves to \$31, the premium is still likely to hover near "0," since the contract is so far out of the money. In this case, as the stock price is moving, the premium is not, and the option "delta" is "0".

If the price of the stock moves upwards towards \$50, the delta increases. Once the price of the stock moves past \$50, the delta will now be "+1," meaning that for every \$1 movement in stock price, the option premium will move by the same \$1. In the money call options have a delta of +1; in the money put options have a delta of -1 (for every dollar increase in stock price, the premium decreases by \$1).

Therefore, delta varies between "0" and + or - 1 for all options and measures how much the option's premium changes for each \$1 stock price movement. (In mathematics, the symbol delta is used to show value "change," and this was applied to options.)

In practical terms, owning an option with a delta of "1" will produce the same gain or loss as owning the underlying stock. Owning an options with a delta of "0" is the same as owning nothing.

Gamma: Rate Of Premium Change As Premium Moves

Gamma measures the change in delta, that is how slowly or quickly delta is moving. As an "out the money" option gets close to being "at the money," the rate of premium change accelerates and the gamma is the greatest. An option that is deep "out the money" has a gamma of "0" - the premium does not move as the stock price moves, since the option is basically worthless. An option that is "in the money" also has a gamma of "0" since the premium moves in lock-step, dollar-for-dollar, with the stock's price movement.

Therefore, gamma is greatest for an option that is right at the money and it diminishes the deeper the option goes in



or out the money. In practical terms, an option with a high gamma is the one with the highest volatility, which will magnify gains or losses as prices move.

**Vega: Rate Of
Premium Change
As Volatility Moves**

Vega measures the change in an option's value relative to the volatility of the underlying asset. It is expressed as the amount of money per underlying share that the option's value will gain or lose as volatility rises or falls by 1%. Similar to gamma, vega is greatest for an at the money option and diminishes as the option moves farther in or out the money.

SPECULATIVE STRATEGIES SECTION EXAMINATION

1.

Which of the following option strategies are profitable in a rising market?

I Long Call

II Long Put

III Short Call

IV Short Put

a. I, II

b. I, IV

c. II, III

d. III, IV

4.

The breakeven point for the position is:

a. 66

b. 67

c. 74

d. 75

5.

The customer's maximum potential gain is:

a. \$400

b. \$6600

c. \$7400

d. unlimited

2.

The writer of a call on a listed stock is exercised. The writer must:

a. deliver stock

b. buy stock

c. deliver cash

d. pay cash

6.

If the customer closes out the position prior to expiration by selling the call at \$10, the gain or loss is:

a. \$400 gain

b. \$400 loss

c. \$600 gain

d. \$1000 gain

Use the following information to answer the next 4 questions:

In November, a customer buys 1 ABC Jan 70 Call @ \$4 when the market price of ABC is \$71.

3.

If ABC falls to \$67 and stays there through January, the customer will:

a. gain \$400

b. lose \$400

c. gain \$6700

d. lose \$6700

Use the following information to answer the next 5 questions:

A customer sells 1 ABC Feb 50 Call @ \$7 when the market price of ABC is \$52.

7.

If the market value of ABC falls to \$48 and stays there through February, the customer will:

a. gain \$700

b. lose \$700

c. gain \$4300

d. lose \$4300

**8.**

The customer's breakeven point is:

- a. 43
- b. 45
- c. 57
- d. 59

9.

The customer's maximum potential loss is :

- a. \$700
- b. \$4300
- c. \$5700
- d. unlimited

10.

The stock moves to \$80 and the customer is exercised. The stock is bought in the market for delivery. The gain or loss to the writer is:

- a. \$700 gain
- b. \$700 loss
- c. \$2300 loss
- d. \$3000 loss

11.

If the stock stays at \$52 and just prior to expiration, the writer closes out the position with a closing purchase at intrinsic value, the gain or loss is:

- a. \$200 loss
- b. \$500 gain
- c. \$700 gain
- d. \$900 loss

Use the following information to answer the next 4 questions:

A customer buys 2 ABC Jan 60 Puts @ \$4 when the market price of ABC is \$59.

12.

The maximum potential loss for the customer is:

- a. \$400
- b. \$800
- c. \$11,200
- d. \$12,000

13.

The breakeven point is:

- a. 52
- b. 56
- c. 64
- d. 68

14.

ABC stock falls to \$40 and the customer buys the stock in the market and exercises the put. The gain is:

- a. \$800
- b. \$1600
- c. \$3200
- d. \$4000

15.

If ABC stock rises to \$62 and the customer closes the positions at \$1, the gain or loss is:

- a. \$300 loss
- b. \$600 loss
- c. \$700 gain
- d. \$1000 loss

Use the following information to answer the next 5 questions:

A customer sells 1 ABC Jul 40 Put at \$6 when the market price of ABC is \$38.

16.

ABC stock rises to \$60 and stays there through July. The customer:

- a. gains \$600
- b. loses \$600
- c. gains \$1400
- d. loses \$1400

17.

The customer's maximum potential gain is:

- a. \$600
- b. \$3400
- c. \$4000
- d. unlimited

18.

The breakeven point is:

- a. \$32
- b. \$34
- c. \$44
- d. \$46

19.

The market falls to \$25 and the customer is exercised. The customer then sells the stock in the market. The loss is:

- a. \$600
- b. \$900
- c. \$1500
- d. \$2500

20.

The maximum potential loss to the writer is:

- a. \$600
- b. \$3400
- c. \$4000
- d. unlimited

21.

A portfolio manager that trades options would:

- a. buy a call option to lock in a stock's price prior to an anticipated price rise
- b. sell a call option to establish a short stock position prior to an anticipated price fall
- c. buy a put option to generate extra income against an existing long stock position
- d. sell a put option to protect an existing long stock position from a market decline

22.

The measure of the change in premium of an option relative to the change in price of the price of the underlying asset is called:

- a. alpha
- b. beta
- c. delta
- d. gamma

23.

Delta will be greatest for an:

- a. in the money option
- b. at the money option
- c. out the money option
- d. option that is closest to expiration

24.

Gamma will be greatest for an:

- a. in the money option
- b. at the money option
- c. out the money option
- d. option that is closest to expiration



25.

To speculate on a market decline, a trader would:

- a. Buy calls and buy puts
- b. Sell calls and sell puts
- c. Buy calls and sell puts
- d. Sell calls and buy puts

SPECULATIVE STRATEGIES SECTION EXAM EXPLANATIONS

1. The best answer is b. Buying a call and selling a put are profitable strategies in a rising market. Buying a put and selling a call are profitable in a falling market.
2. The best answer is a. If the writer of a call option on listed stocks is exercised, he must deliver 100 shares of stock, for which the holder will pay the strike price. If the writer of a put option on listed stocks is exercised, he must pay the strike price for 100 shares of stock delivered to him by the put holder.
3. The best answer is b. The holder of a call pays the premium for the contract. This is the maximum loss if the contract expires "out the money."
4. The best answer is c. The holder of a call breaks even if the market price rises by enough to recover the premium paid. On the "T", the breakeven point is:

Option	Stock	
B - 4	B - 70	Breakeven = 74

The holder paid \$4 for the right to buy stock at \$70. The effective cost if he exercises is \$74. He must be able to sell the stock for \$74 to breakeven.

5. The best answer is d. The holder of a call has unlimited gain potential. He has the right to buy stock at a fixed price - and the stock can rise an unlimited amount.
6. The best answer is c. The customer bought the call (opening purchase) for a \$4 premium and then closed with a sale of the contract at \$10 for a \$600 profit (6 points).

Option	Stock	
B - 4		
S +10		
+ 6		

7. The best answer is a. If the market falls to \$48, the 50 call expires out the money and the writer keeps the \$700 premium.



8. The best answer is c. The writer received \$7 and obligated himself to deliver stock he does not own for \$50 per share. If exercised, he receives \$7 + \$50 for selling = \$57. If he buys the stock for delivery at this price, he breaks even. On the "T", the breakeven point is:

Option	Stock
$S + 7$	$S + 50$ Breakeven $= 57$

9. The best answer is d. The writer of a naked call is obligated to deliver stock that he does **not** own. If exercised, the stock must be bought in the market for delivery. Since the market price can rise an unlimited amount, the maximum potential loss is unlimited as well.

10. The best answer is c. The writer is obligated to deliver stock at \$50 per share. He must buy the stock at \$80 in the market losing 30 points. Since \$700 (7 points) was collected in premiums, the net loss is 23 points or \$2300. This shows on the "T" as:

Option	Stock
$S + 7$	$S + 50$ Breakeven $= 57$
	$B - 80$
$+ 7$	$- 30$ Net Loss = 23

11. The best answer is b. The writer established the short call position with an opening sale at \$7. He closes the position with a purchase at \$2 (intrinsic value when the call strike price is \$50 and the market price is \$52). This shows on the "T" as:

Option	Stock
$S + 7$	
$B - 2$	
$+ 5$	

12. The best answer is **b**. The holder of a put buys the right to sell at a fixed price. If the contract expires "out the money," the maximum loss is the premium paid. \$400 was paid per contract (\$800 for 2 contracts) - \$800 is the maximum potential loss.

13. The best answer is **b**. The holder of the put paid a \$4 premium per share for the right to sell ABC stock at \$60. His net proceeds if he exercises are \$56 per share. To break even, he must buy the stock in the market at this price. This shows on the "T" as:

Option	Stock	
B - 4	S + 60	Break even = 56

14. The best answer is **c**. The customer buys the stock for \$40, and exercises the put to sell at \$60 for a 20 point profit. Since 4 points were paid in premiums, the net profit per contract is 16 points or \$1600. The profit on 2 contracts is \$3200. This shows on the "T" as:

Option	Stock	
B - 4	S + 60	Break even = 56
	B - 40	
- 4	+ 20	Net Gain = 16

15. The best answer is **b**. The put was bought in an opening purchase at \$4 and sold in a closing sale at \$1 for a loss of 3 points (\$300 per contract). Since 2 contracts are involved, the net loss is \$600. This shows on the "T" as:

Option	Stock	
B - 4		
	S + 1	
- 3		

16. The best answer is **a**. If the market rises to \$60, the put expires "out the money" (since the strike price is \$40). The writer keeps the \$600 collected in premiums.



17. The best answer is a. The maximum gain for the writer of a naked call or put is the premium collected. This happens if the contract expires "out the money."

18. The best answer is b. The writer collected \$6 in premiums by obligating himself to buy the stock at \$40. If exercised his net outlay is \$34 for the stock. To breakeven, he must be able to sell the position for \$34. This shows on the "T" as:

Option	Stock
$S + 6$	$B - 40$ Breakeven $= 34$

19. The best answer is b. When exercised, the writer must buy the stock for \$40. He then sells the stock at \$25 for a 15 point loss. Since 6 points was collected as premiums, the net loss is 9 points or \$900.

Option	Stock
$S + 6$	$B - 40$ Breakeven $= 34$
	$S + 25$
$+ 6$	$- 15$ Net Loss = 9

20. The best answer is b. The worst case for the writer of a put is being exercised and being forced to buy worthless stock at the strike price. In this case, the put writer agrees to buy the stock at \$40, but collected \$6 of premiums, for a net outlay of \$34. If the stock is worthless, this is the maximum loss per share (\$3400 for the contract).

21. The best answer is a. The purchase of a call option gives the holder the right to buy stock at a fixed price. Choice B is incorrect because a short call will only result in a short stock position (sale of the shares) if the short call is exercised. A long put can be used to establish a short stock position prior to an anticipated market fall. A long put (right to sell at a fixed price) could be used to protect an existing stock position from a market decline. A short put (obligation to buy at a fixed price) will not protect an existing long stock position.

22. The best answer is c. Delta measures the change in price of an option relative to the change in price of the underlying asset. Delta is "0" for deep out the money options - since the option is worthless, each dollar movement in price of the underlying asset does not affect the option's value. Delta hits the maximum value of "1" when an option is "in

the money" - the option premium moves dollar-for-dollar with the movement in value of the underlying asset.

23. The best answer is a. Delta measures the change in price of an option relative to the change in price of the underlying asset. Delta is "0" for deep out the money options - since the option is worthless, each dollar movement in price of the underlying asset does not affect the option's value. Delta hits the maximum value of "1" when an option is "in the money" - the option premium moves dollar-for-dollar with the movement in value of the underlying asset.

24. The best answer is b. Gamma measure how quickly delta moves - it is the rate of change of the premium movement. The premium moves fastest, either up or down, for an option that is at the money and the market price of the underlying asset starts to move away from the strike price. The farther away the price moves, the rate of change of premium movement slows down.

25. The best answer is d. The strategies that are profitable in bull markets are long calls and short puts. The strategies that are profitable in bear markets are long puts and short calls.



SECTION 3: HEDGING STRATEGIES

3a. HEDGING OVERVIEW

Protect A Long Stock Position By Buying A Put

Option contracts can be used to hedge a stock position taken by a customer. If a customer owns stock (has a long stock position), he will lose if the market drops. To hedge against this, he can buy some insurance by purchasing a put option on the stock. If the stock declines, he can exercise the put and sell the stock at the strike price, eliminating the risk of falling stock prices (known as "market risk").

Protect A Short Stock Position By Buying A Call

Conversely, if a customer has taken a short position in a security, he will lose if the market rises. The potential loss is unlimited. To hedge against this, he can buy some insurance by purchasing a call option on the stock. If the stock rises, he can exercise the call and buy the stock at the strike price (to cover the short stock position), eliminating the risk of rising stock prices.

3b. LONG PUT TO HEDGE LONG STOCK POSITION

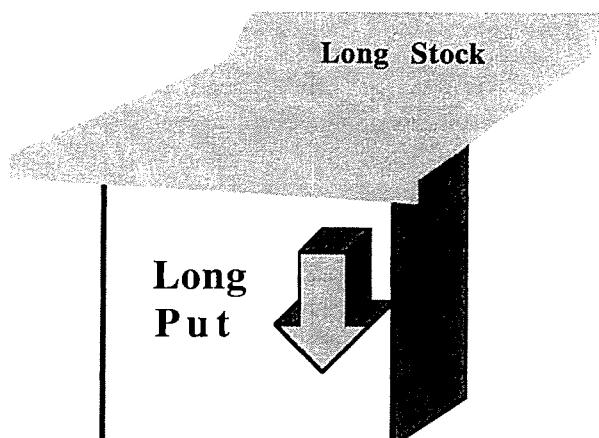
To Protect A Long Stock Position From A Falling Market

Assume that a customer buys 100 shares of ABC stock at \$60 per share. She believes that the stock is a good investment and wishes to hold on to the position. However, she is worried that the market may drop, dragging the stock's price down, and she wants to hedge against this possibility.

If Market Drops, Can Sell Stock At Strike Price

The customer buys 1 ABC Jul 60 Put @ \$5 as a hedge. If the stock drops, the customer can always exercise the put and sell the stock for \$60, no matter how far the market price falls.

Long Put Stops Downside Loss On Long Stock



If the stock's price rises, she lets the put expire "out the money" and sells the stock in the market at the higher price.

To calculate maximum potential gain, breakeven, and maximum potential loss for this position, again we use the "T". The customer has taken the following positions:

**Buy 100 shares of ABC stock at \$60
Buy 1 ABC Jul 60 Put @ \$5**

The positions are entered into the "T":

Option	Stock
Buy -\$5	Buy -\$60

Breakeven = Cost Of Stock + Premium Paid

The customer has bought the stock and has bought the put contract. Once the top line of the "T" is completed, we also have found the breakeven point. The customer has paid a total of \$65 for both positions. To breakeven, the stock position must now be liquidated for \$65. This shows on the "T" as:

Option	Stock	
Buy -\$5	Buy -\$60	Breakeven
		= \$65

Maximum Loss = Premium Paid (Net of any difference between stock cost and strike price)

If the market price of the stock falls, the customer is hedged. She will simply exercise the put and sell the stock at the strike price. If she does this, her loss is limited to \$500. Assume that the stock's price falls to zero in the market. The customer exercises the put. The "T" now shows:



Option	Stock
Buy -\$5	Buy -\$60 Break even = \$65
	Sell +\$60
- \$5	+ \$0 Net Loss = \$5

Because the customer owned the Jul 60 Put, she sold the stock position for \$60. She is not exposed to any market loss on the stock during the life of the contract. She did lose her "insurance" premium of \$500, however.

If the market price of the stock rises, the put will expire out the money. The customer will sell the stock at the higher market price. Assume that the price of the stock rises to \$75 and the customer lets the put expire and sells the stock in the market. The "T" now shows:

Option	Stock
Buy -\$5	Buy -\$60 Break even = \$65
	Sell +\$75
- \$5	+ \$15 Net Gain = \$10

Maximum Potential Gain = Unlimited

The customer makes \$15 on the stock offset by the \$5 premium paid. The net gain is \$10 per share. In a rising market, the customer's potential gain is unlimited. The put would expire worthless and the customer would sell the stock at whatever price the market dictated.

To summarize the characteristics of using a long put to hedge a long stock position:

Long Stock/Long Put = **Hedge To Protect Stock In Falling Market**

Maximum Gain = **Unlimited**

Maximum Loss = **Premium (Offset by difference between stock cost and put strike price)**

Breakeven Point = **Stock Cost + Premium**

3c. LONG CALL TO HEDGE SHORT STOCK POSITION

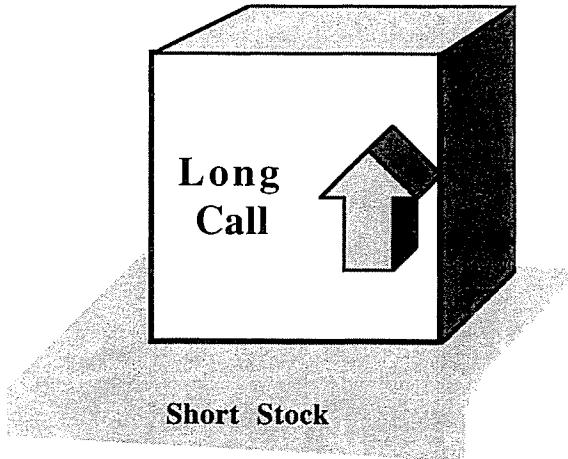
To Protect A Short Stock Position From A Rising Market

If Market Rises, Can Buy Stock At Strike Price To Cover

Assume that a customer sells short 100 shares of ABC stock at \$60 per share. She believes that the stock will fall and is speculating by taking this position. However, she is concerned that the market may rise, forcing her to cover (buy in) at a large loss and she wants to hedge against this possibility.

The customer buys 1 ABC Jul 60 Call @ \$5 as a hedge. If the stock rises, the customer can always exercise the call and buy the stock for \$60, no matter how far the market price rises.

Long Call Stops Upside Loss On Short Stock



If the stock's price falls, she lets the call expire "out the money" and buys the stock in the market at the lower price to cover the short stock position at a profit.

To calculate maximum potential loss, breakeven, and maximum potential gain for this position, again we use the "T". The customer has taken the following positions:

**Sell Short 100 shares of ABC stock at \$60
Buy 1 ABC Jul 60 Call @ \$5**

The positions are entered into the "T" on the following page:



Option	Stock
Buy - \$5	Sell + \$60

**Breakeven = Sale
Price Of Stock -
Premium Paid**

The customer has sold short the stock and has bought the call contract. Once the top line of the "T" is completed, we also have found the breakeven point. The customer has received a net amount of \$55 for both positions. To breakeven, the stock position must now be bought in for \$55. This shows on the "T" as:

Option	Stock
Buy -\$5	Sell +\$60
	Break even = \$55

Maximum Loss =
 Premium (Net of any
 difference between
 the sale price of the
 stock and its cost)

If the market price of the stock rises, the customer is hedged. She will simply exercise the call and buy the stock at the strike price to cover the short stock position. If she does this, her loss is limited to \$500. Assume that the stock's price rises to \$100 in the market. The customer exercises the call. The "T" now shows

Option	Stock
Buy -\$5	Sell +\$60
	Break even
	= \$55
<hr/>	
	Buy -\$60
<hr/>	
-\$5	+\$0
	Net Loss = \$5

Because the customer owned the Jul 60 Call, she bought the stock position for \$60. She is not exposed to any market loss on the stock during the life of the contract. She did lose her "insurance" premium of \$500, however.

If the market price of the stock falls, the call will expire out the money. The customer will buy the stock at the lower market price. Assume that the price of the stock falls to zero and the customer lets the call expire and buys the stock in the market. The "T" now shows:

Option	Stock
Buy -\$5	Sell +\$60 Breakeven = \$55
	Buy -\$0
- \$5	+ \$60 Net Gain = \$55

**Maximum Gain =
Short Sale Price -
Premium**

The customer makes \$60 on the stock offset by the \$5 premium paid. The net gain is \$55 per share. This is the customer's maximum potential gain.

To summarize the characteristics of using a long call to hedge a short stock position:

Short Stock/Long Call = Hedge To Protect Stock In Rising Market

Maximum Gain = Short Sale Price - Premium Paid

Maximum Loss = Premium (Offset by difference between stock sale price and call strike price)

Breakeven Point = Short Sale Price - Premium Paid



HEDGING STRATEGIES SECTION EXAMINATION

1.

Buying a put on a stock position held long is a suitable strategy when the market is expected to:

- I remain stable
- II rise sharply
- III fall sharply
- IV fluctuate sharply

- a. I only
- b. I and III
- c. III only
- d. IV only

Use the following information to answer the next 2 questions:

A customer buys 100 shares of ABC stock at \$40 and buys 1 ABC Oct 40 put @ \$4.

2.

ABC stock falls to \$36 and just prior to expiration, the customer exercises the put, delivering the stock position. The customer:

- a. broke even
- b. lost \$400
- c. gained \$400
- d. lost \$3600

3.

The breakeven point is:

- a. 36
- b. 40
- c. 44
- d. 48

Use the following information to answer the next 5 questions:

A customer buys 100 shares of XYZ at \$49 and buys 1 XYZ Jan 50 Put @ \$5

4.

The stock falls to \$32 and the customer exercises the put, delivering the long stock position. The customer's gain or loss is:

- a. \$100 gain
- b. \$400 loss
- c. \$500 loss
- d. \$5000 gain

5.

The breakeven point is:

- a. 44
- b. 45
- c. 54
- d. 55

6.

The maximum potential gain is:

- a. \$500
- b. \$4400
- c. \$5500
- d. unlimited

7.

The maximum potential loss is:

- a. \$400
- b. \$500
- c. \$4400
- d. unlimited

8.

Just prior to expiration, the stock is trading at \$49. The customer closes the option position at a premium of \$2. One week later, the stock moves to \$55 and the customer sells the stock position in the market. The net gain or loss on all transactions is:

- a. \$300 loss
- b. \$300 gain
- c. \$600 loss
- d. \$600 gain

9.

Which of the following option positions is used to hedge a short stock position?

- a. long call
- b. short call
- c. long put
- d. short put

10.

Which of the following option positions is used to hedge a long stock position?

- a. long call
- b. short call
- c. long put
- d. short put

Use the following information to answer the next 4 questions:

A customer sells short 100 shares of ABC stock at \$40 and buys 1 ABC Mar 40 Call @ \$5

11.

The stock rises to \$80 and the customer exercises the call. The gain or loss is:

- a. \$500 gain
- b. \$500 loss
- c. \$3500 gain
- d. \$3500 loss

12.

The maximum potential loss is:

- a. \$500
- b. \$3500
- c. \$4500
- d. unlimited

13.

The maximum potential gain is:

- a. \$500
- b. \$3500
- c. \$4500
- d. unlimited

14.

The breakeven point is:

- a. 35
- b. 40
- c. 45
- d. 50

Use the following information to answer the next 2 questions:

On the same day a customer buys 100 shares of ABC at \$40 and sells short 100 shares of XYZ at \$50. The customer then buys 1 ABC Jan 40 Put @ \$4 and 1 XYZ Jan 50 Call @ \$5.

15.

XYZ rises to \$60 and the customer exercises the call. ABC falls to \$25 and the customer exercises the put. The net gain or loss on all transactions is:

- a. \$500 loss
- b. \$900 gain
- c. \$900 loss
- d. breakeven

16.

The breakeven points are:

- a. ABC: 36 / XYZ: 45
- b. ABC: 44 / XYZ: 45
- c. ABC: 36 / XYZ: 55
- d. ABC: 44 / XYZ: 55



Use the following information to answer the next 2 questions:

A customer sells short 100 shares of PDQ at \$58 and buys 1 PDQ Jul 60 Call @ \$3.

17.

The customer's maximum potential loss is:

- a. \$200
- b. \$300
- c. \$500
- d. unlimited

18.

The breakeven point is:

- a. 55
- b. 57
- c. 61
- d. 64

19.

A customer buys 100 shares of ABC at \$30 and buys 1 ABC Jan 30 Put @ \$5. The market drops to \$25 and just prior to expiration, the put is exercised. The customer has a:

- a. \$500 gain
- b. \$500 loss
- c. \$1000 loss
- d. breaks even

20.

Referring to the prior question, at which market price is the position profitable?

- a. 25
- b. 30
- c. 35
- d. 40

HEDGING STRATEGIES SECTION EXAMINATION EXPLANATIONS

1. The best answer is c. Buying a put allows the holder to sell a security at a fixed price. Thus, it protects the owner of the underlying stock position in a falling market.
2. The best answer is b. The customer bought the stock at \$40 and sold at \$40 by exercising the put. There is no gain or loss on the stock position. However, the customer did lose the \$400 premium paid. This shows on the "T" as:

Option	Stock
B - 4	B - 40
	S + 40
- 4	0

3. The best answer is c. The customer paid \$4 for the put and \$40 for the stock, for a total of \$44. To breakeven, he must sell the stock at \$44. This shows on the "T" as:

Option	Stock	
B - 4	B - 40	Breakeven
		= 44

4. The best answer is b. The customer bought the stock at \$49 and sold at \$50 by exercising the long put, for a 1 point gain. Since 5 points were paid in premiums, the customer lost 4 points or \$400.

Option	Stock	
B - 5	B - 49	
	S + 50	
- 5	+ 1	Net Loss = 4



5. The best answer is c. The customer paid \$5 for the put and \$49 for the stock, for a total outlay of \$54. To breakeven, he must be able to sell the stock at \$54. This shows on the "T" as:

Option	Stock	
B - 5	B - 49	Breakeven = 54

6. The best answer is d. Since the customer has a long stock position, his potential gain is unlimited. If the market moves up, he lets the put expire "out the money" and sells the stock in the market at the higher price.

7. The best answer is a. The long put gives the stock owner the right to sell at \$50. Since he bought the stock at \$49, exercising results in a 1 point stock profit. However, the premiums paid of \$5 are lost, for a net loss of 4 points or \$400 maximum.

8. The best answer is b. The put contract was purchased at \$5 and closed (sold) at \$2 for a net loss of \$3. The stock was purchased at \$49 and sold at \$55 for a net gain of \$6. The net of all transactions is a 3 point or \$300 gain. This shows on the "T" as:

Option	Stock	
B - 5	B - 49	Breakeven = 54
S + 2	S + 55	
- 3	+ 6	Net Gain = 3

9. The best answer is a. When one has a short stock position, borrowed shares have been sold with the agreement that the customer will buy back the position at a later date. If the market rises, the loss potential is unlimited. The purchase of a call allows the stock to be bought in at a fixed price, limiting upside risk.

10. The best answer is c. Buying a put allows the owner of stock to sell at a fixed price (strike price) if the market falls. This limits downside risk on the long stock position.

11. The best answer is b. If the market rises, the customer can exercise the call and buy the stock at \$40. These shares can be used to replace the "borrowed" shares sold short at \$40. On the stock, there is no gain or loss. However, the customer loses the \$500 paid in premiums.

12. The best answer is a. The long call limits loss on the short stock position in a rising market. The stock was sold for \$40 and can be bought back at \$40 by exercising the call. The only loss to the customer is the premium paid of 5 points or \$500.

13. The best answer is b. If the stock falls, the customer gains on the short stock position. He sold the stock for \$40. If it falls to "0", he can buy the shares for "nothing" to replace the borrowed shares sold and make 40 points. He lets the call expire "out the money" losing 5 points, so the maximum potential gain is 35 points.

14. The best answer is a. The customer sold the stock at \$40 and paid \$5 for the call, receiving a net amount of \$35 per share. To breakeven, he must be able to buy the stock at \$35 per share (to cover the short stock position). This shows on the "T" as

Option	Stock
B - 5	S + 40 Breakeven = 35

15. The best answer is c. When XYZ rises, the customer exercises the long call to buy XYZ at \$50. This stock is used to cover the short sale of XYZ stock at \$50. There is no gain or loss on the stock but the premiums paid of \$500 for the call are lost. When ABC falls, the customer exercises the long put to sell ABC at \$40. Since he bought the stock at \$40, he has no gain or loss on the stock. However, he does lose the \$400 paid in premiums for the put. The total loss is \$900.

16. The best answer is b. The customer paid \$4 for the ABC put and \$40 for ABC stock, for a total of \$44. This is the breakeven on ABC stock. The customer sold XYZ stock short for \$50, but paid \$5 for the XYZ call, for a net receipt of \$45. He must buy back XYZ at this price to breakeven.

17. The best answer is c. The long call allows the customer to buy in the stock position at \$60. Since the stock was sold at \$58, exercise results in a net loss of \$2 on the stock. The customer paid \$3 for the call, so the total loss is \$500. This shows on the "T" as:

Option	Stock
B - 3	S + 58
	B - 60
- 3	- 2 Net Loss = 5



18. The best answer is a. The customer sold the stock for \$58 and paid \$3 in premiums for the long call, for a net receipt of \$55. To breakeven, he must buy back the stock position at this price. This shows on the "T" as:

Option	Stock
B - 3	S + 58 Breakeven = 55

19. The best answer is b. The customer bought the stock at \$30 and sold it by exercising the put at \$30. He only loses the \$500 premium paid for the purchase of the put. This shows on the "T" as:

Option	Stock
B - 5	B - 30 Breakeven = 35
	S + 30
- 5	0 Net Loss = 5

20. The best answer is d. To breakeven, the customer must recover the \$5 paid in premiums and the \$30 paid for the stock (total of \$35). He must sell the stock in the market above \$35 to have a profit. The only choice above \$35 is d, which is \$40.

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SECTION 4: INCOME STRATEGIES

4a. INCOME STRATEGIES OVERVIEW

Sell Contracts To Earn Premiums

**"Covered Writer"
Has The Underlying Security Position**

Suitable In Stable Markets

**Long Stock/
Short Call**

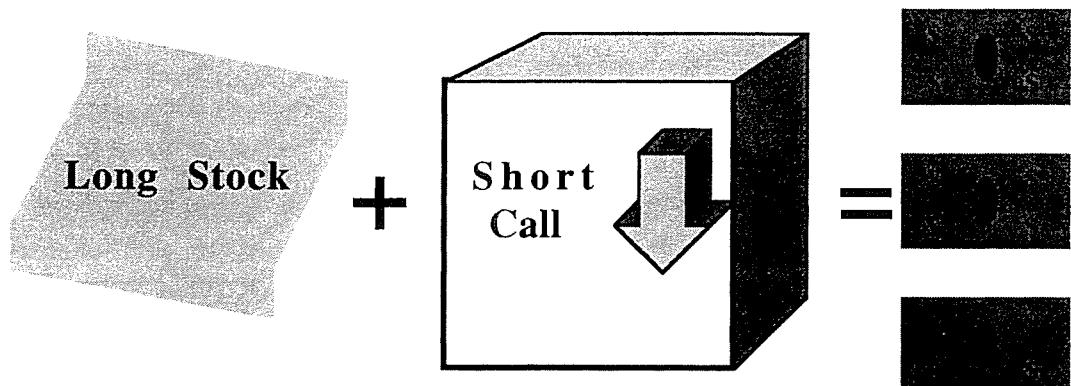
Income strategies involve selling (writing) option positions against an established stock position. The premium received from selling the option enhances the yield from the underlying security. If the option is exercised, the existing stock position is used to satisfy the exercise notice. Because the writer is not exposed to the risk of going to the market to satisfy an exercise notice, the writer is covered against market risk on the short option contracts. Hence, these are called "covered" writing strategies.

The overriding factor needed to understand income strategies is that the stock position comes first and foremost. While writing the option gives extra income from the stock position, any gain or loss is also derived from the stock position.

Income strategies are used during periods when the market is expected to be stable. They are not suitable in a rising market; nor are they suitable in a falling market.

The first income strategy is to sell a call option against a long stock position. Assume a customer owns 100 shares of ABC stock purchased at \$50 and he writes 1 ABC Jan 50 Call @ \$5. If the market stays at \$50, the call expires "at the money" and the \$5 premium is earned with no loss in value of the stock.

Write Calls Against Long Stock For Income



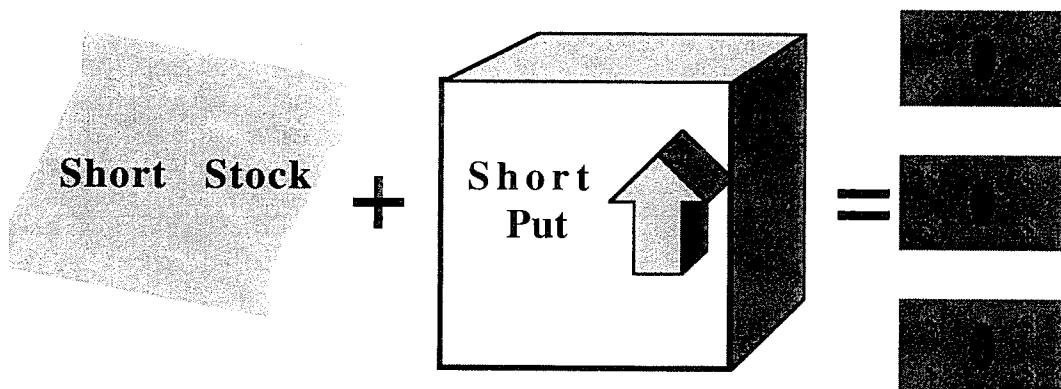
If the market rises, however, he will be exercised and will have to deliver the stock at \$50. He does not enjoy the market appreciation of the stock since he "sells" at the

same price he paid for the stock (\$50). He only earns the premium of \$5 per share. Conversely, if the market falls, the call expires and he keeps the stock position. In a falling market, he can lose all of the stock's value.

Short Stock/ Short Put

The second income strategy is to sell a put option against a short stock position. Assume a customer has sold short 100 shares of ABC stock at \$50 and he writes 1 ABC Jan 50 Put @ \$5. If the market stays at \$50, the put will expire "at the money" and he earns the \$5 premium with no loss from the stock position.

Write Puts Against Short Stock For Income



If the market falls, however, he will be exercised and will have to buy the stock at \$50. He does not enjoy the gain on the short stock position since he "buys" at the same price he sold the stock for (\$50). He only earns the premium of \$5 per share. Conversely, if the market rises, the put expires and he keeps the stock position. In a rising market, he can lose a theoretically infinite amount.

These two income strategies are now covered more completely.

4b. WRITING CALLS AGAINST LONG STOCK POSITIONS

Assume that a customer buys 100 shares of XXX stock at \$70 because it is a solid corporation paying a high dividend rate (let us say \$5 per year). The customer expects that, over the long term, the stock will appreciate. But for the short term he expects the price to be stable. In order to enhance his return, he writes 1 XXX Jul 70 Call @ \$5.

The customer's position now is:

**Long 100 shares of XXX stock at \$70
Short 1 XXX Jul 70 Call @ \$5**



If the stock rises, the call will be exercised and he will deliver the stock for the \$70 strike price, keeping the \$5 premium. If the stock falls, the call expires and he keeps the stock position, losing money every step of the way as the stock drops.

To find the maximum potential gain, breakeven, and maximum potential loss, we use the "T". We start off by inserting the existing positions into the "T":

Option	Stock
Sell +\$5	Buy -\$70

Breakeven = Cost Of Stock - Premium Received

The short call position and long stock position now show. The customer has paid out a net amount of \$65 for the stock. If he liquidates the stock position for this price, he breaks even. (We also know that the first line of the "T" always gives the breakeven point)

Option	Stock	
Sell +\$5	Buy -\$70	Breakeven
		= \$65

If the market rises, the call will be exercised and the customer is obligated to deliver 100 shares of XXX for \$70 per share. Assume that the market rises to \$100 and the customer is exercised. The "T" shows:

Option	Stock
Sell +\$5	Buy -\$70 Break even = \$65
	Sell +\$70
+ \$5	+ \$ 0 Net Gain = \$5

**Maximum Gain =
Premium Received
(Net of difference
between stock cost
and strike price)**

There is no gain on the stock. The customer agreed to sell the stock for \$70 if he was exercised. He gave up all potential gain on the stock for the \$5 premium. This represents his maximum potential gain while he has both the stock and short call positions.

On the other hand, if the market falls, the call will expire "out the money." The customer will be free to sell his stock in the market. Assume that XXX goes bankrupt and the stock falls to zero. The customer's loss is:

Option	Stock
Sell +\$5	Buy -\$70 Break even = \$65
	Sell +\$ 0
+ \$5	- \$70 Net Loss = \$65

**Maximum Potential
Loss = Cost Of Stock
- Premium Received**

The customer loses the full value of the stock net of the premium collected. The maximum loss for the customer is \$65 per share or \$6500. Obviously, this is not an appropriate strategy in a falling market. Simply sell the stock!

**Sale Of
"Out The Money"
Covered Calls Is
Used In A Rising
Market**

The prior example shows how the sale of covered calls against long stock positions is profitable in a stable market. This strategy can also be employed in a slightly different fashion, if an individual believes that the market will rise. In this case, the individual can sell "out of the money contracts" against the long stock position. If the market rises, as long as the increase in price is not too steep, the contracts will remain "out the money" and will expire, earning the premium for the writer.

For example, a customer owns 100 shares of XXX stock, valued at \$70. She believes that the market price will rise, but does not expect the price to increase beyond \$80 per share. The customer sells



1 XXX Jul 80 Call @ \$2. Note that this contract is 10 points "out the money."

If the market rises, XXX's price must increase above \$80 for the call to be exercised. If the price increases to \$79 at expiration, the call would expire and the customer earns the premium income.

Lower Premiums Earned; Lower Risk Of Exercise

Please note that premiums earned with this version of the strategy are lower, since the contracts are "out the money" when they are written. Conversely, the risk of exercise is also reduced, since the market price must rise sharply for the call contracts to move "in the money."

To summarize the characteristics of covered call writing:

Long Stock/Short Call	=	Income Strategy In A Flat Market; Income Strategy In A Rising Market If Out The Money Contracts Are Sold
Maximum Gain	=	Premium (Offset by difference between stock purchase price and call strike price)
Maximum Loss	=	(Occurs If the Market Price of the Stock Falls To Zero) and Equals the Cost Of Stock - Premium
Breakeven Point	=	Cost Of Stock - Premium

4c. WRITING PUTS AGAINST SHORT STOCK POSITIONS

This income strategy is not very popular for reasons that will become obvious as we work through an example. Assume that a customer believes that the price of XXX stock will decline over the longer term, and has sold short 100 shares of XXX at \$70 to profit from this expectation.

However, for the next few months, he does not expect the price to drop. To generate some income during this interim period, he sells 1 XXX Jul 70 Put @ \$5. If the price stays at \$70 over the next few months, as expected, the put will

expire and the customer can buy back the stock at \$70 to cover the short position. He earns the \$5 premium as extra income.

The customer's original position is:

**Sell Short 100 Shares of XXX at \$70
Sell 1 XXX Jul 70 Put @ \$5**

If the stock rises, the put expires "out the money" and the customer loses all the way up on the short stock position. Conversely, if the market falls, the put is exercised and the customer must buy the stock for \$70. Since he sold the stock for \$70, his gain is limited to the premium collected.

To find the maximum potential gain, breakeven, and maximum potential loss, we again use the "T".

Option	Stock
Sell +\$5	Sell +\$70

Breakeven = Sale Price Of Stock + Premium

The "T" shows the short put position as well as the short stock position. The customer has received a total of \$75. In order to breakeven, he would have to buy in the stock position at \$75. This shows on the "T" as:

Option	Stock	
Sell +\$5	Sell +\$70	Breakeven = \$75

If the market falls, the put will be exercised since it is "in the money" and the customer will be obligated to buy the stock at \$70. These shares are used to cover the short stock position. The "T" now shows:



Option	Stock	
Sell +\$5	Sell +\$70	Breakeven = \$75
	Buy -\$70	
	+ \$ 5	+ \$ 0 Net Gain = \$ 5

Maximum Gain = Premium Received (Net of difference between stock sale price and cost)

Maximum Potential Loss - Unlimited On The Short Stock Position

The customer only gains the \$5 premium. All potential profit on the short stock position was "sold off" for the premium collected by selling the put. This is the maximum potential gain while the customer has both the short put and short stock position.

If the market rises, the put will expire "out the money." The customer is left with a short stock position in a rising market. Since he has to buy back the stock to cover this position, his potential loss is unlimited. Assume that the stock rises to \$100 and the customer closes out the short stock position by buying the stock. The "T" shows:

Option	Stock	
Sell +\$5	Sell +\$70	Breakeven = \$75
	Buy -\$100	
	+ \$ 5	- \$ 30 Net Loss = \$ 25

The loss of \$30 on the stock position is partially offset by the \$5 premium received. From this example it becomes clear why this strategy is not popular - one gets unlimited risk on the upside and the gain is limited to the premium on the downside. The put writer is covered against risk on the option, but he has unlimited risk on the stock position.

To summarize the characteristics of a covered put writer:

Short Stock/Short Put	=	Income Strategy In A Flat Market
Maximum Gain	=	Prem. (Net of diff. between stock sale price + put strike)
Maximum Loss	=	Unlimited
Breakeven Point	=	Sale Price of Stock + Premium

4d. ROLLING POSITIONS "UP" AND "DOWN"

A popular writing strategy works as follows:

A customer buys 100 shares of ABC stock at 45 and sells 1 ABC Jan 45 Call @ \$5. Thus, the customer has established a short covered call position.

Assume that ABC stock falls to \$40 in price, and the premium on the Jan 45 Call is now at \$1. The customer closes the short call by purchasing the Jan 45 Call @ \$1, and now sells an ABC Jan 40 Call. The 40 Call is "at the money" and will have a substantially higher premium than the 45 Call. Let's assume that the Jan 40 Call is sold at \$5.

The customer's original position was:

**Buy 100 shares of ABC at \$45
Sell 1 ABC Jan 45 Call @ \$5**

The customer then does the following when the market price of ABC falls to \$40:

**Buy 1 ABC Jan 45 Call @ \$1
Sell 1 ABC Jan 40 Call @ \$5**

The customer has collected a total of \$10 in premiums, from the sale of the two calls, net of the \$1 paid to close the 45 Call, for a net receipt of \$9. Thus, he has effectively reduced the cost of this stock position $\$45 - \$9 = \$36$ per share.

Rolling Down - Used For Covered Short Calls

This strategy is known as "rolling down" a short option position as the market price declines. The idea is that as the market falls, the existing short contract moves out of the money, and the premium falls close to zero. This position is closed, and a new "at the money" call contract is sold (at the lower current market value) to earn extra premiums. If the market drops again, this position would be closed, and another "at the money" contract sold to earn premiums. Thus, in a falling market, by rolling down, premium income is enhanced and offsets any loss on the long stock position.

Rolling Up - Used For Covered Short Puts

The reverse strategy of "rolling up" is used for covered short put positions. As the market price rises, the short put position moves "out the money." The position is closed, and a new "at the money" put is sold. In this manner, as the market rises, additional premium income is earned, offsetting any losses on the short stock position due to the rising market.



4e. PLACING A COLLAR ON A STOCK POSITION

Collar On Price Of A Security

**Collar =
Long Out The Money
Put AND
Short An Out The
Money Call**

An option strategy can be used to maintain the price of a security within a desired range, known as placing a “collar” on a position. This can be achieved at minimal cost, and is popular when a security position has appreciated substantially so that near term upside future appreciation is not likely.

For example, assume that a customer has bought 100 shares of ABC stock at \$40, that is now trading at \$60. The customer does not wish to lose the gain and wishes to sell if the price of the stock falls below \$55 per share, so the customer buys 1 ABC Jan 55 Put (out of the money by 5 points) at a low premium, say \$1. The customer does not believe that the stock will appreciate much between now and January (but is long term bullish). The customer sells 1 ABC Jan 65 Call (out of the money by 5 points) and receives a low premium, say \$1. The net cost to the customer of the “collar” is “0”.

If the stock falls to \$55, the put will be exercised, and the customer still has a 15 point gain on the stock (\$40 cost vs. \$55 sell). Since the cost of the “collar” is zero, this does not reduce the gain. If the stock rises above \$65 (which is not anticipated during the life of the call contract), the short call will be exercised, and the stock will be delivered at \$65 (gain of \$25 above the \$40 cost per share).

Essentially, this strategy is a combination of both a hedge (buy a put) and income strategy (sell a call) against the stock position to lock in a sales price for the stock within a desired range at minimal cost.

INCOME STRATEGIES SECTION EXAMINATION

1.

Covered call writing is an appropriate strategy in a:

- a. declining market
- b. rising market
- c. stable market
- d. fluctuating market

2.

The sale of covered calls is used to:

- a. hedge a long stock position in a falling market
- b. protect a short stock position in a falling market
- c. generate additional income in a stable market
- d. profit if the market drops

Use the following information to answer the next 4 questions:

A customer buys 100 shares of ABC stock at \$49 and sells 1 ABC Jan 50 Call @ \$4.

3.

The market rises to \$55 and the call is exercised. The customer has a:

- a. \$100 profit
- b. \$400 profit
- c. \$500 profit
- d. \$900 profit

4.

The breakeven point is:

- a. 45
- b. 46
- c. 53
- d. 54

5.

The maximum potential loss is:

- a. \$400
- b. \$4500
- c. \$4900
- d. unlimited

6.

Prior to expiration, the customer closes the short call position at \$1. He retains the long stock position. The gain or loss on the option is:

- a. \$100 loss
- b. \$300 gain
- c. \$400 gain
- d. \$500 loss

Use the following information to answer the next 4 questions:

A customer buys 200 shares of GM at \$72 and sells 2 GM 70 Calls @ \$6.

7.

The market rises to \$80 and the calls are exercised. The customer has a:

- a. \$400 gain
- b. \$800 gain
- c. \$1200 gain
- d. \$2800 gain

8.

The breakeven point is:

- a. 58
- b. 60
- c. 64
- d. 66

9.

The maximum potential loss is:

- a. \$6400
- b. \$12,800
- c. \$13,200
- d. \$14,400

**10.**

The maximum potential gain is:

- a. \$800
- b. \$1200
- c. \$7000
- d. unlimited

11.

Which of the following strategies has unlimited loss potential?

- a. long stock/short call
- b. long stock/long put
- c. short stock/long call
- d. short stock/short put

12.

A customer sells short 100 shares of ABC at \$50 and sells 1 ABC Jan 50 put @ \$5. This position results in a profit when:

- I The market rises
- II The market falls
- III The market is stable

- a. I only
- b. II only
- c. I and III
- d. II and III

Use the following information to answer the next 4 questions:

A customer sells short 100 shares of ABC stock at \$60 and sells 1 ABC Oct 60 Put @ \$6.

13.

The market falls to \$30 and the put is exercised. The gain or loss is:

- a. \$600 gain
- b. \$600 loss
- c. \$2400 gain
- d. \$2400 loss

14.

The maximum potential loss is:

- a. \$600
- b. \$4400
- c. \$5000
- d. unlimited

15.

The breakeven point is:

- a. 54
- b. 60
- c. 66
- d. 70

16.

The maximum potential gain is:

- a. \$600
- b. \$4400
- c. \$5000
- d. unlimited

Use the following information to answer the next 4 questions:

A customer sells short 100 shares of PDQ at \$49 and sells 1 PDQ Sep 50 Put @ \$6.

17.

The customer will have a loss at which of the following market prices for PDQ?

- a. 42
- b. 43
- c. 55
- d. 56

18.

The maximum potential loss is:

- a. \$4300
- b. \$4400
- c. \$5500
- d. unlimited

19.

The breakeven point is:

- a. 43
- b. 44
- c. 55
- d. 56

20.

The maximum potential gain is:

- a. \$500
- b. \$600
- c. \$700
- d. unlimited

21.

A customer buys 100 shares of ABC stock at \$45 in a cash account and sells 1 ABC Sept 40 Call @ \$7. The call is exercised. What is the customer's percentage return on cash investment?

- a. 5%
- b. 5.26%
- c. 15%
- d. 18%

22.

A customer buys 100 shares of ABC stock at \$50 and sells 1 ABC Jan 50 Call @ \$5. Later, the 50 Call is closed, and the customer sells 1 ABC Jan 45 Call. The customer is:

- a. rolling up
- b. rolling down
- c. spreading
- d. hedging

23.

A customer owns ABC stock, purchased at \$50 per share, and believes that the market can decline to \$45 per share. The customer wishes to generate extra income from the stock position, but also wishes to protect the position from a large downside movement. The customer should:

- a. Sell an ABC 50 Call and buy an ABC 45 Put
- b. Buy an ABC 45 Put
- c. Buy an ABC 50 Call and buy an ABC 45 Put
- d. Sell an ABC 45 Call

24.

Writing "at the money" covered calls will be profitable if the:

- I Price of the underlying security remains the same
 - II Price of the underlying security rises sharply
 - III Price of the underlying security falls sharply
- a. I only
 - b. II only
 - c. I and II
 - d. II and III

25.

Writing "at the money" covered puts against short stock positions will be profitable if the:

- I Price of the underlying security remains the same
- II Price of the underlying security rises sharply
- III Price of the underlying security falls sharply

- a. I only
- b. II only
- c. I and II
- d. I and III



INCOME STRATEGIES SECTION EXAMINATION EXPLANATIONS

1. The best answer is c. A covered call writer owns the underlying stock position. He sells the call contract to generate extra income from the stock during periods when the market is expected to be stable. If he expects the market to rise, he would not write the call against the stock position because the stock will be "called away" in a rising market. If he expects the market to fall, he would sell the stock or buy a put as a hedge.
2. The best answer is c. Covered call writing is used to generate extra income from a long stock position in a stable market.
3. The best answer is c. If the market rises to \$55, the short call is "in the money" and is exercised. The stock which was bought for \$49 must be delivered for \$50 per share (short call strike price) for a \$100 profit. The writer also earns the \$4 (\$400) premium collected. The total gain is \$500. This shows on the "T" as:

Option	Stock
$S + 4$	$B - 49$
	$S + 50$
$+ 4$	$+ 1$
	Net Gain = 5

4. The best answer is a. The customer paid \$49 for the stock and received a \$4 premium from the sale of the call, for a net cost of \$45. To breakeven, the stock must be sold for this amount. This shows on the "T" as:

Option	Stock
$S + 4$	$B - 49$
	BreakEven = 45

5. The best answer is b. The worst case is the stock becoming worthless. The writer loses the full value of the stock (\$4900) net of the \$400 in collected premiums for a net loss of \$4500.

6. The best answer is **b**. The short call was opened at \$4 and closed with a purchase at \$1 for a net gain of 3 points or \$300 for the contract. This shows on the "T" as:

Option	Stock
S + 4	
B - 1	
+ 3	

7. The best answer is **b**. If the call is exercised, the stock (which cost \$72 per share) must be sold at the \$70 strike price for a \$200 loss. Since \$600 was collected in premiums, the net gain per contract is \$400. The gain for 2 contracts = \$800. This shows on the "T" as:

Option	Stock
S + 6	B - 72
	S + 70
+ 6	- 2
	Net Gain = 4

8. The best answer is **d**. The customer paid \$72 per share for the stock and collected \$6 per share in premiums for selling the call, resulting in a net cost of \$66 per share. To breakeven, the stock must be sold for that amount. This shows on the "T" as:

Option	Stock
S + 6	B - 72 B r e a k e v e n = 66

9. The best answer is **c**. The worst case is that the stock becomes worthless. The customer paid \$72 per share reduced by \$6 in collected premiums for a net cost of \$66. As the market drops, the calls will expire "out the money." The customer can lose all \$66 per share X 200 shares = \$13,200.



10. The best answer is a. If the market rises, the calls are exercised. The stock (which cost \$72) must be delivered at \$70 for a loss of \$2 per share. Since \$6 was collected in premiums for selling the call, the net gain, if exercised, is 4 points or \$400 per contract x 2 contracts = \$800.

11. The best answer is d. With a long stock position, the maximum loss is the value of the stock. With a short stock position, the potential loss is unlimited. If a long call is purchased against a short stock position, the upside loss is limited. If a short put is sold against a short stock position the upside loss is still unlimited since in a rising market the short put will expire "out the money." The short stock position must be covered by purchasing the stock at the higher market price - and the price can rise an infinite amount.

12. The best answer is d. If the market remains stable, the put expires "out the money" and the customer earns the \$500 premium. The stock which was sold at \$50 can be bought for \$50, so there is no further effect on the customer.

If the market falls, the short put is exercised and the customer must buy the stock at \$50. Since he sold the stock at \$50, there is no further effect on the customer. He does earn the \$500 of premiums from the sale of the put.

If the market rises, the short put expires "out the money." The customer must cover the short sale at \$50 by purchasing the stock in the market. His loss potential is unlimited.

13. The best answer is a. If the market drops, the short put is exercised and the customer must buy the stock at \$60. He can use this stock to replace the borrowed shares sold (short) at \$60. There is no gain or loss on the stock. Since \$600 was collected in premiums for selling the put, this is the gain.

14. The best answer is d. If the market rises, the short put expires and the short stock position must be covered by making a purchase in the market. The loss potential is unlimited.

15. The best answer is c. The stock was "sold" at \$60 and \$6 was collected in premiums for selling the put, for a total of \$66 collected per share. To breakeven, the stock must be purchased at this price. This shows on the "T" as:

Option	Stock
$S + 6$	$S + 60$ Breakeven = 66

16. The best answer is a. If the market drops, the short put is exercised and the customer must buy the stock at \$60. Since he sold the stock at \$60, he has no gain or loss on the stock - but he does keep the \$600 of collected premiums. This is the maximum potential gain.

17. The best answer is d. A customer with a short stock / short put position loses if the market rises. The customer sold the stock at \$49 and collected \$6 in premiums, for a total of \$55. To breakeven, the stock must be bought for this amount. If the stock is bought for more than \$55, the customer loses. Therefore, a loss is experienced at \$56.

18. The best answer is d. The maximum potential loss for a customer with a short stock / short put position is unlimited. If the market rises, the put expires and the short stock position must be covered (bought in) in the market.

19. The best answer is c. The customer sold the stock at \$49 and received \$6 in premiums for selling the put, collecting \$55 in total. To breakeven, the stock must be bought at this price. This shows on the "T" as:

Option	Stock
$S + 6$	$S + 49$ Breakeven $= 55$

20. The best answer is a. If the market falls, the short put is exercised and the stock must be bought at \$50. Since it was already "sold" at \$49, there is a loss of \$1 per share (\$100 total). But the customer collected \$600 in premiums; so the end result is a net gain of \$500. This is the maximum potential gain.

21. The best answer is b. To purchase 100 shares at \$45 in a cash account, the customer must meet the Regulation T requirement of 100% (\$4500). The sale of the call option against the stock is "covered" by the ownership of the position, so no funds need be deposited on the sale of the option. Since \$700 is received in premiums from the sale of the option, to meet the total \$4500 Reg. T requirement, the customer must deposit an additional \$3800. This is his cash investment.

If the call is exercised, the customer must deliver the shares, receiving the strike price of \$40 per share. The stock was purchased at \$45 per share, for a loss of \$500 on the stock transaction. Since \$700 was received initially as premiums, there is a **net** gain of \$200.

The return on cash investment is:

$$\frac{\text{Net Return}}{\text{Cash Investment}} = \frac{\$200}{\$3800} = 5.26\%$$

22. The best answer is b. This covered call writer is "buying back" the call contract as the market declines (at a low premium since the contract is now out the money) and selling a new contract at the lower strike price (earning an additional premium). This strategy is known as "rolling down" the option position. By employing this strategy, a covered call writer continues to earn premiums as the market price of the stock falls, limiting his loss on the physical stock position.



23. The best answer is a. This customer has a stock position from which he wishes to generate income - therefore the sale of a covered call is appropriate. In addition, he wishes to protect against the possibility of a sharp downward price movement giving him a loss on the stock. For this, the purchase of a put option is appropriate, allowing the customer to "put" the stock if the market price should decline sharply. The customer has placed a "collar" on the stock position.

24. The best answer is c. Writing "at the money" covered calls produces a gain equal to the premium if the market price of the underlying stock stays the same. This occurs because the call expires "at the money," earning the premium, while there is no price change in the underlying stock. If the market price rises, the call will be exercised, forcing the customer to deliver the stock at the strike price. Since the stock was purchased at this price, there is no gain or loss on the stock position. The gain is equal to the premiums received. If the market declines sharply, the call expires "out the money," and the premium is earned. However, the loss on the underlying stock position would exceed any premium received, resulting in a net loss to the customer.

25. The best answer is d. Writing "at the money" covered puts produces a gain equal to the premium if the market price of the underlying stock (which was "sold short") stays the same. This occurs because the put expires "at the money," earning the premium, while there is no price change in the underlying stock. If the market price falls, the put will be exercised, forcing the customer to buy the stock at the strike price. Since the stock was already sold at this price, there is no gain or loss on the stock position. The gain is equal to the premiums received. If the market rises sharply, the put expires "out the money," and the premium is earned. However, the loss on the underlying short stock position would exceed any premium received, resulting in a net loss to the customer.

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SECTION 5: STRADDLES AND COMBINATIONS

5a. OVERVIEW OF STRADDLES AND COMBINATIONS

So far, all of the strategies that have been covered are suitable only when the market is moving in one direction (either up or down) or are suitable when the market is expected to be stable. Consider this scenario: A customer believes that the market is going to move sharply from its present point, but he also believes that the move has an equal chance of being on the upside or on the downside. What do you do? You recommend that the customer buy a straddle! By straddling the market, the customer will profit if the market moves up or if it moves down. On the other hand, if the market stays flat, he will lose.

**Long Straddle =
Long Call/Long Put**

**Profit If Price Moves
Either Up Or Down
By More Than Total
Premiums Paid**

**Short Straddle =
Short Call/Short Put**

**Profit If Price
Stays The Same**

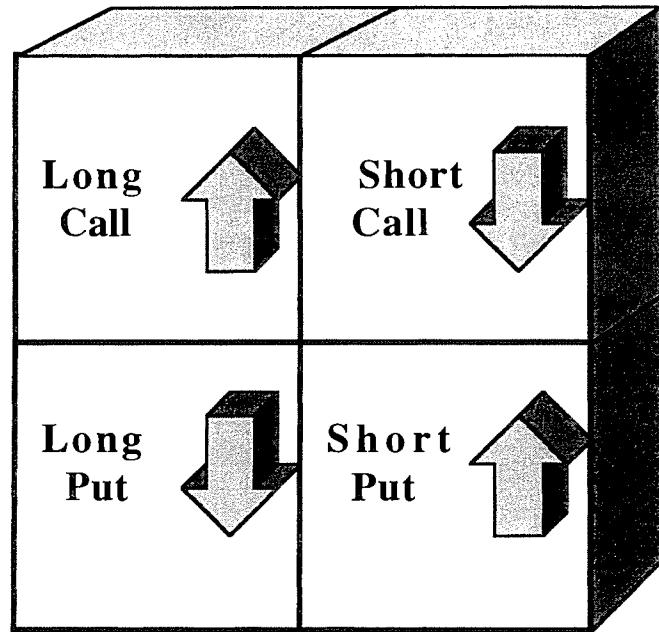
When a customer **buys** a straddle, he purchases a call and a put on the **same** stock having the **same** strike price and expiration. If the market moves up, he gains on the call and the put expires. If the market moves down, he gains on the put and the call expires. If the market stays the same, both the put and call expire "at the money" and he loses the double premiums paid.

Conversely, a customer can **sell** a straddle - selling a call and a put on the **same** stock having the **same** strike price and expiration. He does this if he absolutely believes that the market will stay flat. If this happens, both the call and the put expire "at the money" and he earns the double premiums.

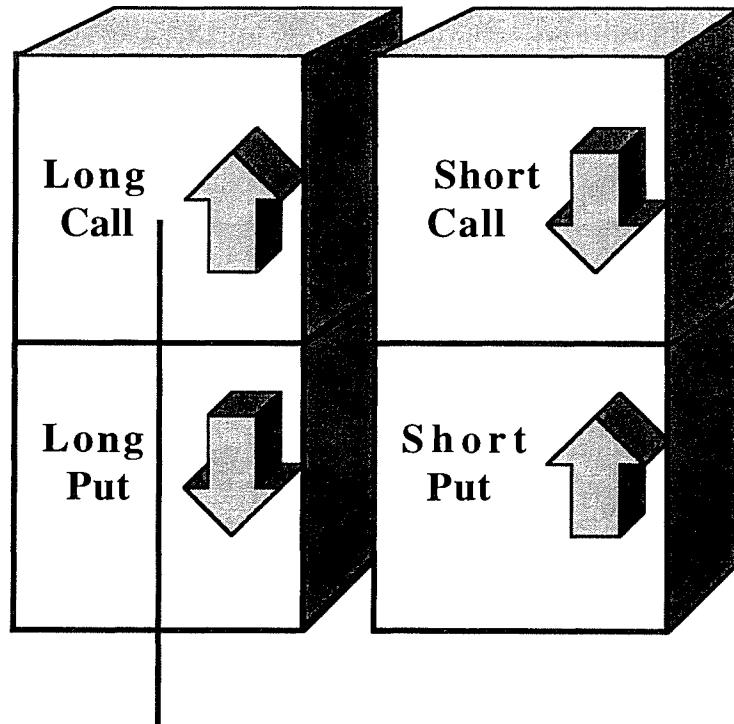
If the market rises, the call goes "in the money" and will be exercised while the put will expire "out the money." He is obligated to deliver stock that he doesn't have and has unlimited loss potential on the upside. If the market falls, the put goes "in the money" and will be exercised while the call will expire "out the money." He is obligated to buy stock that is worth less in the current market and he continues to lose as the market price of that stock drops towards zero.

By **selling** a straddle, the customer takes on double the risk (upside and downside) to earn a double premium. Because of the high risk of this strategy, it is not very popular.

To help remember what comprises a straddle, on the next page is the diagram of speculative options positions seen previously:



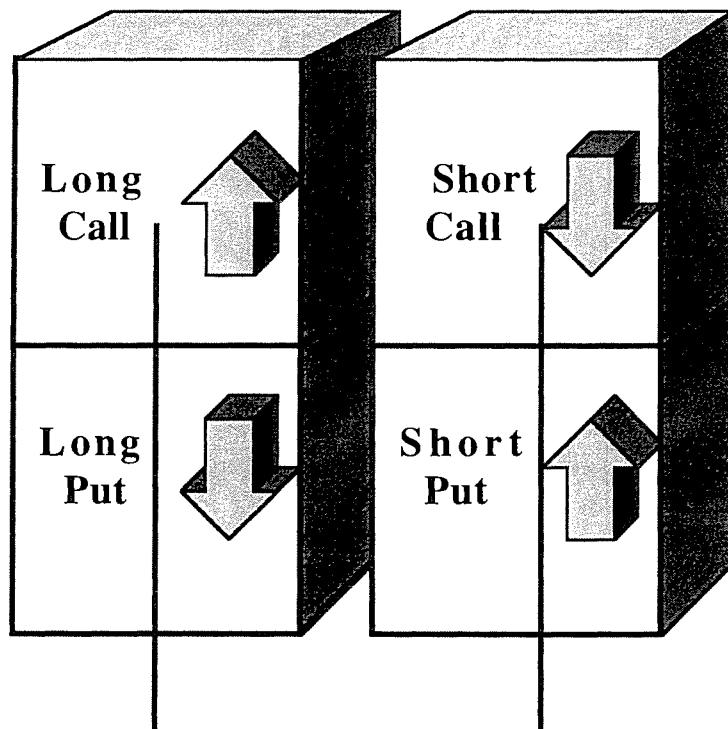
We know that buying a call gives potentially unlimited upside market gain while buying a put gives increasing gain as the market falls to zero. To profit if the market either rises **or** falls, buy both and the picture becomes:



Long Straddle



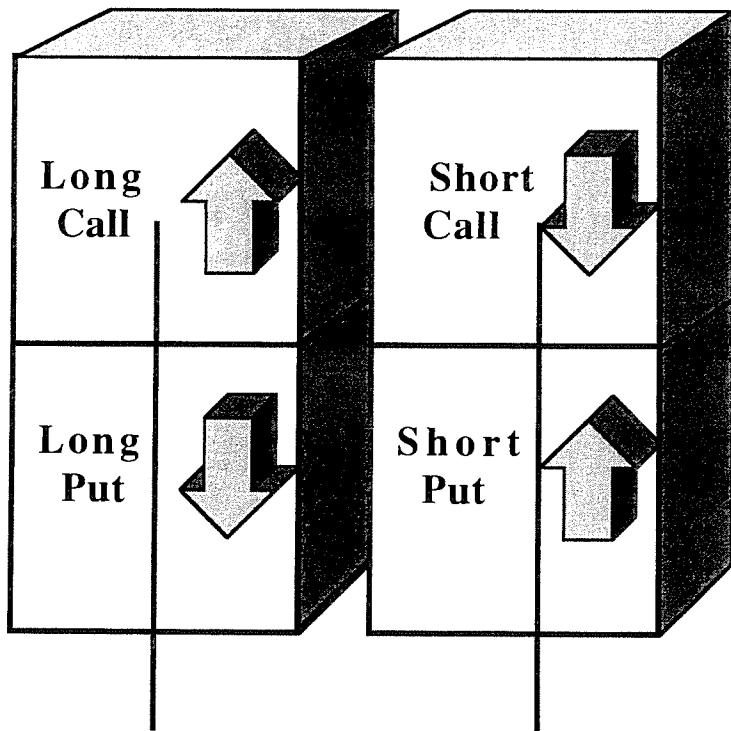
On the other hand, we know that selling a call allows the writer to earn the premium if the market stays flat or falls, while selling a put allows the writer to earn the premium if the market stays flat or rises. By selling both a call and a put, he earns double premiums if the market stays flat. If it moves, he loses on the call on the way up or loses on the put on the way down. To complete the diagram:



Long Straddle Short Straddle

Same Strike Price
and
Expiration

A long straddle or short straddle requires that the security, strike price, and expiration all be the **same**. If the customer buys a call and put on the same security with either **different** strike prices and/or expirations, it is termed a long combination. If he sells a call and put on the same security with either different strike prices and/or expirations, it is termed a short combination.



Long Combination Short Combination

Diff. Strike Price
and / or
Expiration

Combinations have essentially the same characteristics as straddles and one should be able to identify them.

5b. LONG STRADDLES

A customer believes that the market will move sharply but is uncertain as to the direction. You recommend that he buy a straddle on ABC stock to profit from this. The customer takes the following positions:

**Buy 1 ABC Jan 50 Call @ \$5
Buy 1 ABC Jan 50 Put @ \$4**

ABC Current Market Price = \$51

This is a long straddle since the security, strike price and expiration are the **same**. If the market moves up, the call is exercised and the put expires. If the market moves down, the put is exercised and the call expires.



To find the maximum potential gain, breakeven points, and maximum potential loss, we can use the "T" but it is actually simpler not to because there is a breakeven point for **both** the call side of the straddle and for the put side of the straddle. The steps to solving problems having more than one option position are:

Step 1: Stack the Positions one atop the other.

Step 2: Total the Premiums.

Step 3: If the customer is buying, the total premiums result in a "debit."

Step 4: The debit is the amount the customer pays for the long straddle and is his maximum loss.

Step 5: To breakeven the debit must be recovered. Add the debit to the call strike price for the upside breakeven point. Subtract the debit from the put strike price for the downside breakeven.

Step 6: Maximum potential gain is unlimited since the customer owns a call.

To solve this problem, first we stack the positions and total the premiums.

Buy 1 ABC Jan 50 Call @ \$5
Buy 1 ABC Jan 50 Put @ \$4

\$9 Debit

**Maximum Loss =
Total Premiums Paid
(Debit)**

The customer must pay \$9 in premiums or \$900 total for the long straddle. This is his maximum potential loss if the market stays at \$50 and both contracts expire at the money.

**Upside Breakeven =
Call Strike Price +
Debit**

If the market rises above \$50, the call will go in the money and the put expires out the money. To breakeven on the upside, the entire \$9 debit must be recovered from the long call. The upside breakeven is:

50 + 9 = 59 Breakeven
 |
 Buy 1 ABC Jan 50 Call @ \$5
 Buy 1 ABC Jan 50 Put @ \$4
\$9 Debit

Downside Breakeven
= Put Strike Price -
Debit

If the market drops below \$50, the put will go in the money and the call expires out the money. To breakeven on the downside, the entire \$9 debit must be recovered from the long put. The downside breakeven is:

$$\begin{array}{l} \text{Buy 1 ABC Jan 50 Call @ \$5} \\ \text{Buy 1 ABC Jan 50 Put @ \$4} \\ \hline & \text{\$9 Debit} \\ & \\ & \text{50 - 9 = 41 Breakeven} \end{array}$$

Maximum Potential Gain = Unlimited

The customer's maximum potential gain is unlimited because he owns a long call option.

To summarize the characteristics of buying a straddle:

Long Straddle -- Speculative Strategy That Is Both Bullish And Bearish

Maximum Potential Gain = Unlimited (On Call Side)
= Strike Price - Premium (On Put Side)

Maximum Pot. Loss = Combined Premiums
Breakeven Points = Call Strike Price + Combined Premium
= Put Strike Price - Combined Premium

5c. SHORT STRADDLES

A customer believes that the market will stay the same and is willing to assume a high level of risk. You recommend that he sell a straddle on ABC stock to profit from this. The customer takes the following position:

Sell 1 ABC Jan 50 Call @ \\$5
Sell 1 ABC Jan 50 Put @ \\$4

ABC Current Market Price = \$51



This is a short straddle since the security, strike price and expiration are the **same**. If the market stays at \$50, both the call and put will expire and he will earn double premiums. But if the market moves up, the call will be exercised and the put expires. He will lose on the short call position. If the market moves down, the put will be exercised and the call expires. He will lose from the short put position.

To find the maximum potential gain, breakeven points, and maximum potential loss for more than one option, we use the steps outlined previously with slight modifications:

- Step 1:** Stack the Positions one atop the other.
- Step 2:** Total the Premiums.
- Step 3:** If the customer is selling, the total premiums result in a "credit."
- Step 4:** The credit is the amount the customer received for the short straddle and is his maximum potential gain.
- Step 5:** To breakeven the credit must be lost. Add the credit to the call strike price for the upside breakeven point. Subtract the credit from the put strike price for the downside breakeven.
- Step 6:** Maximum potential loss is unlimited since the customer has a naked short call position.

To solve this problem, first we stack the positions and total the premiums.

Sell 1 ABC Jan 50 Call @ \$5
Sell 1 ABC Jan 50 Put @ \$4

\$9 Credit

Maximum Potential Gain = Combined Premiums (Credit)

Upside Breakeven = Call Strike Price + Credit

The customer received \$9 in premiums or \$900 total for the short straddle. This is his maximum potential gain if the market stays at \$50 and both contracts expire at the money.

If the market rises above \$50, the call will go in the money and the put expires out the money. To breakeven on the upside, the entire \$9 credit must be lost from the short call. The upside breakeven is:

$$\begin{array}{r}
 50 + 9 = 59 \text{ Breakeven} \\
 | \\
 \text{Sell 1 ABC Jan 50 Call @ \$5} \\
 \text{Sell 1 ABC Jan 50 Put @ \$4} \\
 \hline
 \text{\$9 Credit}
 \end{array}$$

Downside Breakeven
= Put Strike Price - Credit

If the market drops below \$50, the put will go in the money and the call expires out the money. To breakeven on the downside, the entire \$9 credit must be lost from the short put. The downside breakeven is:

$$\begin{array}{r}
 \text{Sell 1 ABC Jan 50 Call @ \$5} \\
 \text{Sell 1 ABC Jan 50 Put @ \$4} \\
 | \\
 \hline
 \text{\$9 Credit} \\
 | \\
 \text{50 - 9 = 41 Breakeven}
 \end{array}$$

Maximum Potential Loss = Unlimited

The customer's maximum potential loss is unlimited because he has a short call position which is naked.

To summarize the characteristics of selling a straddle:

Short Straddle -- Speculative Strategy That Is Suitable In Flat Markets

$$\begin{array}{rcl}
 \text{Maximum Pot.} & & \\
 \text{Gain} & = & \text{Combined Premiums} \\
 \\
 \text{Maximum} & = & \text{Unlimited (On Call Side)} \\
 \text{Potential} & & \\
 \text{Loss} & = & \text{Strike Price - Premium} \\
 & & \text{(On Put Side)} \\
 \\
 \text{Breakeven} & & \\
 \text{Points} & = & \text{Call Strike Price + Combined Premium} \\
 & & \\
 & = & \text{Put Strike Price - Combined Premium}
 \end{array}$$

5 d. LONG AND SHORT STRANGLES

It was mentioned previously that a straddle with either different strike prices and/or different expirations is called a "combination". A specific type of combination is known as a "strangle".



In a long strangle, a customer buys a call and buys a put on the same stock, but the strike prices are set so both contracts are “out the money” and thus, will cost less than a similar long straddle. Of course, the fact that the position costs less, also means that a greater market movement is needed for the position to become profitable.

For example, when the market price of ABC stock is at \$50, a customer could buy the following straddle:

Buy 1 ABC Jan 50 Call @ \$5
Buy 1 ABC Jan 50 Put @ \$4

\$9 Debit

The customer pays a combined premium of \$9 and will have a profit if the market price of the stock goes above \$59; or falls below \$41.

Long Strangle

The customer does not want to pay \$9, so instead, he or she takes the following positions when the market price of ABC is at \$50:

Buy 1 ABC Jan 55 Call @ \$3
Buy 1 ABC Jan 45 Put @ \$3

\$6 Debit

Both the call and the put are 5 points “out the money”, so the total premium is lower (\$6 instead of \$9) than the premium for the long straddle. However, now the position is profitable if the market goes above \$61 (\$55 + \$6) as compared to \$59 for the long straddle; or if it falls below \$39 (\$45 - \$6) as compared to \$41 for the long straddle..

Long Strangle Has Lower Premium Than Long Straddle And Needs Greater Movement To Be Profitable

To summarize, with a long strangle, the premium paid is less than for a similar long straddle, so the maximum potential loss is lower. However, the breakeven points are farther away from the current market price, so a sharper market move is needed for the position to become profitable.

In a short strangle, a customer sells a call and sells a put on the same stock, but the strike prices are set so both contracts are “out the money” and thus, the customer will collect less than with a similar short straddle. Of course, the fact that the position results in a lower premium collection also means that there is lower risk. A greater market movement either up or down is needed for the position to become unprofitable.

For example, when the market price of ABC stock is at \$50, a customer could sell the following straddle:

Sell 1 ABC Jan 50 Call @ \$5
Sell 1 ABC Jan 50 Put @ \$4

\$9 Credit

The customer receives a combined premium of \$9 and will have a loss if the market price of the stock goes above \$59; or falls below \$41. If the market price stays between \$41 and \$59, the position is profitable.

Short Strangle

The customer believes that there is too great a chance for the market price to move above \$59 or below \$41, so instead, he or she takes the following positions when the market price of ABC is at \$50:

Sell 1 ABC Jan 55 Call @ \$3
Sell 1 ABC Jan 45 Put @ \$3

\$6 Credit

Both the call and the put are 5 points "out the money", so the total premium is lower (\$6 instead of \$9) than the premium collected for the short straddle. However, now the position is profitable if the market stays below \$61 (\$55 + \$6) as compared to \$59 for the short straddle; or if it stays above \$39 (\$45 - \$6) as compared to \$41 for the short straddle..

Short Strangle Has Lower Profit Potential Than Short Straddle And Needs Greater Movement To Be Unprofitable

To summarize, with a short strangle, the premium collected is less than for a similar short straddle, so the maximum potential gain is lower. However, the breakeven points are farther away from the current market price, so a sharper market move is needed for the position to become unprofitable.

5e. DELTA NEUTRAL STRATEGIES

"Delta" is the measure of an option's premium movement as compared to the movement of the price of the underlying stock. It is a correlation coefficient.

A "deep in the money call" has a delta of very close to +1 = for every dollar that the market price of the stock rises, the premium will move up by the same dollar;

A "deep out the money" call has a delta of very close to 0 = for every dollar that the market price of the stock rises, the premium of the option does not move at all, since it is essentially worthless;



"At the money" call options tend to have deltas around +.5 = for every dollar that the stock price rises, the options premium moves up by \$.50.

The delta movement of put options is similar, except that the deltas are negative instead of positive.

A "delta neutral" strategy is one that profits from volatility - one is not taking a market direction. It requires 2 legs and attempts to make the strategy delta "0" - which makes the strategy relatively insensitive to small price movements. However, it is strongly profitable if the market moves sharply in either direction. For example, a long "at the money straddle" is delta neutral.

Assume that when the market price of ABC is 50, a customer:

Buys 1 ABC Jan 50 Call @ \$3 Delta = +.50
 Buys 1 ABC Jan 50 Put @ \$2 Delta = -.50

Initially, the strategy delta is "0" (+.5 offset by -.5).

If the market moves a bit up or a bit down, the customer loses the combined premium paid, less any small gain on the side of the straddle that is "in the money."

If the market rises sharply, the delta of the 50 call goes towards +1, and the delta of the 50 put goes towards 0, so the strategy delta heads towards +1. The call premium keeps increasing by \$1 for each \$1 increase in the stock price.

If the market falls, the delta of the 50 put goes towards -1, and the delta of the 50 call goes towards 0, so the strategy delta heads towards -1. The put premium keeps increasing by \$1 for each \$1 decrease in the stock price.

One can also create delta neutral positions in other ways. When applying delta to stocks, the stock has a delta of +1. If one buys 2 "at the money puts" on the stock with deltas of -.5, another delta neutral position has been created. The concept of being "delta neutral" has real meaning for options market makers; because if they can remain "delta neutral," then they will profit from their Bid-Ask spread and not be subject to losses (or gains) due to price movements in the underlying securities.

STRADDLES AND COMBINATIONS SECTION EXAMINATION

1.

Which of the following create a straddle?

- I Long 1 ABC Jan 50 Call
Long 1 ABC Jan 50 Put
 - II Long 1 ABC Jan 50 Call
Short 1 ABC Jan 60 Put
 - III Short 1 ABC Jan 50 Call
Short 1 ABC Jan 50 Put
 - IV Short 1 ABC Jan 50 Call
Short 1 ABC Jan 60 Put
- a. I, II
 - b. I, III
 - c. II, IV
 - d. III, IV

2.

Which of the following has unlimited loss potential?

- I Short Naked Call
 - II Short Stock/Long Call
 - III Short Straddle
 - IV Short Call/Long Stock
- a. I only
 - b. I, III
 - c. II, III
 - d. I, II, III, IV

3.

A long straddle is profitable in a:

- I rising market
 - II falling market
 - III stable market
- a. I only
 - b. II only
 - c. III only
 - d. I and II

Use the following information to answer the next 4 questions:

A customer buys 1 ABC Jan 50 Call @ \$4 and buys 1 ABC Jan 50 Put @ \$3 when the market price of ABC = \$51.

4.

The market rises to \$70 and the call is exercised. The stock is sold in the market. The put expires. The customer's gain is:

- a. \$700
- b. \$1300
- c. \$2000
- d. \$2700

5.

The breakeven points are:

- a. 46 and 53
- b. 47 and 54
- c. 43 and 57
- d. 45 and 55

6.

The maximum potential gain is:

- a. \$700
- b. \$4300
- c. \$5700
- d. unlimited

7.

The maximum potential loss is:

- a. \$700
- b. \$4300
- c. \$5700
- d. unlimited



Use the following information to answer the next 3 questions:

A customer sells 1 ABC Jul 30 Call @ \$1 and sells 1 ABC Jul 30 Put @ \$3 1/2 when the market price of ABC is \$29.

8.

The maximum potential gain is:

- a. \$450
- b. \$2550
- c. \$3450
- d. unlimited

9.

The maximum potential loss is:

- a. \$450
- b. \$2550
- c. \$3450
- d. unlimited

10.

The breakeven points are:

- a. 26.50 and 31.00
- b. 25.50 and 34.50
- c. 27.50 and 33.50
- d. 29.00 and 35.00

11.

A customer takes the following positions when the market price of ABC is at \$60:

Long 1 ABC Jan 65 Call
Long 1 ABC Jan 55 Put

The customer has created a:

- a. Long Straddle
- b. Short Straddle
- c. Long Strangle
- d. Short Strangle

12.

Which of the following creates a short strangle position when the market price of ABC stock is at \$40

- a. Sell 1 ABC Jan 40 Call; Sell 1 ABC Jan 40 Put
- b. Sell 1 ABC Jan 30 Call; Sell 1 ABC Jan 50 Put
- c. Sell 1 ABC Jan 50 Call; Sell 1 ABC Jan 30 Put
- d. Sell 1 ABC Jan 30 Call; Sell 1 ABC Jan 30 Put

Use the following information to answer the next 3 questions:

A customer sells 1 ABC Jul 35 Call @ \$2 and sells 1 ABC Jul 25 Put @ \$1 when the market price of ABC is 30.

13.

The maximum potential gain is:

- a. \$300
- b. \$2200
- c. \$3800
- d. unlimited

14.

The maximum potential loss is:

- a. \$300
- b. \$2200
- c. \$3800
- d. unlimited

15.

The breakeven points are:

- a. 23 and 37
- b. 27 and 33
- c. 23 and 38
- d. 22 and 38

STRADDLES AND COMBINATIONS EXAMINATION EXPLANATIONS

1. The best answer is b. A straddle is the purchase of a call and a put **or** the sale of a call and a put on the **same** underlying security with the **same** strike price and expiration.
2. The best answer is b. Selling a naked call obligates the writer to deliver stock he does not own - thus there is unlimited risk. A short stock position is hedged by a long call - the long call allows the purchase of the stock at a fixed price, which can then be used to cover the short stock position. A short straddle involves the sale of a call and a put - both of which are naked. A naked call writer has unlimited risk. A long stock / short call position is a covered call writer - where the maximum loss would occur if the stock became worthless.
3. The best answer is d. A long straddle is the purchase of a call **and** the purchase of a put on the same stock at the same strike price and expiration. If the market moves up, the call is profitable. If the market moves down, the put is profitable.
4. The best answer is b. The customer created a long straddle.

Buy 1 ABC Jan 50 Call @ \$4	
Buy 1 ABC Jan 50 Put @ \$3	
<hr/>	
	\$7 Debit

If the market rises to \$70, the call is exercised while the put expires "out the money." There is a 20 point profit on the call offset by \$7 paid in premiums for a net profit of 13 points or \$1300.

5. The best answer is c. To breakeven, the \$7 Debit paid for the straddle must be recovered. This happens at $50 + 7 = 57$ on the call side of the straddle and $50 - 7 = 43$ on the put side of the straddle.
6. The best answer is d. Since one side of the straddle is a long call, there is unlimited upside gain potential. On the put side of the straddle, the maximum potential gain occurs if the stock drops to zero.
7. The best answer is a. If the market stays at 50, both contracts expire "at the money." The customer loses the \$700 paid in premiums. This is the maximum potential loss.
8. The best answer is a. The customer created a short straddle.

Sell 1 ABC Jul 30 Call @ \$1.00	
Sell 1 ABC Jul 30 Put @ \$3.50	
<hr/>	
	\$4.50 Credit

If the market stays at 30, both contracts expire "at the money" and the writer earns the credit of \$450. This is the maximum gain.

9. The best answer is d. Since one side of a short straddle is a short naked call, if the market rises there is unlimited risk.



10. The best answer is b. To breakeven, the writer must lose the 4 1/2 point credit received for selling the straddle. If the market rises, the call side will be exercised at a loss to the writer. The call breakeven is $30 + 4.50 = 34.50$. If the market falls, the put side will be exercised at a loss to the writer. The put breakeven is $30 - 4.50 = 25.50$.

11. The best answer is c. The customer is buying an "out the money" call and is buying an "out the money" put on the same stock. This is a long strangle. The customer believes that the market will move sharply either up or down; and by selecting "out the money" contracts, the customer is paying less than for a similar long straddle position. The premium paid is lower, but the stock needs to move further up or down for the position to become profitable.

12. The best answer is c. To sell a strangle, the customer sells an "out the money" call and sells an "out the money" put on the same stock. The customer believes that the market will basically stay flat, and collects a double premium, however the premium collection is lower than for a similar short straddle. If the market does move sharply either up or down, since "out the money" contracts were selected, the stock needs to move further up or down for the position to become unprofitable as compared to a short straddle. When the market price of ABC is at \$40, the sale of an ABC Jan 50 Call (10 points "out the money"); and the sale of an ABC Jan 30 Put (10 points "out the money") creates a short strangle.

13. The best answer is a. The customer has created a short strangle when the market price of ABC is at \$30:

Sell 1 ABC Jul 35 Call @ \$2
 Sell 1 ABC Jul 25 Put @ \$1

\$3 Credit

The customer believes that the market will basically stay flat, and collects a double premium, however the premium collection is lower than for a similar short straddle. The customer collects a combined premium of \$300, and as long as the market stays between \$25 and \$35, both contracts expire and \$300 is earned. This is the maximum potential gain.

14. The best answer is d. The customer has created a short strangle. If the market does move sharply either up or down, either above \$38 on the short naked call ($\$35 + \3 premium); or below \$22 on the short naked put ($\$25 - \3 premium); then the customer loses. There is unlimited loss potential on the short naked call position - so this is the maximum potential loss.

15. The best answer is d. The customer has created a short strangle. If the market does move sharply either up or down, either to \$38 on the short naked call ($\$35 + \3 premium); or to \$22 on the short naked put ($\$25 - \3 premium); then the customer breaks even. If the market price rises above \$38 or falls below \$22, the customer loses.

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SECTION 6: SPREADS

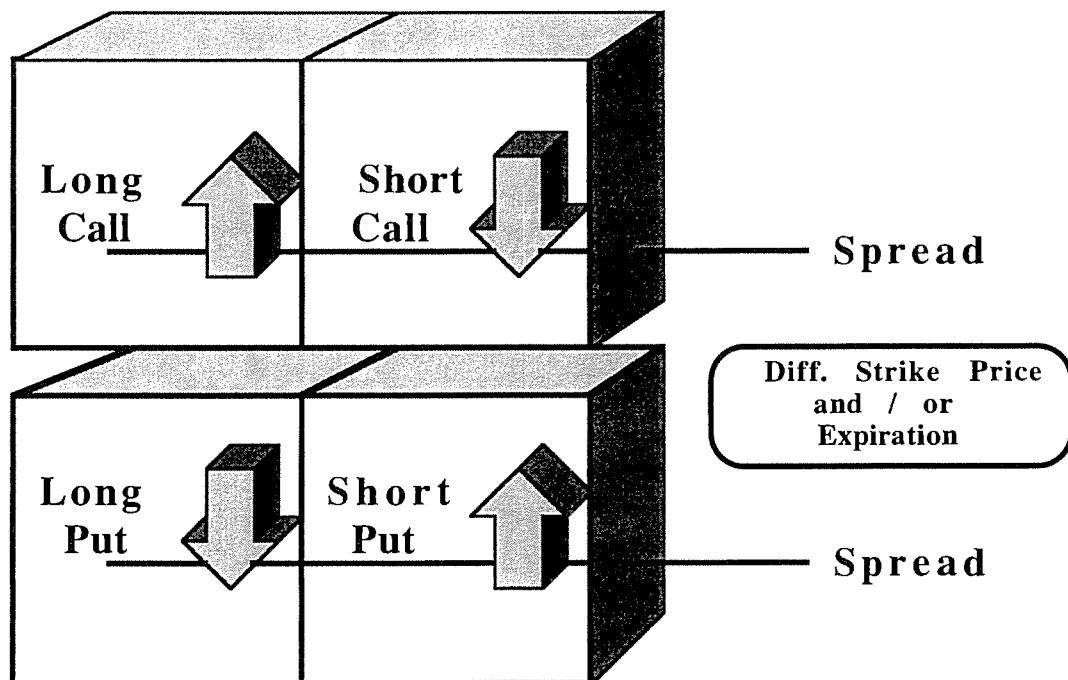
6a. SPREADING OVERVIEW

A spread position is:

The purchase and sale of a call or;
The purchase and sale of a put

at **different** strike prices or with **different** expirations
or with both the strike price and expiration being
different.

Spread positions can be visualized using the options diagram as:



Hedged Option

The theory behind spreading is that instead of taking a "pure" one sided position on the direction of the market (such as buying a call because one is sure the market will go up), one takes a second position as a partial hedge (such as selling a call at a different strike price or expiration).

Limits Risk and Gain

By taking the second position as a partial offset, one limits potential gain and limits potential risk as well.

Price Or Vertical Spread

In essence, spreads are hedged option positions. Hedges where the strike prices are different are called price spreads or "vertical" spreads. An example of a price spread is:

**Buy 1 ABC Jan 50 Call @ \$7
Sell 1 ABC Jan 60 Call @ \$3**

Notice how the strike prices are stacked "vertically" one above the other. There are 4 types of price spreads, which substitute for taking the pure option position.

Instead of buying a call, one can "buy a call spread." This is a **"long" call spread**, where the long call premium is higher. For example:

**Buy 1 ABC Jan 50 Call @ \$7
Sell 1 ABC Jan 60 Call @ \$3**

**_____
\$4 Debit**

**Long Call Spread -
Debit Spread**

The spread is a "long spread" because it results in a net debit of \$4 (one must pay \$4 so one is a "net buyer" of the spread position). In a long call spread one buys the lower strike price (which has a higher premium) and sells the higher strike price - always!

Instead of selling a call, one can "sell a call spread." This is a **"short" call spread**, where the short call premium is higher. For example:

**Sell 1 ABC Jan 50 Call @ \$7
Buy 1 ABC Jan 60 Call @ \$3**

**_____
\$4 Credit**

**Short Call Spread -
Credit Spread**

The spread is a "short spread" because it results in a net credit of \$4 (one receives \$4 so one is a "net seller" of the spread position). In a short call spread one sells the lower strike price (which has the higher premium) and buys the higher strike price - always!

Instead of buying a put, one can "buy a put spread." This is a **"long" put spread**, where the long put premium is higher. For example:

**Buy 1 ABC Jan 60 Put @ \$7
Sell 1 ABC Jan 50 Put @ \$3**

**_____
\$4 Debit**

**Long Put Spread -
Debit Spread**

The spread is a "long spread" because it results in a net debit of \$4 (one must pay \$4 so one is a "net buyer" of the spread position). In a long put spread one buys the higher strike price (which has the higher premium) and sells the lower strike price - always!



Instead of selling a put, one can "sell a put spread." This is a **"short" put spread**, where the short put premium is higher. For example:

Sell 1 ABC Jan 60 Put @ \$7
Buy 1 ABC Jan 50 Put @ \$3

\$4 Credit

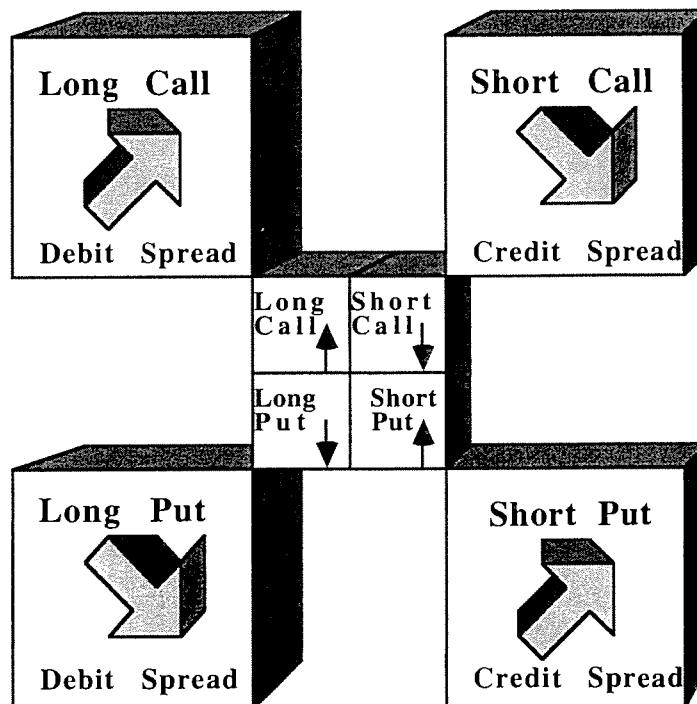
Short Put Spread - Credit Spread

The spread is a "short spread" because it results in a net credit of \$4 (one receives \$4 so one is a "net seller" of the spread position). In a short put spread, one sells the higher strike price option (which has the higher premium) and buys the lower strike price option - always!

These 4 spread positions do not have the same gain potential as taking the pure single option position, but they also do not carry the same risk. They are used when one is not completely sure of the direction the market will take; rather one is "moderately" sure of the market direction.

Each of the 4 price spreads will be discussed separately.

The diagram to envision price spreads is:



After the sections on the 4 price ("vertical") spreads, time spreads ("horizontal" spreads) will be discussed. A time spread has different expirations, not different strike prices. A spread can also consist of contracts with **both**

different strike price and expirations - this is termed a "diagonal" spread.

6b. LONG CALL SPREAD (BULL SPREAD)

Assume that a customer believes that XXX stock will rise in the near future, but he knows that the stock is not very volatile and doesn't expect the stock to rise by more than 10 points. The customer could simply buy 1 XXX Jul 70 Call @ \$5 (assume the market price is \$71) and enjoy unlimited gain potential in return for the 5 point premium paid.

Being a cautious person, he decides to do the following:

**Buy 1 XXX Jul 70 Call @ \$5
Sell 1 XXX Jul 80 Call @ \$1**

(Market Price = \$71)

If XXX does not move above \$80 per share, the short call will expire. The premium earned on the short call of \$1 reduces his money outlay from \$5 to \$4. In return for the reduced cash outlay, his gain potential is reduced. If the market rises above \$80, the short call will be exercised, requiring him to deliver 100 shares of stock at the \$80 strike price.

**Short Call Is
Covered By Long
Call**

The short call is covered by the long call position, because he can always exercise the long call and buy the stock at \$70 for delivery. He does not have to go to the market to get the stock. On the upside, his gain is limited to 10 points (Buy at \$70, Sell at \$80).

Moderately Bullish

Buying a call spread is used when one is moderately bullish. The long spread costs less than taking the simple long call position, but gives lower potential gain. If time premiums are very high, persons may choose long call spreads rather than simple long call positions. This is done as a way of reducing the premium outlay. The diagram for the long call spread is:

**Also Used When
Time Premiums
Are High**





Using the spread position shown on the prior page, the steps to find maximum potential loss, breakeven, and maximum potential gain are:

**Stack Positions
From Low To
High Strike Price**

Step 1: Stack the positions from low to high strike price (for call spreads) and determine if this is a net debit or net credit.

Buy 1 XXX Jul 70 Call @ \$5
Sell 1 XXX Jul 80 Call @ \$1

\$4 Debit

Step 2: If it is a net debit, it is a long spread. Since this is a spread with calls, this is a:

Long Call Spread

Long Call Spread (Bullish)

Step 3: The debit is the deposit and is the maximum potential loss if the market drops and both calls expire out the money.

**Deposit = Debit =
Maximum Loss**

Deposit = \$400 debit = Maximum Potential Loss

Step 4: If the market rises above \$70, the long call will be exercised and the customer will buy the stock at \$70. If the market continues to rise, above \$80, the short call is exercised. The maximum gain is \$10 points on the stock (the difference in the strike prices) net of \$400 paid in premiums = \$600.

**Maximum Gain =
Difference Between
Strike Prices - Debit**

Maximum Gain = Difference between strike prices net of debit = \$1000 - \$400 = \$600

Step 5: To breakeven, the customer must recover the \$400 (4 points) paid in premiums. He makes money from the long call (remember, this is a long call spread) so the breakeven is $70 + 4 = 74$.

**Breakeven = Long
Strike + Debit**

Breakeven = Long Strike Price + Net Debit =
 $70 + 4 = 74$

6c. SHORT CALL SPREAD (BEAR SPREAD)

Assume that a customer believes that XXX stock will fall in the near future, but he knows that the stock is not very volatile and doesn't expect the stock to fall by more than 10

points. The customer could simply sell 1 XXX Jul 70 Call @ \$5 (assume the market price is \$71) and if XXX falls below \$70 and stays there, he earns \$500 of premiums. But if XXX rises, he is exposed to unlimited upside risk. He wishes to limit this risk, so he takes the following position:

**Sell 1 XXX Jul 70 Call @ \$5
Buy 1 XXX Jul 80 Call @ \$1**

(Market Price = \$71)

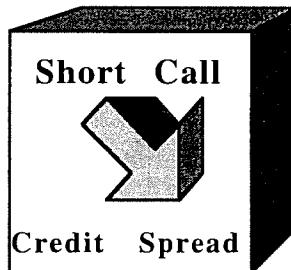
If XXX moves below \$70 and stays there, both options will expire. The premium earned on the short call of \$5 is reduced by the long call premium of \$1. In return for the reduced cash received, his loss potential is reduced. If the market rises above \$70, the short call will be exercised, requiring him to deliver 100 shares of stock at the \$70 strike price.

Short Call Is Only Partially Covered By Long Call

The short call is partially covered by the long call position, because he can always exercise the long call and buy the stock at \$80 for delivery. He does not have to go to the market to get the stock. On the upside, his loss is limited to 10 points (Buy at \$80, Sell at \$70), less premiums received.

Moderately Bearish

Selling a call spread is used when one is moderately bearish. The short spread earns less than taking the simple short call position if the contract goes out the money, but it limits potential risk. The diagram for the short call spread is:



Using the spread position created above, the steps to find maximum potential loss, breakeven, and maximum potential gain are:

Stack Positions From Low To High Strike Price

Step 1: Stack the positions from low to high strike price (for call spreads) and determine if this is a net debit or net credit.

**Sell 1 XXX Jul 70 Call @ \$5
Buy 1 XXX Jul 80 Call @ \$1**

\$4 Credit



Step 2: If it is a net credit, it is a short spread. Since this is a spread with calls, this is a:

Short Call Spread

Short Call Spread (Bearish)

Step 3: The credit is the maximum potential gain if the market drops and both calls expire out the money.

Maximum Gain = Credit

Maximum Potential Gain = Net Credit = \$400

Step 4: If the market rises above \$70, the short call will be exercised and the customer must deliver the stock at \$70. If the market continues to rise, above \$80, the long call is exercised to get the stock for delivery. The maximum loss is \$10 points on the stock (the difference in the strike prices) net of \$400 received in premiums = \$600. Since \$600 is the most that can be lost, this is the deposit amount for the short spread position.

**Maximum Loss =
Difference Between
Strike Prices - Credit**

Maximum Loss = Difference between strike prices net of credit = \$1000 - \$400 = \$600 = Deposit

Step 5: To breakeven, the customer must lose the \$400 (4 points) received in premiums. He loses money from the short call (remember, this is a short call spread) so the breakeven is $70 + 4 = 74$.

**Breakeven = Short
Strike + Credit**

Breakeven = Short Strike Price + Net Credit =
 $70 + 4 = 74$

6d. LONG PUT SPREAD (BEAR SPREAD)

Assume that a customer believes that XXX stock will fall in the near future, but he knows that the stock is not very volatile and doesn't expect the stock to fall by more than 10 points. The customer could simply buy 1 XXX Jul 80 Put @ \$5 (assume the market price is \$79) and enjoy increasing gain if stock drops in return for the 5 point premium paid.

Being a cautious person, he decides to do the following:

**Buy 1 XXX Jul 80 Put @ \$5
Sell 1 XXX Jul 70 Put @ \$1**

(Market Price = \$79)

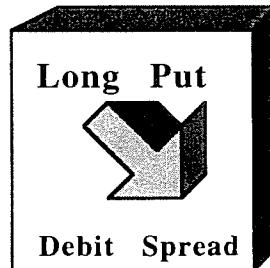
If XXX does not move below \$70 per share, the short put will expire. The premium earned on the short put of \$1 reduces his money outlay from \$5 to \$4. In return for the reduced cash outlay, his gain potential is reduced. If the market falls below \$70, the short put will be exercised, requiring him to buy 100 shares of stock at the \$70 strike price.

Short Put Is Covered By Long Put

The short put is covered by the long put position, because he can always exercise the long put and sell the stock at \$80. He does not have to go to the market to get the stock. On the downside, his gain is limited to 10 points (Buy at \$70, Sell at \$80).

Moderately Bearish

Buying a put spread is used when one is moderately bearish. The long spread costs less than taking the simple long put position, but gives lower potential gain. The diagram for the long put spread is:



Using the spread position created above, the steps to find maximum potential loss, breakeven, and maximum potential gain are:

Stack Positions From High To Low Strike Price

Step 1: Stack the positions from high to low strike price (for put spreads) and determine if this is a net debit or net credit.

Buy 1 XXX Jul 80 Put @ \$5
Sell 1 XXX Jul 70 Put @ \$1

\$4 Debit

Step 2: If it is a net debit, it is a long spread. Since this is a spread with puts, this is a:

Long Put Spread

Long Put Spread (Bearish)

Step 3: The debit is the deposit and is the maximum potential loss if the market rises and both puts expire out the money.

Maximum Loss = Debit

Deposit = \$400 debit = Maximum Potential Loss



Step 4: If the market falls below \$80, the long put will be exercised and the customer will sell the stock at \$80. If the market continues to fall, below \$70, the short put is exercised, and the customer buys the stock for \$70. The maximum gain is \$10 points on the stock (the difference in the strike prices) net of \$400 paid in premiums = \$600.

**Maximum Gain =
Difference Between
Strike Prices - Debit**

Maximum Gain = Difference between strike prices net of debit = \$1000 - \$400 = \$600

Step 5: To breakeven, the customer must recover the \$400 (4 points) paid in premiums. He makes money from the long put (remember, this is a long put spread) so the breakeven is $80 - 4 = 76$.

**Breakeven = Long
Strike - Debit**

Breakeven = Long Strike Price - Net Debit =
80 - 4 = 76

6e. SHORT PUT SPREAD (BULL SPREAD)

Assume that a customer believes that XXX stock will rise in the near future, but he knows that the stock is not very volatile and doesn't expect the stock to rise by more than 10 points. The customer could simply sell 1 XXX Jul 80 Put @ \$5 (assume the market price is 79) and if XXX rises above \$80 and stays there, he earns \$500 of premiums. But if XXX falls, he is exposed to increasing downside risk as the market drops. To limit this risk, he takes the following positions:

**Sell 1 XXX Jul 80 Put @ \$5
Buy 1 XXX Jul 70 Put @ \$1**

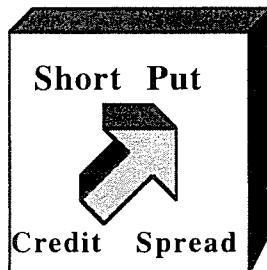
(Market Price = \$79)

If XXX moves above \$80 and stays there, both options will expire. The premium earned on the short put of \$5 is reduced by the long put premium of \$1. In return for the reduced cash received, his loss potential is reduced. If the market falls below \$80, the short put will be exercised, requiring him to buy 100 shares of stock at the \$80 strike price.

**Short Put Is Only
Partially Covered
By Long Put**

The short put is partially covered by the long put position, because he can always exercise the long put and sell the stock at \$70. He does not have to go to the market to sell the stock. On the downside, his loss is limited to 10 points (Buy at \$80, Sell at \$70).

Moderately Bullish Selling a put spread is used when one is somewhat bullish:



The short spread earns less than taking the simple short put position if the contract goes out the money, but limits potential risk.

Using the spread position created above, the steps to find maximum potential loss, breakeven, and maximum potential gain are:

**Stack Positions
From High To
Low Strike Price**

Step 1: Stack the positions from high to low strike price (for put spreads) and determine if this is a net debit or net credit.

Sell 1 XXX Jul 80 Put @ \$5

Buy 1 XXX Jul 70 Put @ \$1

\$4 Credit

Step 2: If it is a net credit, it is a short spread. Since this is a spread with puts, this is a:

Short Put Spread

Short Put Spread (Bullish)

Step 3: The credit is the maximum potential gain if the market rises and both puts expire out the money.

Maximum Gain = Credit

Maximum Potential Gain = Net Credit = \$400

Step 4: If the market falls below \$80, the short put will be exercised and the customer must buy the stock at \$80. If the market continues to fall, below \$70, the long put is exercised and the stock is sold for \$70. The maximum loss is \$10 points on the stock (the difference in the strike prices) net of \$400 received in premiums = \$600. Since \$600 is the most that can be lost, this is the deposit amount for the short spread position.



**Maximum Loss =
Difference Between
Strike Prices - Credit**

Maximum Loss = Difference between strike
prices net of credit = \$1000 - \$400 = \$600 = Deposit

Step 5: To breakeven, the customer must lose
the \$400 (4 points) received in premiums.
He loses money from the short put
(remember, this is a short put spread) so
the breakeven is $80 - 4 = 76$

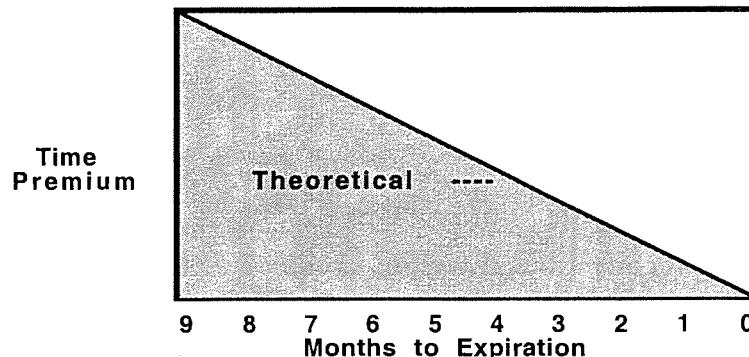
**Breakeven = Short
Strike Price - Credit**

Breakeven = Short Strike Price - Net Credit =
 $80 - 4 = 76$

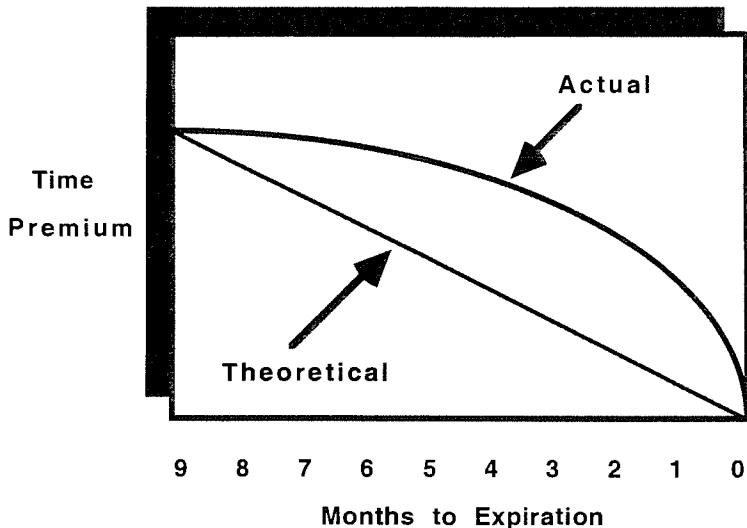
6f. CALENDAR SPREADS (HORIZONTAL)

The strategy behind a calendar spread is completely different from that for price spreads. In a price spread, the customer is taking a direction in the market (either up or down). A calendar spread tries to take advantage of human nature to make a profit!

To explain calendar spreads, we will use a stock (XXX) as the underlying security. Options on stock have a maximum "technical" life (this is fully explained in the next chapter) of 9 months. Assume that the market price of XXX is \$70 and we are looking at XXX 70 Call Contracts. These contracts are "at the money," so the entire premium is time value - there is no intrinsic value. Since time erodes at an even rate, as we get closer to expiration, the premium should fall evenly. A time value graph is below:



But, people tend to be shortsighted. In reality, the time premium is overvalued until the option is about to expire. Then, as it is realized that the option will soon be worthless, the time premium falls off rapidly, as shown following:



Here's how one can profit from this phenomenon. Assume that it is now December and XXX stock is trading at 70. The calls currently available are:

<u>Expiration</u>	<u>Jan</u>	<u>Apr</u>	<u>Jul</u>
XXX 70 Call	4	6	8

Since it is now December, the Jan Call has 1 month to expiration, the Apr has 4 months and the Jul has 7 months. If XXX stays at \$70, we know that people will soon push down the value of the Jan Call since it is close to expiration. However, the Apr and Jul will not fall as rapidly because they have more time left.

If one is brave, one could simply:

**Sell 1 XXX Jan 70 Call @ \$4
(Market Price = \$70)**

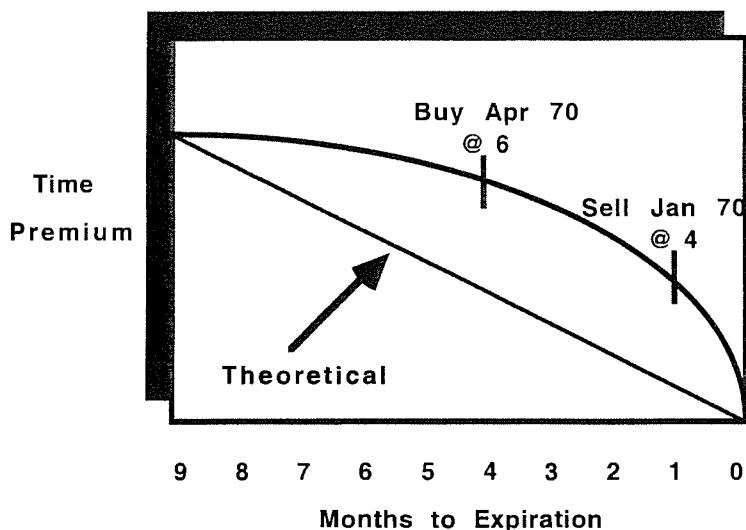
Calendar Spread - Same Strike/ Different Expiration

If XXX stays at \$70, we know that the call will lose value rapidly and can be held to expiration for a \$4 profit or bought back in the market for a low premium before expiration. But what happens if XXX rises? There is unlimited loss potential. To hedge against this one would:

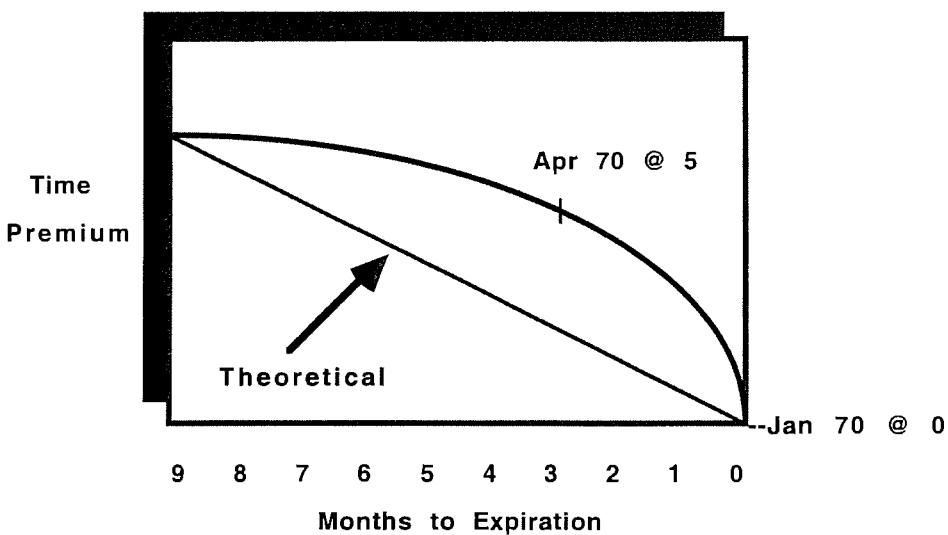
**Sell 1 XXX Jan 70 Call @ \$4
Buy 1 XXX Apr 70 Call @ \$6**

\$2 Debit
(Market Price = \$70)

If the short Jan 70 call is exercised, one can always turn around and buy the stock at \$70 through the long Apr 70 call. The long call covers the short call. This is charted as:



Assume it is 4 weeks later and the stock is still at \$70. The Jan call is almost expired and is trading for "0". The Apr call still has 3 months to expiration and is trading at \$5. The graph now shows:



The spread was established by:

Sell 1 XXX Jan 70 Call @ \$4
Buy 1 XXX Apr 70 Call @ \$6
\$2 Debit

The spread is now closed out by reversing the trades at the current premiums:

Buy 1 XXX Jan 70 Call @ \$0
Sell 1 XXX Apr 70 Call @ \$5
\$5 Credit

Since the spread was established by paying \$2 and closed by receiving \$5, there is a \$3 or \$300 profit.

**Also Called "Time"
Or "Horizontal"
Spreads**

These spreads are called time spreads or calendar spreads or "horizontal" spreads. Be able to identify and have a basic understanding of time spreads.

Diagonal Spread

A final note - a spread where both the price (vertical) and time (horizontal) are different is called a diagonal spread (combining a horizontal and vertical gives a diagonal).

6g. BUTTERFLY SPREADS

**Butterfly Spreads
Used For Income
In A Flat Market**

A "butterfly spread" is a combination of a bull and bear spread, and is used when the market is expected to stay flat.

Assume that ABC stock is trading at \$60, and the stock is expected to stay around that price. A customer could take the following positions:

**Buy 1 ABC Jan 50 Call @ \$12
Sell 1 ABC Jan 60 Call @ \$ 6**

\$6 Debit

**Sell 1 ABC Jan 60 Call @ \$ 6
Buy 1 ABC Jan 70 Call @ \$ 2**

\$4 Credit

The customer has bought a call spread and has sold a call spread. These positions can be summarized as:

**Butterfly
Spread**

Buy 1 ABC Jan 50 Call @ \$12

Sell 2 ABC Jan 60 Calls @ \$ 6 each

Buy 1 ABC Jan 70 Call @ \$ 2

\$2 Net Debit

Note that since these are call spreads, to analyze the positions, they are stacked from low to high strike prices. If these were puts, the stacking order would be reversed - high to low strike prices.

**Maximum Loss
Is The Debit**

The customer must pay \$200 for this debit spread. As with any debit position, this is both the maximum loss potential on the position and the deposit required to establish the position.



**Maximum Gain
Occurs At Central
Strike Price**

If the market stays at the current value of \$60 until expiration, the long 50 call will be exercised and the 2 short calls expire at the money. The customer will gain 10 points on the long call (Buy at \$50, Sell at \$60), offset by the \$2 paid in net premiums, for a net profit of \$800.

If the market begins to rise above \$60, both the long 50 call and the 2 short calls will be exercised. For example, if the market is at \$64, the customer will gain 10 points on the long spread (Buy at \$50, Sell at \$60), but will lose 4 points on the naked short call (deliver at \$60, buy at \$64). Since 2 points was paid in premiums, the net gain is $10 - 6 = \$400$.

**Upside Breakeven
Is Difference In
Strike Prices Net Of
Debit Added To Lower
Strike**

The upside breakeven point occurs at \$68. If the market is at \$68, the customer will gain 10 points on the long spread (Buy at \$50, Sell at \$60), but will lose 8 points on the naked short call (Deliver at \$60, Buy at \$68). Since 2 points was paid in premiums, the net position is $10 - 10 = \text{Breakeven}$. If the market rises, above \$70, all positions will be exercised. The customer would buy 100 shares of stock at \$50, and 100 shares at \$70, delivering the 200 shares at \$60 for no gain or loss on the stock. However, the customer is still out the \$200 debit. This is the maximum potential loss.

If the market drops below \$60, only the long 50 call will be exercised. For example, if the market drops to \$55, the 60 calls and 70 call expire out the money. On the long 50 call, the customer has a 5 point profit, net of \$2 debit = \$3 point net profit.

**Downside Breakeven
Is Difference In
Strike Prices Net Of
Debit Subtracted
From Higher Strike**

The downside breakeven occurs at 52. At this price, both the 60 and 70 calls expire out the money and the customer has a 2 point gain on the long 50 call that exactly offsets the \$2 debit paid.

If the market falls below \$50, all contracts expire "out the money," and the customer loses the \$2 debit.

6h. FINAL NOTE ON SPREADS

**Most Spreads Are
Closed By Trading
Out The Positions**

We know that a spread is established either with a debit ("buying a long spread") or a credit ("selling a short spread"). Instead of exercising or waiting for positions to expire, most spreads are closed by trading out the positions as in the "time spread" example done in Section 6f.

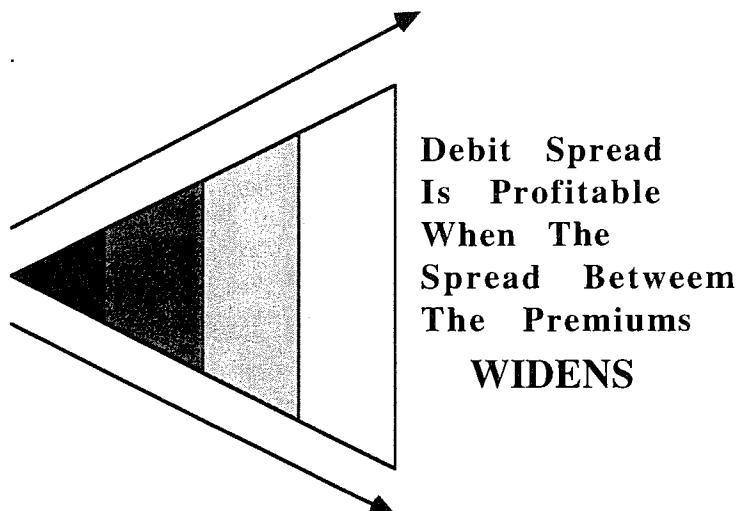
**Exercise Generally
Does Not Occur Due
To High Commission
Costs**

Most spreads are "closed out," rather than having both sides exercised, because of the high commission costs involved with actually buying and selling the underlying stock positions. By trading out the positions, the commissions are much lower.

If one "buys" a spread (creating a debit), the closing transaction is **always** a "sale," meaning a credit to the account. In the time spread example, the spread was created at a \$2 debit and closed at \$5 credit, for a \$3 profit.

Debit Spread Is
Profitable If Spread
Between Premiums
Widens

For a debit spread to be profitable, it must be closed at a larger credit. Hence, for a debit spread to be profitable, the spread between the premiums must **widen**. In our example, the spread between the premiums widened from \$2 to \$5, resulting in a \$3 profit.



For example, assume that a customer establishes the following long call spread on ABC stock, when ABC's market price is \$52 per share.

Buy 1 ABC Jan 50 Call @ \$6
 Sell 1 ABC Jan 60 Call @ \$2

 Market Price = \$52

This customer expects that the market price will rise. Now assume that ABC's market price rises to \$59 the very next day. If this occurs, the 50 Call is now 9 points "in the money" and the premium will have increased in the market to at least \$9 per share (the "in the money" amount). The 60 Call is still 1 point "out the money" and its premium will not have increased as much. Assume that the new premiums are:

ABC Jan 50 Call @ \$12
ABC Jan 60 Call @ \$ 3

Market Price = \$59



Instead of exercising the "in the money" long call, the customer "closes" the positions as follows:

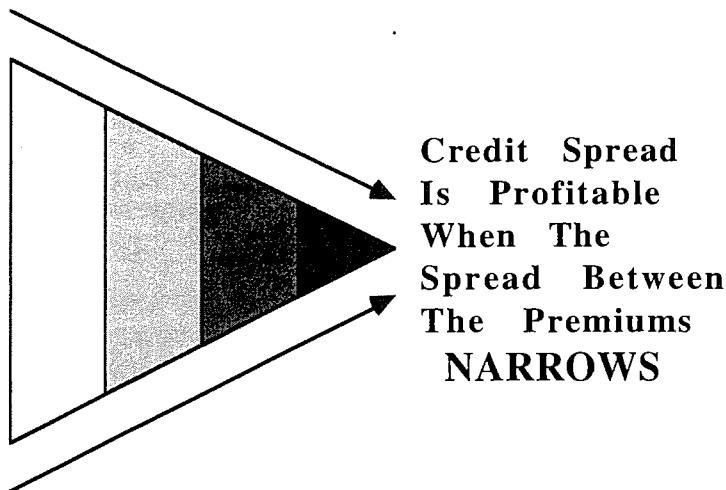
**Sell 1 ABC Jan 50 Call @ \$12
Buy 1 ABC Jan 60 Call @ \$3**

$\$9$ Credit

The customer has a net profit of 5 points or \$500, because the positions were established at a \$4 debit and closed at a \$9 credit. This customer profited on this debit spread because the spread between the premiums widened by 5 points.

Credit Spread Is Profitable If Spread Between Premiums Narrows

Conversely, if one "sells" a spread (creating a credit), the closing transaction is **always** a "purchase", meaning a debit to the account. For a credit spread to be profitable, the original credit must be larger than the closing debit. Hence, the spread between the premiums must **narrow**.



For example, assume that a customer establishes the following short call spread on ABC stock, when ABC's market price is \$58 per share.

**Sell 1 ABC Jan 50 Call @ \$10
Buy 1 ABC Jan 60 Call @ \$2**

$\$8$ Credit

Market Price = \$58

This customer expects that the market price will fall. Now assume that ABC's market price falls to \$51 the very next day. If this occurs, the 50 Call is now only 1 point "in the money" (from 8 points "in the money" the preceding day) and the premium will have decreased sharply in the

market. The 60 Call is now 9 points "out the money" and its premium will also decline by a bit. Assume that the new premiums are:

**ABC Jan 50 Call @ \$ 3
ABC Jan 60 Call @ \$ 1**

Market Price = \$51

The customer "closes" the positions as follows:

**Buy 1 ABC Jan 50 Call @ \$ 3
Sell 1 ABC Jan 60 Call @ \$ 1**

\$ 2 Debit

The customer has a net profit of 6 points or \$600, because the positions were established at an \$8 credit and closed at a \$2 debit. This customer profited on this credit spread because the spread between the premiums narrowed by 6 points.

To summarize this discussion, a way of thinking about this is that one always wants to pay less (debit) than what one sells for (credit). One wants little debits and large credits!

If one starts with a debit, one knows that the position will always be closed with a credit, which one wants to be larger (widen).

If one starts with a credit, one knows that the position will always be closed with a debit, which one wants to be smaller (narrow).



SPREADS SECTION EXAMINATION

1.

Which of the following are vertical spreads?

I Long 1 ABC Jan 50 Call
Short 1 ABC Jan 50 Call

II Long 1 ABC Jan 50 Call
Short 1 ABC Jan 60 Call

III Long 1 ABC Jan 50 Call
Short 1 ABC Apr 50 Call

IV Long 1 ABC Jan 50 Call
Short 1 ABC Apr 60 Call

- a. I only
- b. II only
- c. I and III
- d. II and IV

2.

Which position is profitable in a rising market?

- a. bear put spread
- b. bull call spread
- c. short straddle
- d. short naked call

3.

Which has the greatest gain potential?

- a. long call
- b. long call spread
- c. long put
- d. long put spread

Use the following information to answer the next 4 questions:

On the same day a customer buys 1 ABC Feb 70 Call @ \$4 and sells 1 ABC Feb 80 Call @ \$1 when the market price of ABC is \$70.50.

4.

The maximum potential loss is:

- a. \$300
- b. \$400
- c. \$7400
- d. \$7700

5.

The breakeven point is:

- a. 73
- b. 74
- c. 76
- d. 77

6.

The maximum potential gain is:

- a. \$300
- b. \$400
- c. \$700
- d. unlimited

7.

The position will be profitable if:

- I Both contracts expire
- II Both contracts are exercised
- III The spread widens
- IV The spread narrows

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

Use the following information to answer the next 4 questions:

On the same day a customer buys 1 ABC Jan 50 Call @ \$2 and sells 1 ABC Jan 35 Call @ \$8 when the market price of ABC is \$41.

8.

The maximum potential gain is:

- a. \$600
- b. \$800
- c. \$4800
- d. unlimited

9.

The maximum potential loss is:

- a. \$600
- b. \$800
- c. \$900
- d. unlimited

13.

The maximum potential loss is:

- a. \$600
- b. \$700
- c. \$3900
- d. \$4300

10.

The breakeven point is:

- a. 37
- b. 41
- c. 44
- d. 48

14.

The breakeven point is:

- a. 43
- b. 44
- c. 47
- d. 49

11.

The position will be profitable if:

- I Both contracts expire
- II Both contracts are exercised
- III The spread widens
- IV The spread narrows

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

15.

The maximum potential gain is:

- a. \$100
- b. \$400
- c. \$600
- d. \$1000

16.

The position will be profitable if:

- I Both contracts expire
- II Both contracts are exercised
- III The spread widens
- IV The spread narrows

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

12.

Which positions are profitable in falling markets:

- I Long put spread
- II Short put spread
- III Short straddle
- IV Short stock

- a. I only
- b. I, IV
- c. II, III, IV
- d. I, II, III, IV

17.

Which strategies are profitable in a rising market?

- I Short Put Spread
- II Short Stock / Long Call
- III Short Naked Call
- IV Short Call Spread

- a. I only
- b. I, II
- c. III, IV
- d. None of the above

Use the following information to answer the next 4 questions:

A customer buys 1 ABC Jan 50 Put @ \$7 and sells 1 ABC Jan 40 Put @ \$1 when the market price of ABC is \$47.



Use the following information to answer the next 4 questions:

A customer buys 1 ABC Jan 70 Put @ \$5 and sells 1 ABC Jan 90 Put @ \$19 when the market price of ABC is \$75.

18.

The maximum potential gain is:

- a. \$1400
- b. \$1900
- c. \$7100
- d. \$8000

19.

The breakeven point is:

- a. 71
- b. 76
- c. 85
- d. 89

20.

The maximum potential loss is:

- a. \$600
- b. \$1400
- c. \$1900
- d. \$2000

21.

The position will be profitable if:

- I Both contracts expire
- II Both contracts are exercised
- III The spread widens
- IV The spread narrows

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

22.

A customer buys 1 ABC Apr 50 Call and sells 1 ABC Jan 60 Call. This is a:

- a. horizontal spread
- b. vertical spread
- c. diagonal spread
- d. butterfly spread

23.

To create a debit calendar spread:

- a. buy the near expiration/sell the far expiration
- b. buy the far expiration/sell the near expiration
- c. buy the near expiration/buy the far expiration
- d. sell the near expiration/sell the far expiration

24.

A customer buys 1 ABC Jan 50 Call and sells 1 ABC Oct 50 Call. This is a:

- a. calendar debit spread
- b. calendar credit spread
- c. vertical debit spread
- d. vertical credit spread

25.

Referring to the previous question, assume that the ABC Jan 50 Call was opened at \$6 and the ABC Oct 50 call was opened at \$2. Later, the positions were closed - the ABC Jan 50 Call was closed at \$3 and the ABC Oct 50 Call was closed at \$1. The net profit or loss is:

- a. \$200 profit
- b. \$200 loss
- c. \$400 profit
- d. \$400 loss

26.

A customer buys 10 ABC Feb 50 Calls @ \$4, sells 20 ABC Feb 55 Calls @ \$2.50, and buys 10 ABC Feb 60 Calls @ \$2.

This is a:

- a. bull call spread
- b. bear call spread
- c. butterfly call spread
- d. ratio spread

Use the following information to answer the next 2 questions:

On the same day, a customer establishes the following positions:

- Sell 1 XXX Jan 70 Call @ 2.75
- Sell 1 XXX Jan 60 Put @ 1.00
- Buy 1 XXX Jan 75 Call @ 1.25
- Buy 1 XXX Jan 65 Put @ 2.50

27.

A customer buys 10 ABC Feb 50 Calls @ \$4, sells 20 ABC Feb 55 Calls @ \$2.50, and buys 10 ABC Feb 60 Calls @ \$2. The customer will have a profit at all of the following prices **EXCEPT**:

- a. 50
- b. 52
- c. 55
- d. 57

29.

What is the maximum potential gain on these positions?

- a. \$25
- b. \$225
- c. \$500
- d. Unlimited

30.

What is the deposit required to establish these positions?

- a. 0
- b. \$225
- c. \$475
- d. \$500

28.

A customer buys 10 ABC Feb 50 Calls @ \$4, sells 20 ABC Feb 55 Calls @ \$2.50, and buys 10 ABC Feb 60 Calls @ \$1.

Which statement is true?

- a. This position has unlimited risk
- b. This position has no risk
- c. The position is established at a net debit
- d. The position is established at a net credit



SPREADS SECTION EXAMINATION EXPLANATIONS

1. The best answer is b. A vertical spread is the purchase and sale of a call; or the purchase and sale of a put; at **different** strike prices. A horizontal spread is the purchase and sale of a call; or the purchase and sale of a put; at **different** expirations. A diagonal spread is the purchase and sale of a call; or the purchase and sale of a put; with both **different** expirations and **different** strike prices.
2. The best answer is b. A bull call spread is profitable in a rising market. A bear put spread is profitable in a falling market, as is a short naked call. A short straddle is profitable in a flat market.
3. The best answer is a. A long call has unlimited gain potential in a rising market. A long call spread has limited upside gain potential but costs less than a simple long call position. Long puts and long put spreads are profitable in a falling market. Since there is a limit to how far the market can fall, the gain potential is limited.
4. The best answer is a. The customer has created a long call spread.

Buy 1 ABC Feb 70 Call @ \$ 4	
Sell 1 ABC Feb 80 Call @ \$ 1	
<hr style="width: 20%; margin-left: 0; border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> \$ 3 Debit	

The debit of \$300 is the maximum potential loss occurring if both contracts expire.

5. The best answer is a. The purchaser of a long call spread profits from the long call position. (The short call establishes a limit on the profit potential.) To recover the \$3 Debit, the market price must rise to \$73 (\$70 Long Strike + \$3 Debit).
6. The best answer is c. If the market rises, the long call is exercised and the stock is bought at \$70. If it continues to rise, the short call is exercised and the stock is sold at \$80 for a 10 point profit. Since 3 points were paid in premiums, the maximum potential gain is \$700.
7. The best answer is c. If both contracts are exercised, the long spread results in a \$700 profit (see prior explanation). If both expire, the long spread results in a \$300 loss (the debit). To be profitable, this long spread must be closed out at a larger credit - so the spread between the premiums must **widen**.
8. The best answer is a. The customer has created a short call spread.

Sell 1 ABC Jan 35 Call @ \$8	
Buy 1 ABC Jan 50 Call @ \$2	
<hr style="width: 20%; margin-left: 0; border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> \$6 Credit	

The credit of \$600 is the maximum potential gain, occurring if both contracts expire.

9. The best answer is c. If the market rises, the short call will be exercised, requiring the customer to deliver the stock for \$35 a share. The customer can always exercise the long call to buy the stock at \$50, for a 15 point loss. Since 6 points were collected in premiums, the net loss is 9 points or \$900.

10. The best answer is b. To breakeven, the customer must lose the \$600 (6 points) collected in premiums. Any loss comes from the short call position (remember this is a **short** call spread) so breakeven occurs at $35 + 6 = 41$.

11. The best answer is b. Since this is a credit spread, if both positions expire, the customer keeps the credit. If both positions are exercised, he loses the difference between the strike prices minus the credit. To be profitable, a credit spread must be closed out at a smaller debit. Thus, the spread between the premiums must **narrow**.

12. The best answer is b. Long put spreads, like simply buying a put, are profitable if the market falls. Short put spreads, like simply selling a put, are profitable if the market rises. Short straddles are profitable if the market stays flat. Short stock positions are profitable when the market falls.

13. The best answer is a. The customer has created a long put spread at a 6 point debit. The debit is the maximum loss amount in any debit spread.

Buy 1 ABC Jan 50 Put @ \$7
Sell 1 ABC Jan 40 Put @ \$1

14. The best answer is b. To breakeven, the customer must recover the \$600 (6 points) paid in premiums. Any gain comes from the long put position (remember this is a **long** put spread), therefore the breakeven point is $50 - 6 = 44$.

15. The best answer is b. The customer profits in a long put spread as the market drops. In a falling market, he will exercise the long put and sell the stock for \$50. As the market continues to drop, the short put will be exercised and he is obligated to buy the stock at \$40 for a gain of 10 points. Since \$6 was paid in premiums, the maximum potential gain is 4 points or \$400.

16. The best answer is c. If both puts are exercised, the customer makes \$400. (see explanation 15). If both expire, the debit of \$600 is lost. Since this is a debit spread, it **must** be closed out with a credit. To be profitable, the closing credit must be larger, so the spread between the premiums must widen.

17. The best answer is a. In a rising market, both sides of a short put spread will expire and the customer earns the credit. Short stock/long call is used to limit loss in a rising market. A short naked call exposes the writer to unlimited loss in a rising market. A short call spread, similar to a short naked call, gives "limited" loss in a rising market.

18. The best answer is a. If the market rises, both puts will expire "out the money" and the writer will keep the net credit of \$1400. This is a short put spread.

Buy 1 ABC Jan 70 Put @ \$5
Sell 1 ABC Jan 90 Put @ \$19

\$14 Credit



19. The best answer is b. To breakeven, the writer must lose the \$1400 credit (14 points) collected in premiums. Since this is a short put spread, any loss occurs from the short put position. Breakeven is at the short strike price of $90 - 14 = 76$.

20. The best answer is a. If the market drops, both puts are exercised and the customer will buy the stock at \$90 and can then "put it" at 70 for a 20 point loss. Since 14 points were collected in premiums, the maximum loss is 6 points or \$600.

21. The best answer is b. If the market drops, both puts are exercised and the customer loses \$600 (see explanation 20). If the market rises, both puts expire and the customer earns \$1400. Since this is a credit spread, it must be closed at a debit. To be profitable, the debit must be smaller, so the spread must **narrow**.

22. The best answer is c. A diagonal spread is the purchase and sale of a call or put with different strike prices and expirations, e.g.:

Buy 1 ABC Apr 50 Call
Sell 1 ABC Jan 60 Call

23. The best answer is b. In a calendar spread, the expiration months are different but the strike prices are the same. The nearer expiration will be **cheaper** than the farther expiration since it has less "time." To create a debit spread, the more expensive option must be bought (the far expiration) and the cheaper option must be sold (the near expiration).

24. The best answer is a. Since Oct expires before Jan, it will be cheaper. The customer is selling the Oct 50 Call (cheaper) and buying the more expensive Jan 50 Call, so this is a debit spread.

25. The best answer is b.

Open:	Buy 1 ABC Jan 50 Call @ \$6 Sell 1 ABC Oct 50 Call @ \$2	Close:	Buy 1 ABC Oct 50 Call @ \$1 Sell 1 ABC Jan 50 Call @ \$3
		<hr style="width: 20%; margin: 0 auto; border: 0; border-top: 1px solid black; margin-bottom: 5px;"/>	<hr style="width: 20%; margin: 0 auto; border: 0; border-top: 1px solid black; margin-top: 5px;"/>
		\$4 Deb.	\$2 Cred.

The net loss is \$200 since the spread between the premiums narrowed from 4 to 2. Remember, debit spreads are only profitable if the spread between the premiums widens.

26. The best answer is c. The customer's positions are:

Buy 10 ABC Feb 50 Calls @ 4.00
Sell 20 ABC Feb 55 Calls @ 2.50
Buy 10 ABC Feb 60 Calls @ 2.00

This is a "butterfly spread," which is a combination of a bull and bear spread on the same stock. This spread is established at a net debit of \$1 (\$4 + \$2 paid; \$5 received from the "double sale"). The debit is the maximum potential loss. If the market stays at \$55, the 55 calls expire "at the money," and the 60 calls expire "out the money." There is a 5 point profit on each of the 10 long 50 calls = $\$500 \times 10 = \$5,000$ profit net of the \$1000 debit = \$4,000 profit. If the market drops from 55 to 51, the customer "breaks even." At this price, the 55 and 60 calls expire. There is a 1 point profit on the long 50 calls, offset by

the 1 debit = Breakeven. If the market drops below 51, there is a net loss - with the maximum loss being 1 point.

If the market rises above \$55, the customer gains 5 points on the long call spreads (buy at \$50, deliver at \$55), and begins to lose on the short call spreads. If the market rises to \$57, the customer has a 2 point profit. At this price, the customer gains 5 points on the long call spreads, and the remaining short 55 calls will be exercised (the 60 calls expire out the money). If the stock is purchased at \$57 for delivery, there is a loss of 2 points. 5 points gained on the long call spread, net of 2 points lost on the short call spread, net of \$1 debit paid for the spread equals a 2 point profit. At \$59, the customer breaks even; above \$59 the customer has a loss, with the maximum loss being 1 point.

27. The best answer is a. See previous explanation.

28. The best answer is b. This is a butterfly spread. To purchase the 10 ABC 50 Calls, a debit of $\$4 \times 100 \text{ shares per contract} \times 10 \text{ contracts} = \$4,000$ must be paid. To sell the 20 ABC 55 Calls @ \$2.50, a credit of $\$2.50 \times 100 \text{ shares per contract} \times 20 \text{ contracts} = \$5,000$ is received. Finally to buy the 10 ABC 60 Calls @ \$1, a debit of $\$1 \times 100 \text{ shares per contract} \times 10 \text{ contracts} = \$1,000$ must be paid. The net money amount is \$4000 paid and \$1000 paid, net of \$5,000 received = 0. Neither a debit nor a credit is created from this position. If the market falls below \$50, all positions expire "out the money" and nothing is lost. If the market rises above \$50, the long 50 calls can be exercised at a profit. Above \$55, the short calls will be exercised, and the gain on the 10 long calls is limited to 5 points each. The 10 naked short 55 calls require the delivery of the stock, which must be purchased in the market. However, since there are 10 long 60 calls, \$60 is the maximum price at which the stock will be purchased. Thus, there will be a 5 point loss on 10 of the short calls and a 5 point gain on the other 10 short calls = 0 gain or loss. Thus, this position has no risk.

29. The best answer is c. The customer has established the following spread positions:

Buy 1 XXX Jan 75 Call @ 1.25
Sell 1 XXX Jan 70 Call @ 2.75

1.50 Credit = Short Call Spread (Bearish)

Buy 1 XXX Jan 65 Put @ 2.50
Sell 1 XXX Jan 60 Put @ 1.00

1.50 Debit = Long Put Spread (Bearish)

To profit on the positions, since they are bearish, the market must drop. If the market drops sharply, the calls expire "out the money," giving a profit of \$150 on the short call spread. If the market drops sharply, both puts go "in the money" and will be exercised. The customer must buy XXX at \$60 and can deliver at \$65, for a 5 point profit. Since \$1.50 was paid in premiums, the net profit is \$3.50. The total profit is $\$1.50 + \$3.50 = \$5$ or \$500.

30. The best answer is d. Referring to the positions in the previous question, the deposit for the long put spread equals the debit of $\$1.50 = \150 . This is the maximum potential loss. The deposit for the short call spread equals the difference in the strike prices (5 points), net of the credit received (1 1/2 point credit), for a deposit of $3 \frac{1}{2} \text{ points} = \350 . The total deposit is $\$150 + \$350 = \$500$. This represents the maximum potential loss on the positions.



SECTION 7: RATIO STRATEGIES

7a. RATIO WRITING OF CALL CONTRACTS

To generate "extra" income, instead of selling call contracts against an equal underlying position, a greater number of calls can be sold. This is termed a "ratio write." For example, consider the following positions:

**Buy 100 shares of ABC stock at \$50
Sell 2 ABC Jan 50 Calls @ \$5**

Selling More Call Contracts Than Long Position

This customer is selling 2 call contracts against 100 shares of stock. Thus, he is writing calls against the stock at a 2:1 ratio. In essence, he has created 1 covered call and 1 short naked call. These are shown below:

**Buy 100 shares of ABC stock at \$50
Sell 1 ABC Jan 50 Call @ \$5**

Sell 1 ABC Jan 50 Call @ \$5

Neutral Market Strategy

Similar to simple covered call writing strategies, the customer is hoping that the market price of ABC stays at \$50. If the price stays the same, both short calls expire "at the money" and the customer earns \$10 in collected premiums (\$5 per call contract). Effectively, this reduces the customer's cost of the long stock position to \$40.

**Declining Market
Breakeven = Cost Of Stock - ALL Collected Premiums (On A Per Share Basis)**

If the market price falls, both calls expire "out the money." The customer keeps the premiums, but begins to lose on the long stock position. Since \$10 was collected in premiums, the acquisition cost of the stock has been reduced to \$40. If the market continues to fall, the customer keeps losing on the long stock position, losing a maximum of \$4000 if the stock becomes worthless.

**Rising Market
Breakeven = Strike Price + ALL Collected Premiums (On A Per Share Basis)**

If the market price rises, both calls go "in the money" and will be exercised. The customer bought 100 shares of stock at \$50, and must deliver those shares at \$50, for no further gain or loss on that position. He is left with 1 short naked call. Since he collected \$10 in premiums from selling both short calls, he can afford to lose this amount as the market rises and still will "breakeven." Therefore, if the market rises to \$60, he again will breakeven. Above \$60, the customer continues to lose on the short naked call - and has unlimited risk potential on this position.

Maximum Potential Loss = Unlimited

Greater The "Ratio"; Greater The Risk

If a customer wishes to further increase income from a stock position, he could write calls at a 3:1 ratio or a 4:1 ratio. As the ratio increases, the size of the short naked call

position increases, substantially increasing upside risk potential.

To summarize, ratio call writing generates extra income, but also entails a much higher risk level than simple covered call writing.

7b. RATIO WRITING OF PUT CONTRACTS

To generate "extra" income, instead of selling put contracts against an equal underlying short stock position, a greater number of puts can be sold. This is termed a "ratio write." For example, consider the following positions:

**Sell Short 100 shares of ABC stock at \$50
Sell 2 ABC Jan 50 Puts @ \$5**

Selling More Put Contracts Than Short Position

This customer is selling 2 put contracts against 100 shares of stock sold short. Thus, he is writing puts against the stock at a 2:1 ratio. In essence, he has created 1 covered put and 1 short naked put. These are shown below:

**Sell Short 100 shares of ABC stock at \$50
Sell 1 ABC Jan 50 Put @ \$5

Sell 1 ABC Jan 50 Put @ \$5**

Neutral Market Strategy

Similar to simple covered put writing strategies, the customer is hoping that the market price of ABC stays at \$50. If the price stays the same, both short puts expire "at the money" and the customer earns \$10 in collected premiums (\$5 per put contract). Effectively, this increases the customer's sale proceeds from the short sale from \$50 per share to \$60 per share.

Rising Market Breakeven = Sale Of Stock + ALL Collected Premiums

If the market price rises, both puts expire "out the money." The customer keeps the premiums, but begins to lose on the short stock position. Since \$10 was collected in premiums, the sale proceeds generated from shorting the stock has been increased to \$60. If the market continues to rise, the customer keeps losing on the short stock position, with unlimited upside loss potential.

Maximum Potential Loss = Unlimited

Falling Market Breakeven = Strike Price - ALL Collected Premiums

If the market price falls, both puts go "in the money" and will be exercised. The customer sold 100 shares of stock gain or loss on that position. He is left with 1 short naked put. Since he collected \$10 in premiums from selling both short puts, he can afford to lose this amount as the market falls and still will "breakeven." Therefore, if the market falls to \$40, he again will breakeven. Below \$40, the



customer continues to lose on the short naked put - with the maximum loss occurring if the stock becomes worthless, and the customer is forced to buy "worthless" stock at \$40 per share effective cost (\$50 cost through exercise of short put - \$10 collected premiums).

**Greater The "Ratio";
Greater The Risk**

If a customer wishes to further increase income from a short stock position, he could write puts at a 3:1 ratio or a 4:1 ratio. As the ratio increases, the size of the short naked put position increases, substantially increasing downside risk potential.

To summarize, ratio put writing generates extra income, but also entails a much higher risk level than simple covered put writing.

7c. RATIO SPREADS

A "ratio spread" follows similar logic to a ratio call or put write. Generally, extra short positions are written against the long position to generate extra income (which also increases risk). Below is an example of a ratio call spread:

**Buy 1 ABC Jan 50 Call @ \$7
Sell 3 ABC Jan 60 Calls @ \$2**

(Market Price ABC Stock = \$55)

This customer is writing calls against the long call position at a 3:1 ratio, and is therefore collecting 3 times the premium income that would be generated from the sale of 1 call. To analyze this position, "split" the positions into the "covered" and "naked" positions - as shown below:

Buy 1 ABC Jan 50 Call	@ \$7
Sell 1 ABC Jan 60 Call	@ \$2

\$5 Debit

Sell 2 ABC Jan 60 Calls	@ \$2
--------------------------------	--------------

\$4 Credit

**Maximum Downside
Loss = Net Debit**

Effectively, the customer has created a "Long Call Spread" and 2 short naked calls. From all positions, a net debit of \$1 is created. Since there is a net debit created, if the market drops below \$50, all positions will expire "out the money" and the customer will lose \$100. This is a much smaller loss than if the customer had simply taken the "Long Call Spread" position without selling the extra calls.

**Lower Breakeven =
Long Strike +
Net Debit**

As the market rises above \$50, the customer gains on the long call. (Nothing happens on the short calls until the market rises above \$60.) To breakeven, the customer must recover the \$1 debit - so the **first breakeven** point is $\$50 + \$1 = \$51$.

**Maximum Profit
Occurs If Market
Is At Higher Strike
Price**

If the market continues to rise to \$60, the customer will experience his maximum potential gain (since above \$60, he begins to lose on the 2 short naked calls). At \$60, he gains 10 points on the long call spread (Buy stock at \$50; Sell at \$60), while the short naked calls expire "at the money." Since he paid a net debit of \$1 for all positions, his profit is \$900.

**Upside Breakeven =
Short Strike +
Maximum Gain Per
Share**

Above \$60, the customer begins to lose on the 2 short call positions. Since he has a net profit of \$900 that is "locked" at \$60 or above from all of the positions, he can afford to lose this amount on the 2 naked short calls and still will breakeven. Per contract, he can afford to lose \$450, or $4 \frac{1}{2}$ points. Thus, the upside breakeven point is $\$60 + 4 \frac{1}{2} = \$64 \frac{1}{2}$. This is the **second breakeven** point.

**Unlimited Upside
Loss Potential**

If the market continues to rise above $\$64 \frac{1}{2}$, the customer will lose on the 2 short naked calls and has unlimited upside loss potential.

To summarize, ratio spreading involves the sale of "extra" calls against a long call spread position. The "extra" premium income generated reduces potential loss in a declining market. Conversely, in a rising market, the customer is exposed to unlimited loss potential on the short naked call positions that were established to generate that extra income.

7d. LONG STOCK/SHORT STRADDLE

Another means of generating "extra" income from a stock position in a neutral market is to buy the stock and sell an "at the money" straddle against the stock position. If the market does not move, both sides of the straddle expire "at the money," and the customer retains doubled premiums (effectively reducing the stock's cost). For example, assume a customer takes the following positions:

Long 100 Shares of ABC Stock @ \$50

**Short 1 ABC Jan 50 Call @ \$4
Short 1 ABC Jan 50 Put @ \$3**

$\frac{1}{2}$ Credit



If the market stays exactly at \$50, both options expire and the customer retains the \$7 credit. Since he paid \$50 per share for the stock, the net cost of the stock is \$43.

**Upside Gain =
Credit Received**

If the market rises, the short call goes "in the money" and will be exercised. The customer's stock, purchased at \$50, will be delivered for \$50, at no gain or loss. The short put "expires" out the money. The net result is the customer earns the credit of \$7 = \$700 maximum upside gain potential.

**Downside Breakeven
= Cost Of Stock Less
Credit Received
(Per Share Basis)**

If the market drops, the customer gets "nailed." The short call will expire "out the money." The short put will be exercised, forcing the customer to buy another 100 shares of the stock at \$50. Since the customer collected \$700 in credits, and will own 200 shares of stock if the market drops below \$50, he can afford to lose \$350 per 100 shares (3 1/2 per share) and still breakeven. Thus, the downside breakeven is $50 - 3 \frac{1}{2} = 46 \frac{1}{2}$.

**Maximum Loss =
Stock Becomes
Worthless**

If the market continues to drop, the customer loses on both the original stock position and the stock acquired through the exercise of the short put. He can lose a maximum of $46 \frac{1}{2}$ per share on 200 shares = \$9300. This is the same as buying 200 shares at \$50 (\$10,000 of stock), less the credit of \$700.

Covered Straddle

For the exam, note that this strategy is termed a "covered straddle," but in reality this is **not** a covered strategy. Only the short call is covered; the short put is not covered.

RATIO STRATEGIES SECTION EXAMINATION

Use the following information to answer the next 3 questions:

A customer buys 100 shares of ABC stock at \$48 and sells 2 ABC Jan 50 Calls @ \$2 on the same day.

1.

The customer's maximum potential gain is:

- a. \$400
- b. \$600
- c. \$800
- d. Unlimited

2.

The customer's maximum potential loss is:

- a. \$400
- b. \$4400
- c. \$4800
- d. unlimited

3.

The breakeven points are:

- I \$44
- II \$46
- III \$54
- IV \$56

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

Use the following information to answer the next 4 questions:

On the same day a customer buys 5 ABC Jan 60 Calls @ \$5 and sells 10 ABC Jan 70 Calls @ \$2 when the market price of ABC is \$60.50.

4.

The maximum potential loss is:

- a. \$300
- b. \$500
- c. \$4500
- d. Unlimited

5.

The maximum potential gain is:

- a. \$500
- b. \$4500
- c. \$7000
- d. Unlimited

6.

The breakeven points are:

- I \$61
- II \$62
- III \$73
- IV \$79

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

7.

The position will be profitable if:

- I Both contracts expire
- II The market stays at \$50 until expiration
- III The market stays at \$60 until expiration
- IV The market stays at \$70 until expiration

- a. I and II
- b. III and IV
- c. II and III
- d. IV only



Use the following information to answer the next 3 questions:

On the same day a customer buys 100 shares of ABC stock at \$30 and sells 1 ABC Jan 30 Call @ \$2 and sells 1 ABC Jan 30 Put @ \$3.

8.

The maximum potential gain is:

- a. \$500
- b. \$2500
- c. \$5500
- d. Unlimited

9.

The maximum potential loss is:

- a. \$500
- b. \$2500
- c. \$5500
- d. Unlimited

10.

The breakeven point is:

- a. 25.00
- b. 27.50
- c. 32.00
- d. 35.00

RATIO STRATEGIES SECTION EXAMINATION EXPLANATIONS

1. The best answer is b. The customer has bought 100 shares of stock at \$48 and has sold 2 Jan 50 Calls @ \$2. The best way to visualize the positions is as follows:

Long 100 shares of ABC @ \$48
Sell 1 ABC Jan 50 Call @ \$2

Sell 1 ABC Jan 50 Call @ \$2

The customer's maximum gain occurs if the market goes to \$50 and stays there. In this case, the short naked call expires "at the money" as does the short covered call. The customer is free to sell the stock at the market price of \$50, for a 2 point gain on the stock, in addition to the \$4 points collected in premiums. Thus, the maximum gain is \$600.

Below \$50, both short calls expire; however, the customer will begin to lose on the stock position. Above \$50, both calls are exercised, and since 1 call is naked, the customer will begin to lose on that position, with potentially unlimited loss.

2. The best answer is d. Since the customer effectively has 1 covered call and 1 naked short call, he can lose an unlimited amount in a rising market on the short naked position.

3. The best answer is b. If the market drops below \$50, both calls expire, and the customer earns the \$4 collected in premiums. This is an offset to the cost of the stock of \$48, for a net cost of \$44. Thus, the customer will breakeven if the stock drops to \$44. Below this, the customer loses on the stock position, with a maximum downside loss of \$4400.

If the market rises above \$50, both calls will be exercised. On the covered call, the customer will gain 2 points on the stock, in addition to earning 2 points in premiums, for a gain of 4 points. On the naked call, the customer has collected premiums of 2 points. Thus, as the market rises above \$50, the customer can afford to lose \$600 (\$400 +\$200), and still breakeven. He will breakeven on the upside at $50 + 6 = 56$. Above this price, he will lose money, with potentially unlimited loss.

4. The best answer is d. This is a very difficult question sequence. The customer is taking the following positions:

Buy 5 ABC Jan 60 Calls @ \$5
Sell 10 ABC Jan 70 Calls @ \$2

To recast these positions:

Buy 5 ABC Jan 60 Calls @ \$5	Sell 5 ABC Jan 70 Calls @ \$2	Sell 5 ABC Jan 70 Calls @ \$2
	<hr/> \$3 Debit x 5	<hr/> \$2 Credit x 5

The customer is creating 5 "long call spreads" and has 5 naked calls. In effect, he is writing 2 times number of short calls needed to create the spread - therefore he is "writing at a 2:1 ratio." This is termed a ratio spread. Long call spreads are used when a



customer is moderately bullish, and wishes to reduce the cost of the long position by selling an equal number of "out the money" calls. This limits upside gain potential, but also reduces the cost of the positions. By writing twice the number of calls, the customer further reduces the cost of the positions, **but** also assumes unlimited upside risk on the 5 naked calls that are left.

5. The best answer is **b.** The maximum potential profit must occur at \$70 per share. At this price, the customer would profit on the long call spreads, without losing anything on the 5 short calls - which would expire "at the money." At a \$70 price, each long call spread results in a profit of 10 points (Buy the stock at \$60 by exercising the long call and sell it at \$70 in the market), net of \$3 paid (net debit) in premiums per spread = \$700 profit per spread x 5 spreads = \$3,500 profit. The short naked 70 calls expire resulting in a \$200 profit per contract (\$2 credit) x 5 contracts = \$1000. The total profit is \$3,500 + \$1,000 = \$4,500.

6. The best answer is **b.** If the market stays at \$60 or lower, the short calls will expire "out the money." To breakeven from the long call positions, the customer must recover the \$3 debit paid per spread. Since he also collected \$2 credit for each of the 5 naked short calls, he is really out of pocket only \$1 per long call. Thus, to breakeven on the 5 long calls, the customer must recover 1 point = $60 + 1 = \$61$ breakeven.

If the market rises above \$70, the customer will have made \$700 profit on each of the 5 long call spreads, plus has collected \$2 in premium for each of the naked short calls, for a total \$900 (9 point) profit. As the market rises above \$50, the customer will start to lose on the remaining 5 naked calls. He can afford to lose 9 points and still breakeven. Thus, the second breakeven point is $70 + 9 = 79$.

7. The best answer is **d.** At \$60 or lower, all positions expire "out the money." Since the positions were established at a true net debit of \$500 (\$1,500 debit from 5 spreads, net of \$1000 credit from 5 short naked calls), this amount will be lost. To be profitable, the market must rise above \$61 (see prior explanation), but must not go above \$79.

8. The best answer is **a.** The customer has created a long stock/short straddle position. This is shown below:

Buy 100 Shares of ABC at \$30

Sell 1 ABC Jan 30 Call @ \$3
 Sell 1 ABC Jan 30 Put @ \$2

\$ 5 Credit

The credit of \$500 is the maximum potential gain occurring if both contracts expire "at the money."

If the market rises above \$30, the short call is exercised, while the short put expires "out the money." The stock that was purchased at \$30 is delivered for \$30 - there is no further gain or loss on this position. Thus, in a rising market, the maximum gain is \$500.

If the market falls below \$30, the short put is exercised (requiring the customer to buy **another** 100 shares at \$30), while the short call expires "out the money" As the market falls, the customer now owns 200 shares purchased at \$30. Since \$500 was collected in premiums, he can afford to lose 2.5 points per share and will still breakeven Thus, the

breakeven occurs at $30 - 2.50 = 27.50$. If the market continues to drop to zero, the customer will lose the full value of the 200 shares purchased at \$30, net of \$500 collected in premiums, for a net loss of \$5500 (27.50 per share).

9. The best answer is c. See explanation #8.

10 The best answer is b. See explanation #8.



SECTION 8: SYNTHETIC POSITIONS

8a. SYNTHETICS OVERVIEW

Synthetic Or "Equivalent" Positions

Why take a regular option position when you can use a synthetic instead? Synthetic option positions are "equivalent" positions used by professional traders for two reasons. The first is that the net cost of the synthetic position may be less than the cost of the actual option. The second is that traders can reverse positions in the market with synthetic positions in a way that reduces commission costs.

Synthetic option positions always involve taking a stock position along with a different option position. These are explained next, and must be memorized for the examination.

8b. SYNTHETIC LONG CALL

We will create our own synthetic long call position. Assume that the market price of ABC stock is at \$50 and a customer is:

Long 1 ABC Jan 50 Call @ \$5

The characteristics of this position are:

Unlimited Gain Potential;
Loss Is Limited to the Premium;
Breakeven Is at \$55.

To create a "synthetic" long call, we must match these characteristics exactly with a stock position and another option position. To obtain the characteristic of unlimited upside gain potential, we must buy the stock.

Long 100 shares of ABC at \$50

However, while we have matched the upside characteristic, we have not matched the downside. If the market drops, \$5000 could be lost on the long stock, while the long call would only lose \$500. We must find the appropriate option position to limit downside loss. The option position that will limit downside loss on long stock is the purchase of a put. Assume that the following long put position is added:

Synthetic Long Call

Long 100 shares of ABC at \$50
Long 1 ABC Jan 50 Put @ \$5

If the market drops, the long put will be exercised, and there will be no loss on the long stock position. The net loss is the premium paid of \$5 for the put (\$500). For this position, the breakeven point is $\$50 + \$5 = \$55$.

The characteristics of the combined position exactly match those of the long call. Thus, being long stock/long put is the synthetic equivalent of a long call position.

Synthetic Long Call = Long Stock / Long Put

8c. SYNTHETIC SHORT CALL

We will create our own synthetic short call position. Assume that the market price of ABC stock is at \$50 and a customer is:

Short 1 ABC Jan 50 Call @ \$5

The characteristics of this position are:

Unlimited Loss Potential;
Gain Is Limited to the Premium;
Breakeven Is at \$55.

To create a "synthetic" short call, we must match these characteristics exactly with a stock position and another option position. To obtain the characteristic of unlimited upside loss potential, we must short the stock.

Short 100 shares of ABC at \$50

However, while we have matched the upside characteristic, we have not matched the downside. If the market drops, \$5000 will be gained on the short stock, while the short call only gains \$500. We must find the appropriate option position to limit downside gain. The option position that will limit downside gain on short stock is the sale of a put option. Assume that the following short put position is added:

Synthetic Short Call

Short 100 shares of ABC at \$50 **Short 1 ABC Jan 50 Put @ \$5**

If the market drops, the short put will be exercised, and there will be no gain or loss on the stock position (the stock that was sold for \$50 will be purchased at \$50 from the exercise of the short put). The net gain is the premium received of \$5 for the put (\$500).



For this position, the breakeven point is $\$50 + \$5 = \$55$. At $\$55$, the short put expires "out the money" and the $\$5$ premium received from that contract exactly offsets the loss on the short stock position.

The characteristics of the combined position exactly match those of the short call. Thus, being short stock/short put is the synthetic equivalent of a short call position.

Synthetic Short Call = Short Stock / Short Put

8d. SYNTHETIC LONG PUT

We will create our own synthetic long put position. Assume that the market price of ABC stock is at $\$50$ and a customer is:

Long 1 ABC Jan 50 Put @ \$5

The characteristics of this position are:

Maximum Gain Occurs When The Stock Is Worthless;
Loss Is Limited to the Premium;
Breakeven Is at $\$45$.

To create a "synthetic" long put, we must match these characteristics exactly with a stock position and another option position. To obtain the characteristic of increasing gain as the market drops, we must short the stock.

Short 100 shares of ABC at \$50

However, while we have matched the downside characteristic, we have not matched the upside. If the market rises, the short stock position has unlimited loss potential, while the long put only loses the $\$500$ premium. We must find the appropriate option position to limit upside loss. The option position that will limit upside loss on short stock is the purchase of a call option. Assume that the following long call position is added:

Synthetic Long Put

Short 100 shares of ABC at \$50
Long 1 ABC Jan 50 Call @ \$5

If the market rises, the long call will be exercised, and there will be no gain or loss on the stock position (the stock that was sold for $\$50$ will be purchased at $\$50$ from the exercise of the long call). The net loss is the premium paid of $\$5$ for the call ($\$500$).

For this position, the breakeven point is $\$50 - \$5 = \$45$. At $\$45$, the long call expires "out the money" and the $\$5$ premium paid for that contract exactly offsets the gain on the short stock position.

The characteristics of the combined position exactly match those of the long put. Thus, being short stock/long call is the synthetic equivalent of a long put position.

Synthetic Long Put = Short Stock / Long Call

8e. SYNTHETIC SHORT PUT

We will create our own synthetic short put position. Assume that the market price of ABC stock is at $\$50$ and a customer is:

Short 1 ABC Jan 50 Put @ \$5

The characteristics of this position are:

Maximum Loss Occurs if the Stock Is Worthless;
Gain Is Limited to the Premium;
Breakeven Is at $\$45$.

To create a "synthetic" short put, we must match these characteristics exactly with a stock position and another option position. To obtain the characteristic of maximum loss if the stock is worthless, we must buy the stock.

Long 100 shares of ABC at $\$50$

However, while we have matched the downside characteristic, we have not matched the upside. If the market rises, there is unlimited gain potential on the long stock, while the short put only gains $\$500$. We must find the appropriate option position to limit upside gain. The option position that will limit upside gain on long stock is the sale of a call option. Assume that the following short call position is added:

Synthetic Short Put

Long 100 shares of ABC at $\$50$
Short 1 ABC Jan 50 Call @ \$5

If the market rises, the short call will be exercised, and there will be no gain on the long stock position. The net gain is the premium received of $\$5$ for the call ($\$500$).

For this position, the breakeven point is $\$50 - \$5 = \$45$. At $\$45$, the short call expires "out the money" and the $\$5$ per



share received in premiums reduces the cost of the stock to \$45 per share.

The characteristics of the combined position exactly match those of the short put. Thus, being long stock/short call is the synthetic equivalent of a short put position.

Synthetic Short Put = Long Stock / Short Call

8f. USES OF SYNTHETIC OPTIONS

A memory device for learning the 4 synthetic options positions is:

Synthetic Calls are:

"LLL": Long Call = Long Stock and Long Put

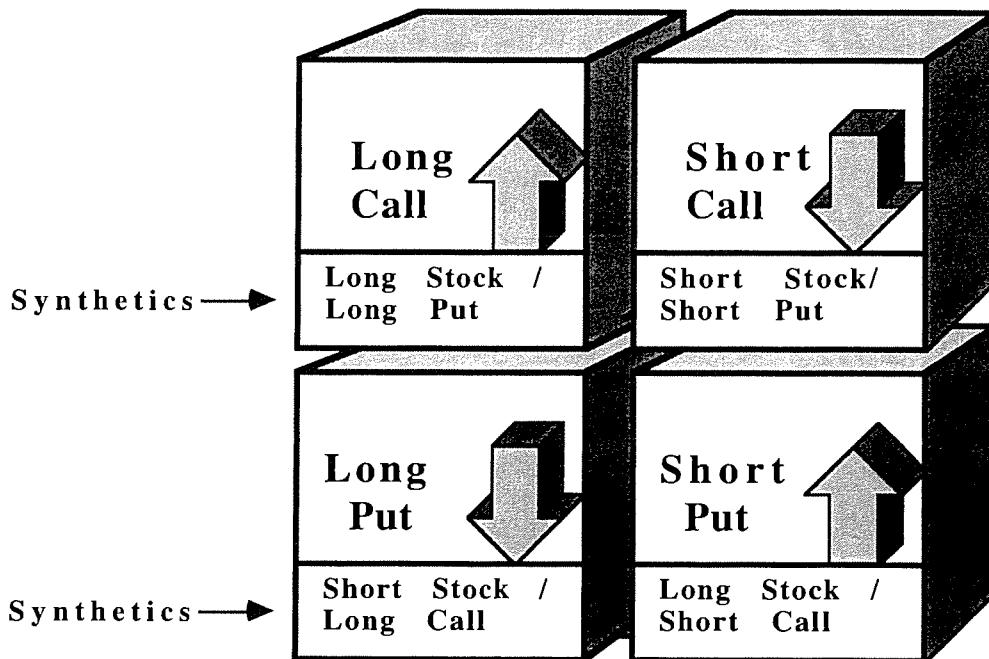
"SSS": Short Call = Short Stock and Short Put

Synthetic Puts are:

"LSL": Long Put = Short Stock and Long Call

"SLS": Short Put = Long Stock and Short Call

Notice that to create the synthetic, the opposite option position is always taken. Synthetics can be pictured as:



Imagine that a trader is long 100 call contracts, and he believes that the market is peaking and is about to fall. To reposition himself for the market decline, he would have to sell his 100 long calls and buy another 100 long puts, incurring 2 commissions to reverse market directions.

Since he already has the long call position, he can simply short the underlying stock and create a synthetic long put (combined position of short stock/long call). He is now positioned to profit in a declining market, since the synthetic exactly mimics a long put. In the process, he has only incurred 1 commission, not 2.

Thus, traders employ synthetic options to mimic the actual option position at lower transaction costs.

8g. SYNTHETIC STOCK POSITIONS

Synthetic Or "Equivalent" Positions

Synthetic Long Stock Position

Instead of combining a stock position and an option position to create a synthetic option, we can also combine two options positions to create a synthetic or equivalent stock position.

For example, assume that a customer buys 100 shares of ABC stock at \$50. If we wish to create a synthetic equivalent, we would:

**Buy 1 ABC Jan 50 Call @ \$5
Sell 1 ABC Jan 50 Put @ \$5**

If the market rises, the customer has unlimited gain potential on the long call, while the short put expires "out the money."

If the market stays exactly at \$50, both contracts expire "at the money," and the customer has no gain or loss.

If the market drops, the customer loses on the short put, while the long call expires "out the money." He incurs the maximum loss on the short put if the stock becomes worthless.

To summarize, the synthetic equivalent of long stock is:

Long Call / Short Put = Synthetic Long Stock

Notice that to create the synthetic long stock position (a bullish strategy), we used both option positions that are bullish. This is an easy way to remember which option positions create a synthetic stock position.

**Synthetic Short Stock Position**

For example, assume that a customer shorts 100 shares of ABC stock at \$50. If we wish to create a synthetic equivalent, we would:

**Sell 1 ABC Jan 50 Call @ \$5
Long 1 ABC Jan 50 Put @ \$5**

If the market rises, the customer has unlimited loss potential on the short call, while the long put expires "out the money."

If the market stays exactly at \$50, both contracts expire "at the money," and the customer has no gain or loss.

If the market drops, the customer gains on the long put, while the short call expires "out the money." He incurs the maximum gain on the long put if the stock becomes worthless.

To summarize, the synthetic equivalent of short stock is:

Short Call / Long Put = Synthetic Short Stock

Notice that to create the synthetic short stock position (a bearish strategy), we used both option positions that are bearish. This is an easy way to remember which option positions create a synthetic stock position.

SYNTHETIC POSITIONS SECTION EXAMINATION

1.

Which of the following positions creates a synthetic long call?

- a. Long stock / Long put
- b. Long stock / Short call
- c. Short stock / Long call
- d. Short stock / Short put

2.

Which of the following positions creates a synthetic short call?

- a. Long stock / Long put
- b. Long stock / Short call
- c. Short stock / Long call
- d. Short stock / Short put

3.

Which of the following positions creates a synthetic long put?

- a. Long stock / Long put
- b. Long stock / Short call
- c. Short stock / Long call
- d. Short stock / Short put

4.

Which of the following positions creates a synthetic short put?

- a. Long stock / Long put
- b. Long stock / Short call
- c. Short stock / Long call
- d. Short stock / Short put

5.

Which of the following positions creates a synthetic long stock position?

- a. Short call / Long put
- b. Long call / Short put
- c. Short stock / Long call
- d. Short stock / Short put



SYNTHETIC POSITIONS SECTION EXAMINATION EXPLANATIONS

1. The best answer is a. A long call has the characteristics of unlimited upside gain potential, but loss is limited to the premium paid if the market declines. To mimic the characteristic of unlimited upside gain, the stock must be purchased. To limit loss on the stock position in a falling market, a put must be purchased. Thus, being long stock/long put is the synthetic equivalent of a long call ("LLL").
2. The best answer is d. A short call has the characteristics of unlimited upside loss potential, but gain is limited to the premium received if the market declines. To mimic the characteristic of unlimited upside loss, the stock must be sold short. To limit gain on the stock position in a falling market, a put must be sold. (If the market declines, the put will be exercised, requiring the customer to buy the stock that was already sold.) Thus, being short stock/short put is the synthetic equivalent of a short call ("SSS").
3. The best answer is c. A long put has the characteristics of increasing downside gain potential, but loss is limited to the premium paid if the market rises. To mimic the characteristic of increasing downside gain, the stock must be sold short. To limit loss on the stock position in a rising market, a call must be bought. (If the market rises, the call will be exercised, and the customer will buy the stock that was already sold.) Thus, being short stock/long call is the synthetic equivalent of a long put ("LSL").
4. The best answer is b. A short put has the characteristics of increasing downside loss potential, but gain is limited to the premium received if the market rises. To mimic the characteristic of increasing downside loss, the stock must be purchased. To limit gain on the stock position in a rising market, a call must be sold. (If the market rises, the call will be exercised, and the customer must deliver the stock that was already purchased). Thus, being long stock/short call is the synthetic equivalent of a short put ("SLS").
5. The best answer is b. To create a synthetic long stock position with options, we must mimic the characteristics of unlimited upside gain potential and loss potential equal to the value of the stock position. To do this, purchase a call (unlimited upside gain potential) and sell a put (increasing loss as the market falls). Also notice that these are the 2 bullish option strategies; and that a long stock position is bullish.

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SECTION 9: EQUITY (STOCK) OPTIONS

9a. CONTRACT SPECIFICATIONS

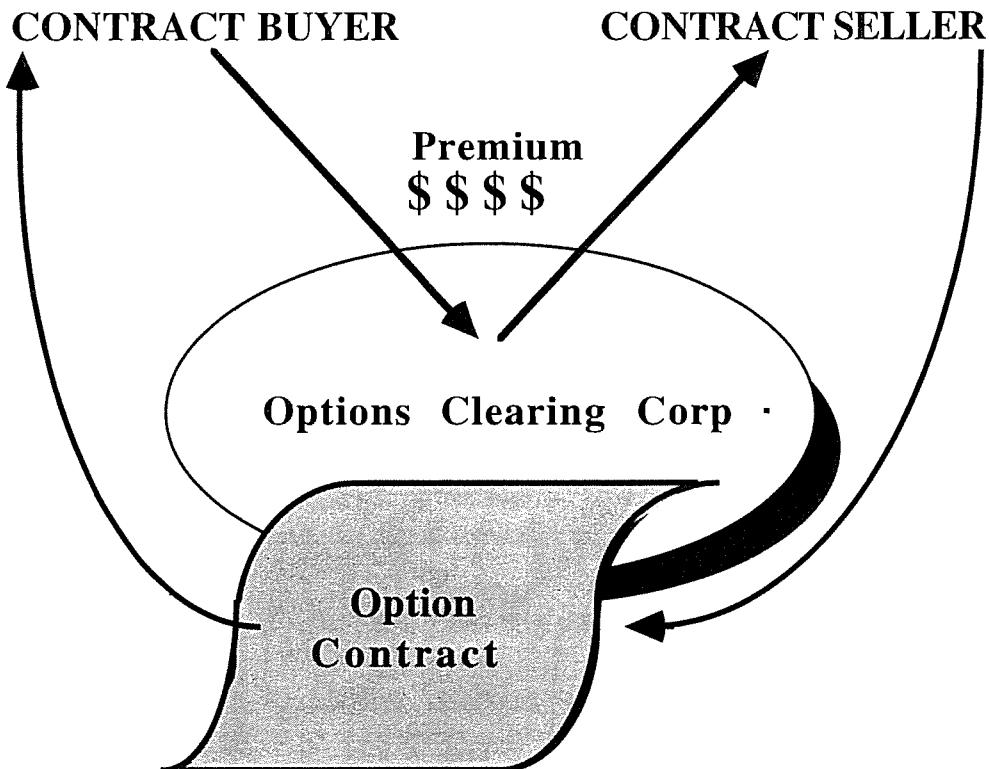
The majority stock options are traded on the Chicago Board Options Exchange. Trading of options contracts on listed equity securities takes place on the following exchanges:

Chicago Board Options Exchange (CBOE)
 American Stock Exchange (AMEX)
 Pacific Stock (ARCA) Exchange
 Philadelphia Stock Exchange (PHLX)
 International Securities Exchange (ISE)

The largest options market is the CBOE. The AMEX is also quite large. The Pacific (ARCA) and PHLX are smaller options markets. Also note that NYSE Euronext now owns the AMEX and Pacific (ARCA) options exchanges and runs them as separate subsidiaries; while NASDAQ OMX now owns the PHLX Exchange and also runs it separately.

Options Clearing Corporation

Contracts traded on the options exchanges are standardized under rules set by the Options Clearing Corporation (O.C.C.), a subsidiary of the CBOE. The O.C.C. issues the contracts, guarantees the contracts, and acts as clearing house for all listed options trades.



O.C.C. Contract Specifications

O.C.C. rules are designed to make options easier to trade. Because of the standardization procedure, the only item left to the market is to determine the premium. Options are not traded on all equity securities, only larger capitalization issues that are actively traded - mostly New York Stock Exchange and NASDAQ Global Market traded equity issues.

Contract Size: Every contract on an equity option covers **100** shares.

Strike Price

New contracts are issued at prices that are based on the existing market price. For most stocks, the interval is set at 2 1/2 points. Therefore, if a stock is at \$21, contracts cannot be issued at a \$21 strike price, but they could be issued at strike prices of \$17.50, \$20.00, \$22.50, etc.

For each stock trading at \$20 or less, strike prices can be issued up to 100% higher or lower. For stocks over \$20, the range is +/- 50%. So if a stock is trading at, say, \$50, options can now be issued with strike prices ranging from \$25 to \$75.

Premium Increments:

Premiums are quoted in "pennies," in minimum increments of 5 cents for contracts trading below \$3; and 10 cents for contracts trading at \$3 or more.

However, in 2007 the CBOE and the other options exchanges have been rolling out a "penny pilot program" that permits trading of the more active contracts in "penny" (\$.01) increments. This is being expanded through 2010.

Expiration Date:

Contracts expire on the Saturday following the third Friday of each month. The actual time of expiration is 11:59 PM Eastern Standard Time.



Expiration: Once a contract is issued, it trades until its expiration date. For each equity security, an option contract can always be issued for the current trading month ("spot") and for the "next month." For example, if it is now May 1, contracts can be issued for May ("spot") and June ("next month").

Spot
Next Month

In addition, each equity security is assigned to an expiration "cycle." There are 3 cycles:

Cycle 1---->	Jan	Apr	Jul	Oct
Cycle 2---->	Feb	May	Aug	Nov
Cycle 3---->	Mar	Jun	Sept	Dec

For example, Mobil is on Cycle 2 - the only Mobil contracts that can be issued, other than "spot" and "next" month, are Feb, May, Aug, and Nov.

For example, General Electric is assigned to Cycle 3. The only GE contracts that can be issued, other than "spot" and "next" month, are for Mar, Jun, Sept, and Dec.

**Next 2
Expiration
Months**

Aside from the "spot" and "next month" contracts, all of the regular expiration dates within each cycle **do not** trade at the same time. Based upon the current date, only the **next two** available expiration months within the cycle trade.

Based upon a current date of May 1st, the GE (Cycle 3) contracts that are permitted to trade are:

May	(spot);
June	(next month);
September	(the first upcoming regular cycle month in Cycle 3);
December	(the next upcoming regular cycle month in Cycle 3).

Once the May contracts expire, say on May 20th, the contracts that would be trading for GE are:

June	(spot);
July	(next month);
September	(the first upcoming regular cycle month in Cycle 3);
December	(the next upcoming regular cycle month in Cycle 3).

Once the June GE contracts expire, say on June 20th, the contracts that will be trading for GE are:

July (spot);
August (next month);
September (the first upcoming regular cycle month in Cycle 3);
December (the next upcoming regular cycle month in Cycle 3).

Once the July GE contracts expire, the contracts that will be trading for GE are:

August (spot);
September (next month);
December (the first upcoming regular cycle month in Cycle 3);
March (the next upcoming regular cycle month in Cycle 3).

**Actual
Maximum
Contract
Life -
8 Months**

Note that the March contracts may start trading as soon as the July contracts expired. This occurs 8 months from the July expiration date. Thus, the actual maximum life of an equity options contract is 8 months.

**Technical
Maximum
Contract
Life -
9 Months**

However, the Options Exchanges are permitted to issue contracts with a given expiration month that is 9 months in the future. As an example, for a Cycle 1 company, once January contracts expire, October contracts can be opened. Though this is not the current practice, it must be known for the examination.

**Trading
Hours:**

Normal trading hours for listed equity options are 9:30 AM - 4:00 PM Eastern Standard Time (EST).

**Opening
Rotation:**

At the start of trading each day, an "opening rotation" is conducted, where each options series is traded briefly by itself. The purpose of the opening rotation is to establish a single opening price for each contract trading in that market. After completing the rotation, regular trading is started.



**Trading
Cut Off:**

The last day to trade equity options is on the Friday prior to expiration (expiration occurs on the Saturday following the third Friday of the month). The last time to trade on this day is 4:00 PM EST.

**Closing
Rotation:**

On the last trading day for contracts that are about to expire, the CBOE, after the close of regular trading (after 4:00 PM) conducts a "closing rotation." Each options series is traded by itself, for a brief time period, during this closing rotation. This allows final last minute closing trades of any contracts that are about to expire to be conducted systematically.

**Exercise
Cut Off:**

The last day to exercise equity options is on the Friday prior to expiration (expiration occurs on the Saturday following the third Friday of the month). The last time to exercise on this day is 5:30 PM Eastern Standard Time. Note that the OCC automatically exercises any contracts that are \$.01 in the money at expiration

**CEA -
Contrary
Exercise
Advice**

A special form called a "CEA" - Contrary-Exercise Advice - must be used to stop the automatic exercise or to change the parameters of the automatic exercise. This instructs the OCC of the customer's "contrary intention." These are accepted for up to 2 hours after the 5:30 PM exercise cut-off (so they are accepted until 7:30 PM ET on the third Friday).

**American
Style Option:**

Note that equity options are so-called "American style" options that are exercisable any time until expiration. This contrasts to so-called "European-style" options that are only exercisable at expiration (not before).

Regarding the cut-off times, please remember that the Options Clearing Corporation is based in Chicago (it started as part of the CBOE), and operates on Central Time. To translate these times into Central Time, **subtract** 1 hour.

9b. OPTIONS CLEARING CORPORATION RULES

Options Clearing Corporation

Options Disclosure Document - Given To Customer No Later Than Time Account Is Approved For Options Trading

Options Clearing Corporation Prospectus Provided To Customers Upon Request

The Options Clearing Corporation (O.C.C.) has a number of rules by which customers and registered representatives must abide.

Before opening an options account, the O.C.C. requires that the customer receive an "Options Disclosure Document" published by the O.C.C. The date it is furnished to the customer is entered on the New Account Form. The actual rule for delivery states that it must be delivered to customers no later than the time that the account is approved for options trading, and this must be known for the exam.

A more detailed version of the Options Disclosure Document is the Options Clearing Corporation Prospectus. This document give extremely detailed information about the functions of the O.C.C. and options trading. This document must be provided to any customer that so requests.

These documents detail the characteristics and risks of standardized options, and the rules under which the exchanges and O.C.C. operate. Some of the more important rules are:

Settlement of Options Trades: Trades of options are settled regular way **next business day**.

Maintenance of Records: The O.C.C. keeps the record of who has long option positions and short option positions in the name of the brokerage firm. The list is updated daily as of the settlements for that day. If a customer decides to exercise, he notifies his brokerage firm, who notifies the O.C.C.

Assignment of Exercise Notices: When the O.C.C. receives an exercise notice from a brokerage firm, it selects a short contract to be exercised on a **random order** basis.

When the brokerage firm that has the short position receives that notice from the O.C.C., it is permitted to select the particular customer to be exercised on either a **"first-in, first-out" or random order** basis. Once a firm has chosen a method, it cannot change it without a valid reason, and must give the CBOE notice of the change and receive approval for the change.

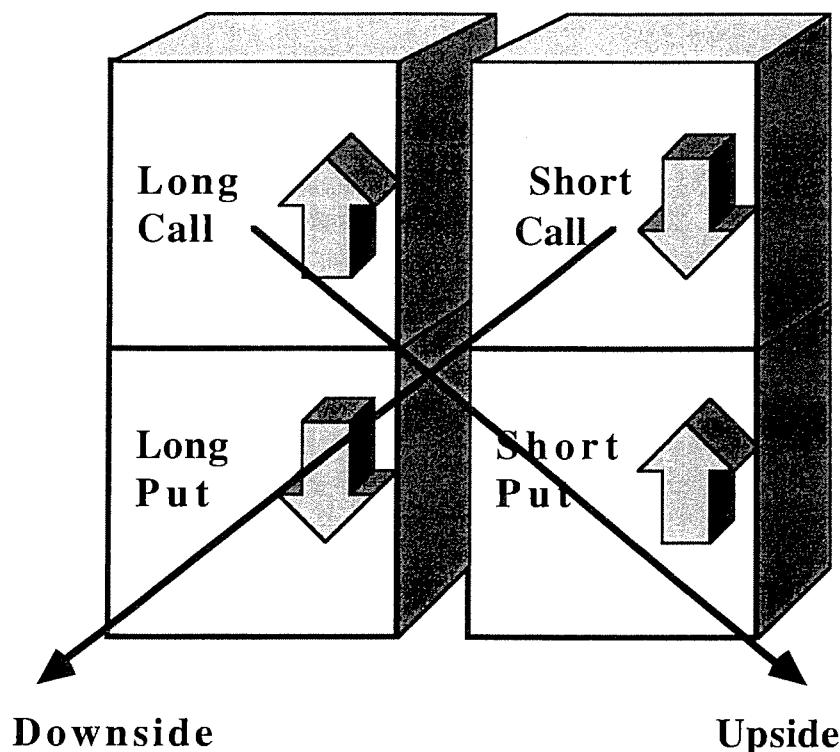
Settlement When Exercised: All assignments of exercise notices are based upon positions held at the close of business the previous day. If an exercise



occurs, this results in a regular way stock trade in the underlying security. Thus, if a call writer is exercised, the stock must be delivered **3 business days** after exercise date. If a put writer is exercised, he or she must pay the strike price to buy the stock **3 business days** after exercise date.

Position Limits: A person who accumulates a large number of contracts has "control" over 100 times that number of shares of stock. The O.C.C. limits the number of positions that any individual can take (or group of individuals **"acting in concert"**). The limit varies depending on the trading volume of the underlying stock - the higher the trading - the higher the limit.

This limit is applied to each "side" of the market, with the Exhibit below showing that:



The **"upside"** of the market consists of:

Long Calls and Short Puts;

The **"downside"** of the market consists of:

Long Puts and Short Calls.

For example, with a 75,000 contract position limit:

75,000 long calls and 75,000 long puts
do not exceed the limit and are acceptable;

75,000 long calls and 75,000 short puts
EXCEED the limit and are **NOT** acceptable.

Position Limits

The actual position limits depend on the trading volume of the underlying security - there are 5 tiers based on trading volume. The more actively traded issues have higher option contract position limits than less actively traded ones. Also note that the actual position limit figures are not tested.

Report To CBOE Of Customer Options Positions Of 200 Or More Contracts In One Class

In addition, the CBOE requires that member firms report, no later than the close of business on the following business day, any customer who has an aggregate long or short position of 200 contracts or more in any one class of option.

Exercise Limits: In addition to position limits, there are limits on the number of contracts that can be exercised within any **5 business day** (1 working week) period. Exercise limits also vary depending on the trading volume of the underlying stock, but you do not have to know the specific limits.

No Adjustment For Cash Dividends

Adjustments to Contracts: Option contracts are **not** adjusted for cash dividends. When a stock goes ex-dividend, the strike prices are left alone.

2:1 Or 4:1 Splits Number of Contracts Up / Strike Reduced

Contracts **are** adjusted for stock splits that are either 2:1 or 4:1. The strike price is reduced and the number of contracts is increased.

For example, ABC stock splits 2:1.

Before: 1 ABC Jan 60 Call
After: 2 ABC Jan 30 Calls

Fractional Split No Change To Contract But "Deliverable" Is Adjusted

For fractional splits and stock dividends, there is no change to the terms of the contract as it is traded. Instead, if there is an exercise, the "deliverable" is adjusted.

For example, ABC stock "pays" a 20% stock dividend.

Before: 1 ABC Jan 60 Call
After: 1 ABC Jan 60 Call

Strike Price And Multiplier Are Unchanged

The contract remains with a strike price of 60 and a multiplier of 100. If there is an exercise of the contract, then the delivery amount and price are "fixed" to reflect the value of the stock dividend or fractional stock split.



**Adjustment
To Deliverable**

For the 20% stock dividend, the adjusted deliverable will be:

$$100 \times 1.2 = 120 \text{ shares at } \$60/1.2 = \$50$$

Note that after the deliverable adjustment, the aggregate exercise value of the contract does not change. Before, the contract covered 100 shares at \$60 = \$6,000 of stock. After, the contract covers 120 shares at \$50 = \$6,000 of stock.

Also note that because the contract strike is not adjusted, but the actual market price is adjusted on "ex" date, it might appear that these unadjusted contracts are "in" or "out" of the money when they really are not. For these contracts, simply comparing the strike price to the market price will not work to determine whether the contract is "in" or "out" of the money.

**Reverse Stock Split
Contract Is
Unchanged**

Finally, note that for reverse stock splits as well, there is no adjustment to the contract - only the deliverable is adjusted if there is an exercise.

For example, ABC stock splits 1:3

Before: 1 ABC Jan 20 Call
After: 1 ABC Jan 20 Call

If there is an exercise, the deliverable becomes:

$100/3 = 33.33$ shares at $\$20 \times 3 = \60 . (Note: In this case, the fractional .33 share amount value would be paid in cash and only 33 shares delivered.)

Covered Writing Positions: Writers of naked options assume large risk positions and are required to make large margin deposits to the Options Clearing Corporation to protect the brokerage firm. A "covered" writer is covered against this risk and hence does not have to put up margin on the short option position. The following positions cover the sale of options by a customer:

**"Covered Call Writing Positions"
Short Call (Unlimited Upside Risk)**

1. Long the underlying stock (or equivalent security such as a convertible or warrant) (a "covered call writer")
2. Long a call at the same strike price or lower that expires in the same month or after the short call
(creating a "debit" or long call spread)

Please note that being "long a call" with a nearer expiration will **not** cover a short call. This makes sense, because the long call might expire, and the remaining short call is "naked" for the time left until expiration.

3. **Long an escrow receipt for the stock**
(the stock is held in a bank vault - not with the broker)
4. **Bank guarantee letter**
(the bank will pay if the customer can't upon exercise)

"Covered Put Writing Positions"
Short Put (Increasing Risk as Market Falls)

1. **Short the underlying stock position**
(creating a "covered put writer")
2. **Long a put at the same strike price or higher that expires in the same month or after the short put**
(creating a "debit" or long put spread)

Please note that being "long a put" with a nearer expiration will **not** cover a short put. This makes sense, because the long put might expire, and the remaining short put is "naked" for the time remaining until expiration.

3. **Bank guarantee letter / cash escrow receipt**

Since the writer of a put is obligated to buy the stock if exercised, having cash equal to the strike (purchase) price on deposit covers a short put.

9c. LONG TERM STOCK OPTIONS (LEAPs)

The CBOE and other exchanges introduced a new equity options product in late 1990, in an effort to increase investor interest in stock options trading. The new contracts are "long term" equity options, with a longer life than the 9 month maximum for regular stock options.

LEAPs

So-called "LEAPs" - Long-term Equity AnticiPation options are issued after the May expiration with an expiration approximately 30 months later. For example, after the May 2011 expiration, for Cycle 1 companies, LEAPs will be issued



for January 2014. After the May 2012 expiration, LEAPs will be issued for January 2015, etc.

This means that for any given company at any time, there will be 4 near term options and 2 or 3 LEAPs available.

Assume that a company is assigned to Cycle 1 and it is now April 1st, 2011. The contracts that will be trading will be:

April '11	(this month)
May '11	(next month)
July '11	(1st upcoming month in Cycle 1)
October '11	(2nd upcoming month in Cycle 1)
January '12 LEAP	
January '13 LEAP	

Now assume that it is right after the May '11 expiration. The contracts that will be trading for this Cycle 1 company are:

June '11	(this month)
July '11	(next month)
October '11	(1st upcoming month in Cycle 1)
January '12	(2nd upcoming month in Cycle 1 - the January '12 LEAP has converted to a regular option because its maturity is now under 9 months)
January '13 LEAP	
January '14 LEAP	

LEAPs allow investors to position themselves for market movements that are expected over a longer period of time. LEAPs trade alongside the regular stock options, and have much higher time premiums since their expiration is much longer. LEAPs have proven to be a successful new product, and trading volumes are growing.

EQUITY OPTIONS CHARACTERISTICS SECTION EXAMINATION

1.

The last time to trade an equity option that is about to expire is:

- a. 4:00 PM EST; 3:00 CST; on the third Friday of the month
- b. 4:00 PM EST; 3:00 CST; on the Saturday following the third Friday of the month
- c. 5:30 PM EST; 4:30 CST; on the third Friday of the month
- d. 5:30 PM EST; 4:30 CST; on the Saturday following the third Friday of the month

2.

In determining whether there has been a violation of position limits, long calls will be aggregated with:

- I Long Puts
 - II Short Calls
 - III Short Puts
- a. I only
 - b. II only
 - c. III only
 - d. I, II, III

3.

If an equity put holder exercises a contract, the holder must:

- a. deliver cash in 1 business day
- b. deliver stock in 1 business day
- c. deliver cash in 3 business days
- d. deliver stock in 3 business days

4.

The O.C.C. assigns exercise notices to writers on a:

- a. first-in; first-out basis
- b. last-in; first-out basis
- c. random order basis
- d. method of reasonable fairness

5.

The maximum life on an equity LEAP contract approximately is:

- a. 12 months
- b. 24 months
- c. 30 months
- d. 38 months

6.

A customer's short put is considered to be "covered" by a:

- I Long put with the same strike price or higher with the same expiration or later
 - II Bank guarantee letter
 - III Short stock position in the underlying security
- a. I only
 - b. I and II
 - c. II and III
 - d. I, II, III

7.

Options strike prices are adjusted on "ex" date for:

- a. cash dividends
- b. stock dividends
- c. 2:1 stock splits
- d. 3:2 stock splits



Use the following information to answer the next 2 questions:

ABC corporation is trading in the market for \$51. The corporation declares a 25% stock dividend.

8.

After the ex date, the holder of 1 ABC Jan 50 Call will have:

- a. 1 ABC Jan 50 Call
- b. 1.25 ABC Jan 50 Calls
- c. 1 ABC Jan 40 Call
- d. 1.25 ABC Jan 40 Calls

9.

If there is an exercise, the number of shares that will delivered will be:

- a. 80
- b. 100
- c. 120
- d. 125

10.

Which of the following are "classes" of options?

- I ABC Calls
- II ABC Puts
- III ABC Jan 50 Calls
- IV ABC Jan 50 Puts

- a. I and II
- b. I and III
- c. II and III
- d. III and IV

EQUITY OPTIONS SECTION EXAMINATION EXPLANATIONS

1. The best answer is a. The last time to trade an equity option contract that is about to expire is 4:00 PM Eastern Standard Time (3:00 PM Central Time) on the third Friday of the expiration month. The contract can be exercised until 5:30 PM EST on that day. Any expiring contracts that have not been closed by trading or exercise on that third Friday will expire at 11:59 PM EST on the Saturday following the third Friday of the expiration month.
 2. The best answer is c. Long calls and short puts constitute the "up" side of the market. Long puts and short calls constitute the "down" side of the market. Position limits are applied to each "side" of the market.
 3. The best answer is d. If the holder of an equity put exercises, he is selling the stock at the strike price. Settlement is 3 business days after exercise date - this is a regular way stock trade.
 4. The best answer is c. If an option contract is exercised by a holder, a writer is selected by the Options Clearing Corporation to perform on the contract on a random order basis.
 5. The best answer is c. The maximum life on an equity LEAP (Long Term Equity AnticipaPation option) contract is about 30 months. New contracts are issued after the May expiration of each year, with these contracts expiring 30 months later (January).
 6. The best answer is d. A customer's short put is "covered" by a short stock position in the same security. If the put is exercised, the customer is obligated to buy stock that he has previously sold short. Therefore, he would have the physical shares to replace the borrowed stock that was sold, and would not incur a loss upon exercise. A long put with the same strike price or higher (thus creating a long put spread) or a bank guarantee letter (where the bank assumes responsibility for loss upon exercise) also cover the sale of a put.
 7. The best answer is c. Options are not adjusted on ex date for cash dividends, nor are they adjusted for stock dividends or fractional splits. Because there is no adjustment of the strike price or multiplier for stock dividends or fractional splits, if there is an exercise, the "deliverable" will be adjusted. Listed option contract strike prices are only adjusted for 2:1 or 4:1 stock splits, with the number of contracts being increased proportionately.
 8. The best answer is a. This is a stock dividend, where there is no adjustment to the contract on ex date to the strike price or the multiplier. Both before and after the ex date, the contract will be 1 ABC Jan 50 Call. If the contract is exercised, the "deliverable" will be adjusted for the 25% stock dividend. The deliverable will now become
- $100 \times 1.25 = 125$ shares at $50/1.25 = \$40$
9. The best answer is d. See prior explanation.
 10. The best answer is a. A class of option consists of all options of one type on an underlying security. For example, all ABC calls are a "class;" all ABC puts are a "class."



SECTION 10: CHARACTERISTICS OF STOCK INDEX OPTIONS

10a. OVERVIEW

The "idea" behind individual stock options is carried one step further with index options. A market "index" is composed of a number of issues traded. For example, the Standard and Poor's 500 Index is composed of the 500 largest companies (based on market capitalization) headquartered in the United States. If one believes that the market as a whole will rise, instead of picking calls on individual stocks, why not buy a call on the index instead? If one thinks the market as a whole will fall, why not buy a put on the index?

Index options are considered by some people to be gambling. This is not really true. Assume that one is a portfolio manager, with \$100,000,000 invested in NYSE issues. One can protect the portfolio against a drop in the market by purchasing individual puts on each stock position. Alternatively, one can buy index puts as a hedge - which is simpler and cheaper. Maybe the manager believes that the market will stay flat and wants to earn some extra income during this time period. Why not sell index calls against the portfolio for the added premium income?

All of the strategies that were discussed using equities as the underlying security apply to **all** option contracts - including index options.

We all should know the name of the most widely quoted index - the Dow Jones Industrial Average. It consists of 30 industrial stocks listed on the NYSE, such as IBM, GE, Exxon, American Express, etc. The DJIA is the index one always hears quoted in the news - such as "The Dow was up 20 points today." It would make sense that an index option would be traded on the DJIA, but Dow Jones and Co. did not (until October of 1997) allow its name to be put on an index option because it believed that "gambling" using its index could have a negative effect on its value.

Standard and Poor's 100 Index (OEX)

Traded On CBOE

The very first index option was introduced in 1983 by the Chicago Board Options Exchange (about 10 years after stock options first started trading in that market). At that time, the CBOE attempted to license the DJIA, but was rebuffed by Dow Jones. Instead, the CBOE went to Standard and Poor's to license the S & P 500 index. Standard and Poor's problem with the licensing was that if the contract was a failure, it could reflect badly on their index, so a compromise was

struck. A sub-index of 100 stocks out of the 500 was created, called the S & P 100 index. An index option was created by the CBOE called the "OEX" - as in Options Exchange Index - that started trading in 1983.

OEX - American Style	Trading in this index option exploded after introduction, and the other exchanges that trade options quickly came out with products for this marketplace. The OEX became the most actively traded option contract in the world. It was modeled after traditional stock options, in that it is an "American Style" option - that is, one that is exercisable at any time.
Very Actively Traded Option On CBOE	
Standard and Poor's 500 Index (SPX)	With the success of the OEX, the CBOE was able to license the full S & P 500 index, and introduced the "SPX" index option in 1984. First introduced as an American Style option, it was changed to a "European Style" option about 6 months later. A European Style option is one that is exercisable only at expiration. These contracts are more attractive to institutional writers, since there is no risk of an unexpected exercise. This contract has also been very successful - the SPX is now the most actively traded index option contract.
Traded On CBOE	
SPX - European Style	
Major Market Index (XMI)	The American Stock Exchange came up with an index that mimics the DJIA - it is called the Major Market Index and consists of 20 stocks, most of which are in the DJIA. The Major Market Index, known as the "XMI" index, tracks the DJIA with 99% accuracy.
Traded On AMEX	
Dow Jones Industrial Average Index (DJI)	In October of 1997, Dow Jones and Co. finally decided to license its Dow Jones Industrial Average to the Chicago Board Options Exchange, stating at the time that it believed that the options market had matured enough; and that investors had become sophisticated enough; to allow trading of options on the index. The Dow Jones Industrial Average Index option (DJI) covers the 30 stocks in the industrial average.
Traded On CBOE	
OEX, SPX and XMI - "Broad Based"	The most popular index options, by far, are the OEX and SPX, with these being the most actively traded of all options. The XMI has not been as successful. These are termed "broad based contracts" since they measure a cross section of the market.
"Narrow Based"	
9 Or Fewer Stocks	Other index options were devised using sectors of the market - such as an airlines index, an energy index, etc. These are termed "narrow based contracts" and have been relatively unsuccessful. The technical definition of a narrow-based index is one with 9 or fewer stocks; where no one stock is more than 30% of the value of the index; and no more than 60% of the index value is attributable to the 5 largest stocks in the index.



10b. OEX (S & P 100) INDEX OPTION

The OEX index option is traded on the Chicago Board Options Exchange and it mirrors price movements in the broad market. Instead of covering 100 shares, the contract is said to have a "multiplier" of 100.

If a holder of an index call exercises, he is not delivered 100 bundles of the 100 stocks in the index at the strike price. Similarly, if the holder of an index put exercises, he does not sell 100 bundles of the 100 stocks in the index at the strike price.

**Exercise Settles In
Cash At Closing
Index Value**

Exercise of index options results in a settlement in cash. If the holder of a call or put exercises, the writer must pay to the holder the difference between the strike price and the closing index value that day. Since the OEX option is American style, it can be exercised at any time. Also note that as a general rule, all of the other index options are European style - and can only be exercised at expiration. In reality, very few contracts are ever exercised. Positions are closed by making offsetting trades in the market.

Following is a financial listing for OEX contracts:

S & P 100 Index (Chicago)

Option & N Y Close	Strike Price	Calls - Last			Puts - Last		
		Sep	Oct	Nov	Sep	Oct	Nov
495.54	490	11.75	14.75	17.50	5.50	11.00	14.50
495.54	495		8.50	12.25	14.75	7.65	11.75
495.54	500		6.00	10.50	r	10.40	17.40
495.54	505		4.00	7.50	11.00	13.00	19.00

Total Call Vol: 64,749 Call Open Int: 229,354 r: Not Traded
Total Put Vol: 53,995 Put Open Int: 220,087

A customer who believes that the market will rise can buy an OEX Call. Assume a customer takes the following position:

**Buy 1 OEX Sep 490 Call @ \$11.75
OEX Close: 495.54**

The customer pays a premium of \$11.75 times a multiplier of 100 equals a total cost of \$1,175 for the contract. Trades settle next business day.

The contract covers a "value" of 490 index strike price times a multiplier of 100 = \$49,000. If this customer decided to exercise the contract (which technically cannot happen until the trade settles the next day), he does not take delivery of the index! The seller is obligated to pay to the holder:

Contract Price =	490	x 100 =	\$49,000
OEX Close =	495.54	x 100 =	\$49,554

Paid by seller to holder	\$ 554
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**Upon Exercise,
Seller Pays Buyer
"In the Money"
Amount Computed
Based Upon Closing
Index Value**

If an index option is exercised, the seller must pay the holder the **next** business day. Notice that the seller pays the holder the closing index value. If a call holder exercised during this day when the OEX was at 515.82 at 1:00 PM and then the market fell sharply to close at 495.54, the cash settlement would be calculated from the **closing price** - not the price at the moment of exercise.

The OEX (or SPX) is used by portfolio managers who wish to hedge or get extra income. Assume that a portfolio manager runs a \$1,000,000 portfolio of "blue chip" stocks. To protect against a fall in the market, the manager can buy OEX Puts. Assume the manager decides to buy the following:

Existing Portfolio: \$1,000,000 "Blue Chip" stocks

Hedge: Buy 20 OEX Sept 500 Puts @ 10 3/8

**Matching Number Of
Contracts To Hedge
Portfolio**

Since each contract covers $500 \times 100 = \$50,000$ of value, 20 contracts must be purchased to hedge the portfolio. If the market drops, the portfolio cannot be "put" to the writer. Instead, the cash profit on the put contracts will offset the loss in value of the portfolio.

**Beta - Measures
Volatility**

Assume that one has a portfolio that tracks the market, but it consists of more volatile stocks. The measure for volatility is called the "**beta**." If one's portfolio moves as fast as the market as measured by the S & P 500 index, the portfolio has a beta of 1; a beta of 2 means the portfolio is twice as volatile; 3 means 3 times as volatile, etc.

**Can Use Beta
Weighted Contracts
To Hedge Against
Systematic Risk**

To hedge a \$1,000,000 portfolio with a beta of 2, one needs **twice** the number of contracts. (Remember, if the index falls, one's portfolio falls twice as fast.) Matching portfolio "betas" allows for hedging against "market risk". This is the risk that the market will drop, taking the portfolio value with it. Market risk is also known as "systematic risk."

**Cannot Hedge
Against
Unsystematic Risk**

Hedging with index contracts does not protect against "unsystematic risk." This is the risk that a specific security may turn into a bad investment.

As a second example, assume that it is believed that the market will stay flat for the next few months. The portfolio manager decides to generate extra income from the portfolio by selling 20 OEX Sep 500 Calls @ \$6 (collecting $\$600 \times 20$ contracts = \$12,000). If the market rises, any gain



on the portfolio will be offset by an equal loss on the short calls (but one wouldn't do this if it was thought that the market will rise). If the market drops, the calls expire and the premiums are kept as a partial hedge against stock losses in the portfolio.

10c. OEX / SPX LEAPS

OEX / SPX LEAPS

Long Term Index Options

Index LEAP Maximum Life Is About 36 Months

Minimum Premium

A newer type of index option is a contract with a long life. On the CBOE, these are known as "LEAPs" - Long-term Equity Anticipating options. LEAPs cover both the OEX and SPX indexes. Both of these products expire in December of each year, and contracts are issued for each of the two Decembers after the current year.

For example, in the beginning of December of 2010, index LEAPs are available with December '10 (about to expire), '11, and '12 expirations. After the Dec '10s expire, the '11s and '12s still trade; and in January of 2011, LEAPs are issued with a Dec '14 expiration. Thus, the maximum life on these contracts is 35 months (but this is tested as 36 months).

The LEAP contract is issued in the same "style" as the regular index option. Thus, OEX LEAPS are American style options; while SPX LEAPS are European Style Options. If LEAP contracts on indexes are exercised, the writer must pay the holder the "in the money" amount (identical to the exercise of regular index options). For LEAP index contracts, the multiplier is 100.

Following is a comparison of the OEX, along with its LEAP variant, to a regular stock option.

	Stock Option	OEX Option
Multiplier:	100	100
Trade Settlement:	Next Day	Next Day
Exercise Settlement:	3 Bus. Day Delivery of Stock	Next Day Delivery of Cash
Premium Increment:	\$0.05 if < \$3; \$0.10 if \$3 or higher	\$0.05 if < \$3; \$0.10 if \$3 or higher

(Note: For any stock option contract that is in the "penny pilot program," the minimum premium increment is \$.01)

Maximum Life:	8 months (may be tested as 9 months)	4 months (may be tested as 3 months)
Style:	American	American
LEAP Max. Life:	30 months	36 months
LEAP Style:	American	American
Trading Cut-Off:	4:00 PM EST	4:15 PM EST
Expiration:	Saturday following 3rd Friday Of Month @ 11:59 PM EST	

10d. OTHER INDEX OPTIONS

Russell 2000 Index (RUT)

Russell 2000 Index (RUT) contract traded on the CBOE. The Russell 2000 Index consists of small capitalization stocks, specifically the bottom 2,000 stocks out of the largest 3,000 stocks by market capitalization traded in the U.S. This index option is moderately successful. Note that this index's price movement will not correlate as well with a large capitalization portfolio's price movement.

Major Market Index (XMI)

Major Market Index (XMI) contract traded on the AMEX. It consists of 20 stocks and mimics the Dow Jones Industrial Average. With the advent of the DJX option on the CBOE, this contract will probably be discontinued.

Value Line Contract (VLE)

Value Line Index (VLE) contract traded on the Philadelphia Exchange (PHLX). The Value Line index consists of approximately 1700 common issues, selected from the NYSE, AMEX, and OTC markets. This contract would be useful to a portfolio manager whose securities mirrored this selection. This contract has been unpopular, and will probably be discontinued. The multiplier is 100.

NASDAQ 100 Index (NDX)

NASDAQ 100 Index (NDX) traded on the CBOE. The NDX consists of the 100 largest non-financial NASDAQ stocks based on market capitalization.

Narrow Based Contracts

A variety of narrow based index options contracts are traded on the various exchanges. These contracts are either country specific or industry specific. Examples of these narrow based contracts are:

CBOE: Mexico Index (MEX)
Technology Index (TXX)

AMEX: Japan Index (JPN)
Pharmaceutical Index (DRG)



PHLX: Gold/Silver Index (XAU)
Oil Service Index (OSX)

Narrow Based Contracts Have Higher Betas

Most Contracts Other Than OEX Are European Style

VIX - Volatility Index Options

VIX Based On SPX Expected Volatility Over Next 30 Days

VIX Value Of "0" Implies Flat Market

VIX Negatively Correlated To Stock Price Movements

It is not necessary to memorize these for the examination, but, for example, it should be known that these portfolios will tend to have higher "betas" than broad based indexes; and that they are available, though not very actively traded, in the market. In contrast to the OEX (Standard and Poor's 100 Index option), which is American style, the other contracts, including the XMI, SPX and narrow based contracts; and any LEAPS on these contracts; are typically issued in European style only.

10e. VIX OPTIONS

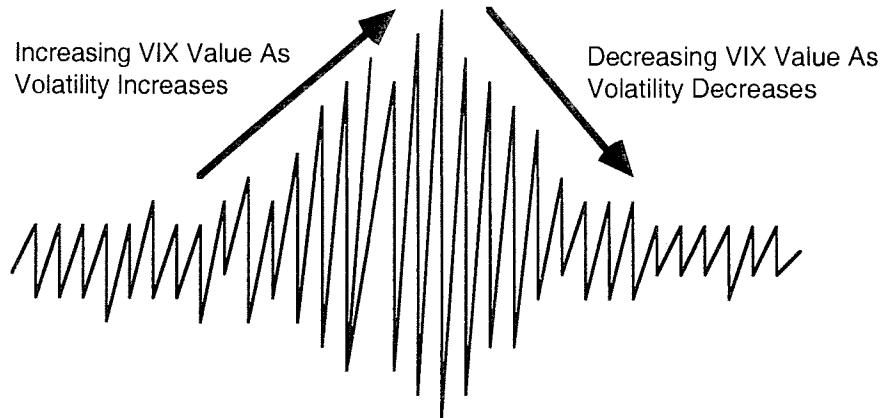
"VIX" is the trading symbol for S & P Volatility Index Options. This is a benchmark index that gauges investor sentiment - commonly referred to as a "fear gauge."

The index is derived from real-time S & P 500 Index option (SPX) bid and ask quotes. It reflects investors' consensus view of expected stock price volatility over the upcoming 30 days. It uses a formula to derive expected volatility excluding changes in underlying price, dividends, interest rates and time to expiration (these are the regular determinants of the option premium).

What is truly odd about the "VIX" contract is that it is an option on a futures contract. In 2003, the CBOE started the "CFE" - the Chicago Futures Exchange - to electronically trade futures and options on futures. However, the CFE uses the CBOE's electronic trading platform to trade, so the contract is deemed to be "SEC" regulated and not CFTC regulated - hence it is a securities product that can be tested on Series 9!

A VIX value of "0" implies no market volatility over the next 30 days - that is no daily change in the S & P 500 Index. An extreme VIX measure (the VIX has tended to range between 15 and 50) implies high volatility. However, historically, the S & P Index is not very volatile - rarely moving more than 5% in a given day. Very low VIX levels imply that the market is calm and the next likely market move is upwards. Very high VIX levels indicate heightened investor fear and the next market move is likely to be down.

During normal market conditions, the VIX is negatively correlated to the price movements of the S & P 500 Index. The "idea" here is that when VIX values are rising (increasing market volatility), this is an indicator of increased "fear" and an impending market decline.



Conversely, when VIX values are falling (decreasing market volatility), this is an indicator of increased "confidence" and an impending market rise.

CBOE statistics show that over the past 15 years, during days of sharp price movement in the S & P 500 Index, when stock prices dropped on average 4%, the VIX went up by 17%; and on days when the S & P 500 Index rose by 4%, the VIX dropped by 9% (all numbers are rounded). Thus, the VIX could be used as a "catastrophic hedging tool" for stock portfolios.

The index allows risk managers and hedge funds to trade "volatility," and market makers that trade "volatility" can use these options to hedge their positions.

This option contract differs from standard index options in that the:

contracts available are the upcoming 2 months plus 1 more upcoming month based on the February quarterly cycle (either Feb., May, Aug., or Nov.);

contract is a 30-day benchmark of expected market volatility as measured by SPX options' prices.

Exercise settlement is based upon a monthly calculation of expected market volatility over the upcoming 30 days. It is based on SPX options that will expire exactly 30 days prior to the third Friday of the following calendar month;

exercise settlement calculation is not performed on the Friday that is 30 days prior to expiration, but the Wednesday morning before. Options exercises settle on this Wednesday, so that the expiration does not coincide with the regular index option exercises



(which occur on the third Friday). Exercise settlement is in cash, on the business day following the calculation;

last day to trade an expiring contract is the Tuesday before the monthly Wednesday morning exercise-settlement value calculation;

underlying value of the VIX option is the forward value (expected future value) of SPX options expiring 30 days later. A June VIX contract measures implied market volatility for the July following; a July VIX contract measures implied market volatility for the August following, etc.

This option contract is the same as regular index options in that the:

contract multiplier is \$100;

contract is only issued in European Style;

contract trades between 9:30 AM and 4:15 PM ET (8:30 AM and 3:15 PM CT);

exercise settlement occurs in "cash" the next business day, with the writer paying the holder any "in the money" amount.

10f. INDEX WARRANTS

As opposed to issuer-created warrants that are attached to new issue bond and preferred stock offerings as a sweetener, index warrants are created by a broker-dealer or bank and are settled and cleared through the OCC (Options Clearing Corporation).

There are both index call warrants and index put warrants, and they are available on a broad range on stock indices (including foreign indices) as well as individual stocks and currencies.

Index warrants are really no different than options, however index warrants

trade on stock exchanges and not on the options exchanges;

are created by an issuer and only a fixed number of contracts is created. In contrast, an options contract is created "out of thin air" when a new buyer and new seller meet and trade that contract.

The niche for index warrants trading on stock exchanges is that issuers can quickly create and issue warrants based on market conditions. For example, after the 2011 Japanese earthquake and nuclear meltdown, Nikkei put warrants became popular.

Index warrants are subject to position limits and exercise limits set by the exchange where they are listed. In addition, the exchange requires reporting of positions when set thresholds are reached.



STOCK INDEX OPTIONS SECTION EXAMINATION

1.

A customer buys 1 OEX Jan 450 Call @ \$5 when the index closes at 451. The maximum potential loss is:

- a. \$450
- b. \$451
- c. \$500
- d. unlimited

2.

Index options expire:

- a. each week
- b. each month
- c. every four months
- d. every nine months

3.

Index calls would be purchased by a customer who:

- a. is bullish on the direction of the market
- b. is bearish on the direction of the market
- c. believes that interest rates will rise
- d. believes that interest rates will fall

Use the following information to answer the next 2 questions:

A customer sells 1 XMI Dec 830 Put @ \$8 when the index is at 829.00. The customer is exercised when the index closes at 825.00.

4.

The writer is obligated to:

- a. deliver cash
- b. receive cash
- c. deliver stock
- d. receive stock

5.

The writer must pay:

- a. \$30,000 to the holder
- b. \$5,000 to the holder
- c. \$1,000 to the holder
- d. \$500 to the holder

6.

Which are true statements regarding index options?

- I Upon exercise, the writer must pay to the holder the "in the money amount"
- II Settlement upon exercise occurs next business day
- III Settlement is based on the index value at the time of exercise
- IV The maximum risk for an index option writer is the loss of the premium

- a. I and II
- b. II and III
- c. I, II, III
- d. II, III, IV

7.

The manager of a \$400,000 aggressive stock portfolio wishes to hedge with OEX 400 contracts. The portfolio has a beta of 1.5. To hedge, the manager will buy:

- a. 10 OEX puts
- b. 15 OEX puts
- c. 10 OEX calls
- d. 15 OEX calls

8.

Which statements are true regarding LEAP index option contracts?

- I LEAP index contracts have shorter initial expirations than regular index contracts
 - II LEAP index contracts have longer initial expirations than regular index contracts
 - III LEAP index contracts have higher initial time premiums than regular index contracts
 - IV LEAP index contracts have lower initial time premiums than regular index contracts
- a. I and III
 - b. I and IV
 - c. II and III
 - d. II and IV

9.

The sale of index calls against a portfolio of listed securities is a:

- a. covered writing strategy
- b. naked writing strategy
- c. horizontal spread strategy
- d. bullish strategy

10.

A customer buys 1 OEX Jan 450 Put @ \$10 when the index is at 448.25. The maximum potential gain for the holder is:

- a. \$1,000
- b. \$43,825
- c. \$44,000
- d. \$45,000

11.

The VIX option is based on the:

- a. DJX
- b. SPX
- c. OEX
- d. NDX

12.

Regarding an exercise of VIX options, the contracts are issued in:

- a. American Style
- b. European Style
- c. a choice of either American or European style
- d. non-exerciseable form

13.

The last day to exercise a VIX contract is the:

- a. third Friday of the month
- b. Saturday following the third Friday of the month
- c. Friday preceding the third Wednesday of the month
- d. Wednesday that is 30 days prior to the Third Friday of the following month

14.

VIX options trade during the hours of:

- a. 9:30 AM - 4:00 PM ET
(8:30 AM - 3:00 PM CT)
- b. 9:30 AM - 4:15 PM ET
(8:30 AM - 3:15 PM CT)
- c. 9:30 AM - 5:30 PM ET
(8:30 AM - 4:30 PM CT)
- d. 9:30 AM - 11:59 PM ET
(8:30 AM - 10:59 PM CT)

15.

An investor that is bullish on stock price movements would:

- I Buy VIX Calls
- II Buy VIX Puts
- III Sell VIX Calls
- IV Sell VIX Puts

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV



STOCK INDEX OPTIONS SECTION EXAMINATION EXPLANATIONS

1. The best answer is c. The customer pays a premium of 5. Since the multiplier on the contract is 100, the total premium is \$500. This is the maximum potential loss.
2. The best answer is b. Index options expire monthly. Actively traded contracts extend out for **each** of the next 4 months. In addition, longer term contracts (LEAPs) are available with expirations of up to 35 months.
3. The best answer is a. Index calls are purchased by a customer who believes that the market will rise. Index puts are purchased by a customer who believes that the market will fall.
4. The best answer is a. If an index option is exercised, the writer is obligated to pay the holder the "in the money" amount in cash.
5. The best answer is d. The put has a strike price of 830. Upon exercise, the index closes at 825; therefore, the put is "in the money" by 5 points or \$500. The writer must pay this amount to the holder.
6. The best answer is a. If an index option is exercised, the writer must pay the holder the "in the money" amount the next business day. The index value is computed as of the close the day of exercise. The writer of an index call has unlimited risk; the writer of an index put has increasing risk as the market drops.
7. The best answer is b. Each OEX 400 Put contract covers \$40,000 of stock (400 strike times the multiplier of 100). To hedge a \$400,000 portfolio, 10 contracts are necessary. Since the portfolio is 1.5 times as volatile as the index (beta of 1.5), 1.5×10 contracts = 15 contracts are needed to provide a complete hedge.
8. The best answer is c. LEAPs are long term options contracts. LEAP index options have a maximum initial life of 36 months (actually 35 months, but this is tested as 36 months); whereas regular index options have a maximum initial life of 4 months. Because LEAPs have a longer life, they have a longer time premium.
9. The best answer is b. If the writer of index calls is exercised, he does not deliver the stocks in the index - he delivers **cash**. Index call writing against a portfolio of securities is therefore considered to be a "naked" writing strategy. As with any "income writing" strategy where the call writer owns the physical instrument or an equivalent, the writer expects the market to remain neutral or be mildly bearish.
10. The best answer is c. If the index drops to "0", the writer must pay the holder $450 \times 100 = \$45,000$. Since the holder paid 10 points (\$1000) in premiums, the maximum potential gain is \$44,000.
11. The correct answer is b. The VIX option (CBOE Volatility Index) is based upon the expected price movements of the Standard and Poor's 500 Index Option Contract (SPX option) over the upcoming 30 days.
12. The correct answer is b. The VIX option (CBOE Volatility Index) is issued in European style - that is, it can only be exercised at its expiration.

13. The correct answer is d. The VIX option (CBOE Volatility Index) measures expected market volatility over the upcoming 30 days. It can only be exercised at expiration, with the exercise value based on a computation of expected upcoming 30 day SPX volatility. Instead of the computation being done on the third Friday of the month at market close, the computation is done at market open on the Wednesday preceding the third Friday that is 30 days prior to the calendar month immediately following the expiring month.
14. The correct answer is b. The VIX option (CBOE Volatility Index) trades during the normal market hours for trading of index options - 9:30 AM - 4:15 PM ET (8:30 AM - 3:15 PM CT).
15. The correct answer is c. The VIX option is negatively correlated to stock price movements. If stock prices are rising, then the VIX would be expected to fall. The profitable VIX options positions would be long VIX puts and short VIX calls.



SECTION 11: FOREIGN CURRENCY OPTIONS

11a. FOREIGN CURRENCY MARKET OVERVIEW

Interbank Market

Foreign currency values relative to the dollar affect U.S. business activity and therefore the financial markets. Foreign currencies are traded in the "interbank" market. Trading is unregulated between domestic and foreign banks, in very large units (usually \$5,000,000 minimum).

Unregulated

For each foreign currency trade, the buyer and seller negotiate the price and settlement terms. Settlement can be:

Spot Market

Spot: Settlement and delivery in 1 or 2 business days. (The more active the trading in the currency, the quicker the settlement time.)

Forward Contract

Forward: Settlement later than "spot," usually months in the future.

Floating Exchange Rates

Because exchange rates "float," the value of currencies is determined in the marketplace. Central banks are big players in this market and can easily drive prices up or down for the short term. If a country feels its currency is undervalued, it will buy the currency in the market. If it feels the currency is overvalued, it will sell the currency in the market.

Central Bank Trading

However, long-term price trends reflect the changing economic fortunes of each country. As a country's economy strengthens and its interest rates rise, currency values rise. As a country's economy weakens and its interest rates fall, currency values fall. Because long-term prices are based on the country's economic performance, fiscal and monetary policies of each country are determinants of price direction.

24-Hour Trading

Trading occurs 24 hours a day, with no systematic trade reporting taking place.

Options On Foreign Currencies

Options on foreign currencies are traded on the Philadelphia Stock Exchange (PHLX). They can be used to speculate on the direction of the currencies' values. For example, if you believe that the Japanese Yen will strengthen, buy yen calls. If you believe that the Canadian Dollar will weaken, buy Canadian dollar puts.

Importers and exporters can also use these contracts. Suppose an importer needs to pay for a shipment expected

in 2 months from Britain in Pounds. To protect against the Pound rising (and hence costing more dollars), he can buy Pound calls and lock in a fixed cost for the currency.

Assume an exporter will be paid in EUROS when a shipment arrives in 2 months. To protect against a fall in that currency (meaning the currency is worth less in dollars), buy EURO puts.

PHLX World Currency Options

The PHLX completely revamped the foreign currency options that it offers in mid-2007 to make them more logical and user-friendly. The revised currency options are called PHLX World Currency Options and trading volumes have been decent.

The revisions to the PHLX currency option contracts bring them in line with stock and index options. In addition, to increase investor interest, the PHLX has developed new products, such as FLEX options and 3D options, which are covered later in this section (and these are tested).

11b. CURRENCY OPTION CONTRACTS

The PHLX currency options contracts that must be known for the Series #56 exam are:

Foreign Currency	Contract Size	Premium
Australian Dollar	10,000	
Canadian Dollar	10,000	Multiplier Of
British Pound	10,000	100
Swiss Franc	10,000	
European Curr. (EURO)	10,000	
Japanese Yen	1,000,000	Multiplier Of 100

These are the six major world currencies and the contracts are sized to appeal to the "smaller" investor - the contract sizes are much smaller than currency futures contracts and options on futures (which are not securities and thus are not on this exam). Note that the contract sizes must be memorized for the exam.



Below is a sample quote for a PHLX EURO (the symbol is XDE) contract:

1 PHLX XDE Nov 145 Call @ 2.10

(Market = 146.00)

The customer will pay a premium of 2.10 times a multiplier of 100 = \$210 for the contract.

This contract allows the holder to buy the EURO at a price of 145 cents (\$1.45). Since the market price is \$1.4600, the contract is "in the money" by \$.0100.

To breakeven the EURO must climb above 145 + 2.10 premium or above \$1.4710.

If the EURO rises in value from 146 to 147 (\$1.46 to \$1.47), this is an increase in value of \$.01 x 10,000 units of currency = \$100. All other things being equal, this increase in value would directly result in an increase in the premium from 2.10 to 3.10, which equals an increase from \$210 to \$310 - again, a \$100 increase in value.

This example shows that the basics of options apply to **all** types of contracts. Also note that the PHLX states that the multiplier on the larger Japanese Yen contract is also "100" - but they add a "00" to the computation. Thus, a \$.01 move in the Japanese Yen contract equals (.00)01 = \$.0001 x 1,000,000 = \$100 - the same as for the contracts that are sized in 10,000 units of currency.

**Trades Settle
Next Business Day**

European Style

Foreign currency option trades settle next business day through the Options Clearing Corporation. The contracts are available only as "European Style" - which can be exercised only at expiration (but can still be traded). European style options are more attractive to institutional writers of contracts that do not want an unexpected exercise.

The contracts are essentially similar to index options. If the contract is "in the money" at expiration, the holder could perform a closing trade to realize the profit, or could exercise at expiration, with the last day to trade being the third Friday of the month, just like stock and index options.

**Exercise Settlement
In Cash**

Exercise settlement results in a delivery of cash (U.S. dollars) from writer to holder the next business day, again just like index options. The settlement value is based on the 12:00 Noon "Buying Rate" determined by the Federal

Reserve on the third Friday of the month (last trading day for that month, just like stock and index options).

Also note that an exercise of the "previous" generation of PHLX currency options could be settled by delivering the foreign currency - this is no longer the case.

For example, assume that a customer has purchased 1 PHLX Mar XDC (Canadian Dollar) 100 Put @ 2.10 when the Canadian Dollar is at 99. Just prior to expiration, the Canadian Dollar falls to 95 and the premium on the contract rises to 5.00 (intrinsic value only since there is no "time" left to the contract). The customer performs a closing trade. The profit is:

Closing Sale Proceeds	\$500 (5.00 x 100)
Opening Purchase Cost	\$210 (2.10 x 100)
<hr/> \$290 Profit	

For example, assume that a customer has purchased 1 PHLX Mar XDC (Canadian Dollar) 100 Put @ 2.10 when the Canadian Dollar is at 99. The Canadian Dollar falls to 95, and on the 3rd Friday in March, the exercise settlement value is set at 95.00. The customer exercises the contract.

As a result of the exercise, the writer must pay the holder the "in the money amount" of $5 \times 100 = \$500$. Since a premium of $2.10 \times 100 = \$210$ was paid for the contract, the profit is $\$290 (\$500 - \$210)$

Block Transaction Is 1,000 Contracts Or More

Please note that the PHLX establishes special block trading procedures for trades of 1,000 contracts or more. While the actual procedures are not tested, the size of a block transaction should be known for the exam.

FLEX Options

Also, please note that the PHLX offers the ability to customize currency options contracts (and any other option traded on the exchange). So-called FLEX options give the customer the ability to customize any aspect of the contract; with the contra-side of the contract taken by a Specialist on the exchange. Such FLEX options must be in minimum units of 50 contracts. Finally, the CBOE also now offers "FLEX" options on its options products.

3D Foreign Currency Option Is Obsolete

Finally, when the PHLX traded the "old style" foreign currency options that permitted exercise settlement in delivery of the foreign currency, (these all expired at the end of 2007), they also offered a currency option called "3D" - (Dollar Denomination Delivery), where exercise settlement was only in U.S. dollars. Since this is the way that the "new" PHLX currency options settle, "3D"



options are obsolete, but may still be tested as a type of available contract.

The specifics on foreign currency option contracts traded on the PHLX are:

Contract Size:	10,000 units of currency except for Japanese Yen, which cover 1,000,000 units of currency
Multiplier:	100
Settlement of Trades:	Next business day
Settlement of Exercise:	Writer pays the holder the "in the money" amount the next business day
Expiration Type:	European (exercise only at expiration)
Automatic Exercise:	If contract is "In the money by \$.01 (\$1.00 for the contract) on the 3rd Friday at market close
Expiration Cycle:	This month, next month, and upcoming 3 months in Cycle 3 (Mar, Jun, Sept and Dec)
Trading Cut-Off:	4:00 PM ET on the 3rd Friday of the month
Expiration Date:	11:59 ET on the Saturday following the 3rd Friday of the month
Trading Hours:	9:30 AM - 4:00 PM ET (same as equity options; in contrast, index options trade until 4:15 PM)
Position Limit:	200,000 contracts on 1 side of the market in a single currency

FOREIGN CURRENCY OPTIONS SECTION EXAMINATION

1.

When reading the morning newspaper, you see that Japan is experiencing record economic growth, while Switzerland is suffering from labor shortages. An appropriate strategy is to:

- I Buy Swiss Franc Calls
- II Buy Yen Calls
- III Buy Swiss Franc Puts
- IV Buy Yen Puts

- a. I and II
- b. I and IV
- c. II and III
- d. II and IV

2.

Canadian Dollar Feb 95 Calls on the PHLX are quoted at 1.25. Canadian Dollars are trading at 95.25. What is the total premium for 10 contracts?

- a. \$125
- b. \$250
- c. \$1,250
- d. \$2,500

3.

A customer buys 1 PHLX British Pound 201 Call @ 4.00 when the Pound is trading at 200. Later, the Pound is trading at 207 and the contract is closed at intrinsic value. The profit is:

- a. \$200
- b. \$400
- c. \$600
- d. \$700

4.

A foreign currency trader has bought 1,000,000 Swiss Francs in the spot market at 92. To hedge, he buys 100 PHLX Jun SF 92 Puts @ 1.75. The position will be profitable at which price?

- a. .9025
- b. .9200
- c. .9375
- d. .9400

5.

Which contract is at parity?

- a. British Pound Jul 205 Call @ 6.00 when the Pound closes at 210
- b. British Pound Jul 205 Put @ 1.00 when the Pound closes at 210
- c. Canadian Dollar Oct 101 Call @ 3 when the Canadian Dollar closes at 104
- d. Canadian Dollar Oct 101 Put @ 3 when the Canadian Dollar closes at 99

6.

The size of a PHLX EURO contract is:

- a. 5,000 Euro
- b. 10,000 Euro
- c. 50,000 Euro
- d. 100,000 Euro

7.

The holder of a PHLX World Foreign Currency call option:

- I can exercise at any time
- II can exercise only at expiration
- III will receive cash as the result of an exercise
- IV will receive the foreign currency as a result of the exercise

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

**8.**

A Japanese corporation that exports goods to the U.S. purchases Yen puts on the PHLX exchange. If the Japanese corporation exercises the puts, it will:

- a. deliver U.S. Dollars in the U.S.
- b. deliver Japanese Yen in the U.S.
- c. receive U.S. Dollars in the U.S.
- d. receive Japanese Yen in the U.S.

9.

An option contract that is exercisable only on the expiration date is a(n)

- a. Spot contract
- b. American contract
- c. European contract
- d. Cash contract

10.

Performance on foreign currency option contracts is guaranteed by the:

- a. Exchange where the currency option trades
- b. Writer of the contract
- c. Options Clearing Corporation
- d. International Monetary Market

11.

A Japanese Company purchases beef in the United States for import into Japan. The importer pays for the beef in U.S. dollars. The importer is concerned that the dollar may rise. To protect against this, the best strategy is to:

- a. Buy Yen Calls
- b. Buy Yen Puts
- c. Sell Yen Calls
- d. Sell Yen Puts

12.

Foreign currency options expire on the:

- a. Saturday preceding the third Wednesday of the month
- b. Saturday following the third Wednesday of the month
- c. Saturday preceding the third Friday of the month
- d. Saturday following the third Friday of the month

13.

Exchange traded options are available for all of the following currencies EXCEPT:

- a. Canadian Dollars
- b. Australian Dollars
- c. United States Dollars
- d. Japanese Yen

14.

A Japanese exporter to the United States will receive payment in U.S. dollars. To hedge against a fall in the dollar, the exporter should:

- a. Buy Yen calls
- b. Buy Yen puts
- c. Sell Yen calls
- d. Sell Yen puts

15.

A United States manufacturer exports goods to Germany, and is paid in EUROS. To protect against foreign currency fluctuations, the firm should:

- a. Buy EURO calls
- b. Buy EURO puts
- c. Sell EURO calls
- d. Sell EURO puts

FOREIGN CURRENCY OPTIONS SECTION EXAMINATION EXPLANATIONS

1. The best answer is c. If Japan is experiencing economic growth, its currency can be expected to strengthen. To profit, buy Yen calls. If Switzerland is having labor problems, its economy is in trouble, weakening the currency. To profit, buy Swiss Franc puts.
2. The best answer is c. A quote of 1.25 on a Canadian Dollar contract is 1.25 times a "multiplier" of \$100 = \$125 per contract. Since the customer is buying 10 contracts, the total premium is \$1,250.
3. The best answer is a. The contract was purchased at a premium of $4 \times \$100$ multiplier = \$400. When the contract is closed, the British Pound is trading at 207. The call strike price is 201, so the contract is "in the money" by 6 points. The contract is closed at a premium of 6×100 multiplier = \$600. Because \$400 was paid for the contract, the profit is \$600 - \$400 = \$200.
4. The best answer is d. The trader bought the Swiss Francs at 92 and paid a premium of 1.75 for the put option, for a total cost of .9375. To be profitable, the price must rise above .9375. The only choice above .9375 is .9400 - choice d.
5. The best answer is c. A contract trades "at parity" when the premium equals intrinsic value. The CD Oct 101 Call has intrinsic value of 3 (since the market is 104). Since the premium is 3, the contract is at parity.
6. The best answer is b. The size of PHLX traded "World" Foreign Currency option contracts is 10,000 units of currency, except for the Japanese Yen, which is 1,000,000 units of currency.
7. The best answer is c. PHLX World Foreign Currency option contracts are issued in "European" style - that is, they can be exercised only at expiration. Exercise settlement is in U.S. dollars - the writer must pay the holder the "in the money" amount on exercise. There is no delivery of the foreign currency.
8. The best answer is c. Exercise of a PHLX World Foreign Currency put settles in cash - the exercise requires that the writer deliver the "in the money" amount in cash (U.S. dollars) to the holder. Since the Japanese corporation bought the puts, if it exercises, it will receive cash.
9. The best answer is c. "American" options are exercisable at any time until expiration. "European" options are only exercisable on the expiration date, not before.
10. The best answer is c. The O.C.C. (Options Clearing Corporation) guarantees performance on listed options contracts. If the writer fails to perform, the O.C.C. will make good on the contract.
11. The best answer is b. To pay for the beef, the Japanese importer must sell yen to buy dollars. If the dollar rises, it becomes more expensive relative to the yen. Thus, the yen is falling in relation to the dollar. The importer must take its yen and convert them to dollars to pay for the beef. To protect against a fall in the yen, the best strategy is to buy yen puts. Another way to look at this is to understand that the importer is "short" dollars



and "long" yen. To hedge a long yen position, the appropriate strategy is to buy yen puts.

12. The best answer is d. PHLX traded "World" Foreign Currency options expire on the same date as all other listed options, which is the Saturday following the third Friday of the month.

13. The best answer is c. No PHLX listed options are traded on the U.S. Dollar in the United States. Options are traded on the Euro, British Pound, Swiss Franc, Canadian Dollar, Australian Dollar, and Japanese Yen.

14. The best answer is a. The Japanese exporter is receiving payment in U.S. Dollars. If the dollar falls, then he will receive fewer yen when converting the dollars received to yen. Because the dollar is falling relative to the yen, the yen is becoming more expensive relative to the dollar. If the importer buys yen calls, the gain on the long call contracts (due to the appreciating yen) will offset any loss realized upon conversion of the dollars received. Another way to look at this is to understand that the exporter is "long" dollars and "short" yen. To hedge a "short" yen position, the appropriate strategy is to buy yen calls.

15. The best answer is b. The U.S. exporter will be paid in EUROS. Thus, the firm will realize a loss if the EURO falls relative to the U. S. Dollar. The firm should buy EURO puts to protect against any fall in the EURO. Another way to look at this is to understand that the firm is "long" EUROS. To hedge a long position, the appropriate strategy is to buy EURO puts.

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TRADING MARKETS TAG





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SECTION 1: TRADING MARKET BASICS

1a. DEFINITIONS OF THE TRADING MARKETS

Negotiable securities trade in specific "markets." The overall marketplace for securities is divided into the:

Primary Market

Primary Market: New issues being sold to the public for the first time; and

Secondary Market

Secondary Market: Trading of issued securities.

This chapter deals with the "secondary" market - trading of issued securities. Issued securities trade on an exchange floor, or are traded "over-the-counter."

Secondary Market Subdivisions

The secondary market is divided into 4 submarkets. These are called the:

First Market;
Second Market;
Third Market;
Fourth Market.

The names of the markets follow the chronology of each market's founding. A description of each of these markets follows.

First Market

First Market: The first market is trading of exchange listed securities on the floor of the stock exchange. This was the first market, as the New York Stock Exchange (NYSE) is a bit over 200 years old. The largest stock exchange by far is the NYSE, followed by the American Stock Exchange (AMEX).

These exchanges have specific listing standards for companies that wish their stocks to be traded, both requiring that companies have a **national** investor base to be listed. As of this writing, on average, more than 1,500,000,000 shares change hands on the NYSE each day, spread among approximately 3000 listed companies. This is a very active trading market.

The American Stock Exchange is much smaller and generally trades national companies that do not meet NYSE listing standards. AMEX has been purchased by the NYSE Group and is being operated as a subsidiary market, trading about 600 smaller listed companies.

There are also regional stock exchanges which trade companies specific to that region, and they may also trade some NYSE and AMEX listed issues (so called "dual listings").

These exchanges are:

Regional Stock Exchanges

Pacific (ARCA)
Philadelphia (PHLX)
Boston (BOX)
National Stock Exchange (NSX)

As the securities industry continues its consolidation, the NASDAQ Stock Market has bought both the Boston and Philadelphia Stock Exchanges and operates them as subsidiaries. The NYSE Group owns the Pacific Stock Exchange, now renamed the Arca (as in Archipelago) exchange. The NYSE purchased Archipelago (an electronic trading network that owned the Pacific Exchange) in 2006. The National Stock Exchange (NSX) used to be the "Chicago Stock Exchange." It relocated its headquarters to Jersey City and renamed itself the National Stock Exchange. It has no trading floor and is an all electronic exchange.

Options Trading

Options also trade on exchange floors. The largest options exchange, by far, is the Chicago Board Options Exchange (CBOE). The exchanges that trade options, listed in order of trading volumes, are:

Options Trading Floors

Chicago Board Options Exchange	(CBOE)
American Stock Exchange	(AMEX)
Philadelphia Stock Exchange	(PHLX)
Pacific Stock Exchange (ARCA)	(PSE)

These exchanges maintain separate options trading areas. Also, please note that the NYSE used to trade options, but it started later than the other exchanges and never achieved a sizable market share. In mid-1997, it abandoned options trading and sold its options trading business to the CBOE.

ISE - Electronic Options Market

Additionally, in May 2000, a new electronic options exchange started trading - the International Securities Exchange. This exchange competes against the four major options exchanges, with the advantage of lower operating costs. This should increase competition and lower costs of options trading. The ISE has been very successful, and has captured about 25% of options trading.

Second Market

Second Market: The second market is trading of securities which are not listed on an exchange, "over-the-counter." The second market developed in the early 1900s with the invention of the telephone. Instead of needing an exchange floor to meet and trade, trading could now take place over the phone. The "over-the-counter" (OTC) market trades a greater number of companies than the stock exchanges, and since 1995, has had greater trading volume

Over-The-Counter Trading Of Unlisted Securities

Greater Number Of Companies Trade OTC

**Regulated By FINRA**

than the exchanges. It is regulated by FINRA - the FINRA - Financial INdustry Regulatory Authority.

NASDAQ

Well over 10,000 companies trade OTC, with trading concentrated in approximately 3200 companies quoted on the NASDAQ Stock Market. About 2,000,000,000 NASDAQ shares change hands each day.

NASDAQ listing requirements are less stringent than NYSE or AMEX rules, and most start-up companies begin trading over-the-counter. As a company grows and matures, it may move its listing to the AMEX or NYSE, but companies also may stay in the NASDAQ market.

No Options Trading On NASDAQ

Generally speaking, options don't trade over-the-counter - for example, NASDAQ does not trade options.

Third Market

Third Market: The third market is trading of exchange listed securities which takes place "off the trading floor" through over-the-counter market makers.

Over The Counter Trading Of Exchange Listed Securities

The third market developed in the 1960s, but really did not come into prominence until the 1980s. At that time, the NYSE had a rule that if a member firm had an order to buy or sell an exchange listed stock during the hours the exchange was open, the trade had to be performed on the exchange floor. Because of this rule, virtually all trades were funneled to the exchange floor and there were no competing marketplaces to perform trades in NYSE listed issues.

19c-3 Securities

This NYSE rule was deemed to be "anti-competitive" and was modified in 1979 under SEC pressure (SEC Rule 19c-3 that is now rescinded that specified which securities were subject to the restriction) and finally was dropped at the end of 1999. Thus, NYSE listed issues can now be traded anywhere.

Starting in the 1980s, as new companies were listed by the NYSE, these could be traded anywhere - not only on the floor of the NYSE. It was at this point that the so-called "Third Market" - that is NASD member firms (FINRA was first created in 2007 from the merger of the NYSE and NASD regulatory groups) that are making markets in NYSE listed issues - started to become active. These "Third Market Makers" would trade NYSE listed issues at narrower bid-ask spreads than the market makers on the NYSE floor, attracting orders away from the exchange floor.

In addition, Third Market Makers started to "pay for order flow" to attract orders away from the NYSE trading floor. In effect, the Third Market Maker was rebating a portion of its spread to the member firm that sent it the order.

Furthermore, during the 1980s, a global market developed trading NYSE listed issues. In response, "Third Market Makers" began to stay open 24 hours. Imagine that a trader in London wants to buy 1000 shares of GM at 10:30 AM London Time (5:30 AM New York Time). The NYSE doesn't open for 4 hours, so the trader calls a Third Market Maker such as Jefferies & Co., or Weeden and Co., and performs the trade.

The Third Market has been very successful at pulling market share away from the NYSE - to the point where more NYSE-listed securities are now traded through Third Market Makers than are actually traded on the floor of the NYSE.

Fourth Market

Direct Trading Between Institutions Over-The-Counter

INSTINET

ECN - Electronic Communications Network

Fourth Market: The fourth market is direct trading of securities between institutions, without the use of a broker. This market also developed in the 1960s, because at that time the NYSE had fixed commission rates (these were abolished under Federal Law in 1975). Under the fixed commission rates, institutions did not get discounts for large trades, so the "cost" of trading for these firms was quite high. Instinet ("Institutional Network") was created at that time as an electronic bulletin board for banks, insurance companies, etc. to list offerings of securities to sell, or bids for securities they wished to buy. The subscriber simply called the listing firm directly to trade, bypassing the brokers and large commissions.

In 1975, when fixed commissions were abolished, brokers started giving large discounts on institutional trades. The main reason for Instinet's existence was eliminated and it never developed into a large marketplace for this reason. Instinet was purchased in 1989 by Reuters. Reuters used the system as the basis for a global electronic trading system that it was developing. Instinet was repositioned by Reuters as an institutional intermediary, brokering institutional trades at much lower cost. This proved to be a very successful strategy, and Instinet volumes grew wildly - to the point where it was executing more trades in NASDAQ securities than NASDAQ itself (though it was not as successful at eroding the NYSE's market share trading NYSE issues).

Instinet was the first of what are now called "ECNs" - Electronic Communications Networks, that match customer buy and sell orders 24 hours a day on an agency basis. During the 1990's, as computer network technology advanced, other ECNs started up that were either "cheaper" or "faster" than Instinet or they were ECNs that were owned by large member firms, which allowed these firms to "internalize" their order flow. These included the Brut ECN, Island ECN, Archipelago ECN and others.



**NASDAQ Purchases
INET**

ECNs were capturing an ever-increasing portion of order flow, and the 2 dominant markets in the U.S. - the NYSE and NASDAQ - responded in a similar fashion. In mid-2005, NASDAQ announced that it was buying INET (Instinet and Island) and the NYSE announced that it was buying Archipelago.

**NYSE Purchases
ARCHIPELAGO**

In the case of NASDAQ, the issue was simple - Instinet and Island had captured about 50% of NASDAQ trading volume because their trading technology was superior to NASDAQ's and their trade pricing was much cheaper. NASDAQ figured that once it completed the purchase (which closed in January 2006), it could drop many of its more expensive and slower trading systems and achieve large cost savings. In early 2007, NASDAQ rolled out NASDAQ "Single Book" - a single trading platform that combined INET and some smaller ECN purchases (like the Brut ECN) with its existing SuperMontage (now renamed SingleBook) trading platform)

In the case of the NYSE, the worry was that using human floor traders would be quickly outmoded by electronic trading, especially when a new SEC Regulation - Regulation NMS - took effect in 2006.

Regulation NMS

Regulation NMS (National Market System) requires that orders for both NYSE and NASDAQ stocks be routed to the market center that provides the best price (the same as the previous rule). This is known as the "trade-through" rule, because an order cannot be executed in a marketplace at a price that is worse than the best price posted by any other market center - thus, one cannot "trade through" that market center's best price. The new rule also requires that execution occur at that price within 1 second, instead of the previous 30 seconds. Human-based floor trading works great when you have 30 seconds to fill an order; but is not so great if you only have 1 second to complete the fill!

The NYSE has become a "hybrid" market that offers both human-based trading and electronic trading via the Archipelago purchase. Human based floor trading will continue because there are "opt out" provisions from the "trade-through" rule - for example, an institution might want a human trader on the NYSE floor to "work" a large block order that is not easy to fill via an automated system. However, with a 1-second execution rule, a larger and larger portion of NYSE trading has gravitated to the automated systems provided by the Archipelago purchase, and human-based trading on the NYSE floor is in decline.

Both NASDAQ and the NYSE have completed their integration of INET and Archipelago - however they are run as separate subsidiaries of these markets. Thus, the 4th

Market still exists. In addition, there are new entrants in the 4th Market, such as DirectEdge, BATS, and LavaFlow.

BATS Exchange

These newer entrants have a different business model - with some of these offering "free" trading, using a "Google" approach for revenue - paid advertising and links are their revenue sources. One of these, BATS (Better Alternative Trading System) has been spectacularly successful and in late 2008 received approval from the SEC to operate as a true electronic exchange (since it had captured about 15% of NYSE and NASDAQ trading volume). DirectEdge has also become a registered exchange. Needless to say, the NYSE and NASDAQ are not happy about this and have yet to figure out how to respond.

Payment For Order Flow

As mentioned previously, the NYSE used to have a rule that required its members to direct their orders to the NYSE floor - these orders could not be routed to other markets for NYSE listed issues such as Third Market Makers and ECNs. This rule was completely abolished at the end of 1999, and NYSE member firms are free to route their orders for NYSE listed issues to any market that trades that security.

The SEC requires that member firms route their orders to the market that is posting the best available price. So if a Third Market Maker is offering an NYSE listed stock for a cheaper price than can be obtained on the NYSE floor itself, then the order must be sent to the Third Market Maker.

But what happens if both the Third Market Maker and the NYSE are offering the stock at the same price? Then another issue comes up. Some market makers have a policy of "paying for order flow" - that is, they actually pay a small amount to the retail member firm that directs the order to that market maker. In essence, the market maker is rebating some of its profit on executing that order back to the retail member firm that sent it the order.

In the real world, what often happens is that whoever is the dominant market maker in that security sets the price and moves it according to market conditions; and the other smaller market makers continuously match that price. In such an environment, a retail member firm will then simply send the order to the market maker that will pay the most for it!

SEC Rule 606

The SEC permits this practice, because it believes that such competition will ultimately result in a lower execution cost for the customer. However, they do attach strings if firms engage in this practice under Rule 606 of Regulation NMS (National Market System). The requirements of the rule are:



**Disclosure Of
Payment For
Order Flow**

The fact that the firm made a payment for order flow must be disclosed on the customer trade confirmation;

**Disclosure On Request
Of Routing Of Customer
Orders In Prior 6 Months**

The firm, on request of the customer, must disclose the identity of the market to which the customer's orders were routed for execution in the preceding 6 months along with the time of execution. (These are known as "non-directed" orders, since the customer did not tell the broker the specific market where the order was to be executed, so the member firm could route the order to wherever it wanted.)

The firm must notify customers, in writing, at least annually, of the availability of this information.

**Quarterly Report
Detailing Order
Routing Procedures
And Payment For
Order Flow**

In addition, the rule requires member firms to prepare a quarterly report that is publicly available that details the percentage of customer orders that were "non-directed;" the identity of the ten largest markets or market makers to whom non-directed orders were routed; and details the member firm's relationship with that market maker (for example, many larger retail member firms own their own market maker subsidiaries to whom they route orders); and any arrangement for payment for order flow or profit-sharing.

Because of this rule, member firms cannot have "hidden" arrangements with market makers to favor them in return for "payment for order flow" - everything is out in the open and is fully disclosed. Thus, customers can make informed decisions about how retail member firms are routing and executing their orders.

**SEC Rule 605
Exchange Report
On Execution Quality**

Aside from member firm reports of routing procedures, the SEC requires the exchanges to compile reports covering their order execution quality under Rule 605 of Regulation NMS.

**Monthly Reports
By Market Center**

Rule 605 requires market centers to make monthly electronic reports about the quality of execution in each stock traded, including:

how market orders of various sizes are executed relative to public quotes;

information about effective spreads; and

the extent to which the market center was able to "improve" execution prices for limit orders as compared to the public quote at that time.

The monthly “Rule 605” report is posted on each exchange’s website, making it easily accessible to the public.

Finally, as competition heats up among the different markets (First, Second, Third and Fourth markets), there are other points to consider. During the hours that the NYSE is open, a retail member firm can route a customer order to the floor of the NYSE (First Market); to an over-the-counter dealer who makes a market in the NYSE listed issue (Third Market) or to an ECN for execution (Fourth Market). Because of SEC Rule 611, such an order should always get an execution at the best price.

SEC Rule 611

SEC Rule 611 (part of Regulation NMS), requires that:

all markets that quote NYSE, AMEX and NASDAQ issues be electronically linked (this includes 3rd and 4th market makers); and that

any executable order received by a specific market for a stock must either be executed at the best price showing in any of these markets within 1 second or be routed to the market that is posting the better price for execution there.

Rule 611 - Trade Through Rule

This is called the “trade-through” rule, because a market that receives an executable order cannot “trade-through” another market’s better-priced quote. It must either match it and execute in 1 second or send it to the better priced market. This forces markets to use electronic order routing algorithms that are “Rule 611 compliant” and insures that customers will always get the “best price.”

(Note: All of rules of Regulation NMS are summarized in the last section of this chapter.)

1b. BROKERS AND DEALERS

In order to function, markets must be liquid. Orders to buy and sell must be filled at all times. It is the function of the dealers to make markets in securities. Dealers are expected to maintain an inventory of each security in which they make a market: to buy if a customer wishes to sell, and to sell if a customer wishes to buy.

Dealer Quotes In Bid and Ask

Dealer quotes are in terms of Bid and Ask. The Ask price is the price at which the dealer will sell the security. The Bid price is the price at which the dealer will buy the security. To make a profit, the Ask price is always higher than the Bid - the difference is the **spread** - the dealer's gross profit margin. For example, a dealer quotes ABC stock at:

Spread



	<u>Bid</u>	<u>Ask</u>
ABC	13	13.50

The dealer is offering ABC stock at 13.50 to a person wishing to buy. The dealer is willing to buy ABC stock at 13 from a person wishing to sell. The spread is \$.50, so for each "round turn" (a buy and sell), the dealer earns \$.50.

Active Markets Characterized By Narrower Spreads

The more active the trading market, the narrower the spreads become. This makes the market more "efficient" and is better for customers, since the "spread" gives the customer a built-in loss (the customer in this example buys at \$13.50 but can only sell for \$13) that is recovered only if the market price moves up.

Specialists Are Dealers On NYSE

On stock exchanges (First Market), the dealers are called specialists. On the NYSE, there are 5 specialist member firms handling the 3000 NYSE listed issues, so each specialist firm handles about 600 different stocks. The specialist is the sole market maker in that stock.

Specialist Is An Exchange Member

Specialist firms are prohibited from dealing with the public. They are wholesalers of securities and only deal with the retail members of the NYSE. Retail members (firms such as Merrill Lynch, Morgan Stanley, etc.) accept customer orders and go to the exchange floor to execute the trade with the specialist. For acting as a middleman (broker), the retail firm earns a commission.

Specialists Do Not Deal With The Public

Historically, under NYSE rules, retail members were prohibited from owning specialist units. Brokers remained distinct from Dealers to avoid conflicts of interest. However, specialists need large amounts of capital to handle today's trading volumes, and the small privately held specialist firms did not have sufficient capital. The NYSE relaxed its rules and now allows retail members to buy specialist units; as long as the operations are kept truly separate from the retail business.

OTC Dealers Are Market Makers

In the OTC market (Second and Third Markets), the structure is very different. Instead of assigning a stock to one specialist, the OTC market uses a system of competing market makers. Market makers register with FINRA and are expected to maintain a market in that issue. For example, Intel is one of the most heavily traded OTC stocks and there are over 30 market makers competing at any time. NASDAQ feels that competition among market makers narrows spreads and makes for a more efficient market. This contrasts with the exchanges' view that the market should be concentrated in the hands of one specialist.

OTC Firms Can Act As Broker Or Dealer

NASDAQ allows firms to wear either of two hats. Market makers can also deal with the public. On the exchanges,

the specialist firms are prohibited from dealing with the public - only the retail members are allowed to take customer orders. OTC firms are called broker/dealers because they can handle either function.

Broker Earns A Commission

Assume that a customer wishes to buy Intel stock and goes to a small broker/dealer who is not a market maker. The small broker/dealer gets the best quote for Intel from the NASDAQ system and buys from that market maker. For acting as middleman, the firm charges a commission - the firm is acting as a broker.

Dealer Earns A Mark-Up

Assume that a customer wishes to buy ABCD stock, and goes to the broker/dealer who is the sole market maker in the issue. The firm will sell ABCD to the customer from its inventory directly. The firm is acting as a dealer and is allowed to "mark-up" the stock to the customer. When acting as a dealer, OTC firms earn mark-ups.

In OTC Transactions, Firm May Act As EITHER A Broker OR A Dealer

In each OTC transaction, the firm can act either as broker or dealer - it cannot be both at once. When acting as a broker, a commission is earned. When acting as a dealer, a mark-up is earned. As a comparison, on exchanges, all customer transactions are handled through brokers. Customers cannot contact specialists directly - specialists trade only with retail members.

1c. ORDER TICKET INFORMATION

To place an order in the secondary market, an order ticket must be completed, either on paper or electronically. The order ticket must be completed in full prior to order entry.

ACME Securities Inc. ORDER TICKET					
Buy	Size	Day	Spec. Inst.		
Sell	100	GTC	DNR Discret.		
Long	Short				
Name of Security			Price	Stop	
ABC Common			Mkt	Stop Limit	
Customer Name			Account Number		
Smith			01487		
R R Number	Date	Manager Approval			
333	3/7/10				

The order ticket must specify the following:



Buy Or Sell

Whether the order is to Buy or Sell: When stock is bought, a long position is being taken. In this case the customer is buying, so "Buy" is circled on the ticket. If a customer sells a long position, it is termed a long sale. Then "Sell" and "Long" would be circled on the ticket. If a customer sells borrowed shares, he or she is taking a short stock position. In this case, both "Sell" and "Short" would be circled.

Short Sale Fundamentals

To understand the mechanics of a short sale, one must have a basic understanding of margin rules. When a customer opens a margin account, buying securities with credit extended by the brokerage firm, the brokerage firm takes all of the securities held in the account as collateral for the loan, and keeps them in the name of the brokerage firm.

The brokerage firm has the right to lend these securities to anyone else. If another customer wishes to sell short this stock, the brokerage firm simply "borrows" the first margin customer's securities and sells them (this is a "short sale"). At a later date, the shares are repurchased by the second customer and replaced in the vault. On the following page is a more detailed short sale example.

Short Sales Subject To Regulation SHO

Short sales of stock in all markets are subject to SEC Regulation SHO. Regulation SHO (as in SHOrt sale) basically requires that every order ticket to sell be marked as either a "long sale" or a "short sale;" and that if the sale is "short," the securities to be borrowed must be "located" by the broker and the borrowed shares delivered on settlement. In addition, Regulation SHO has many other provisions, which are covered later in this chapter.

Order Size

The size of the order is specified: The number of shares of stock (in this case 100 shares), or number of option contracts or number of bonds to be traded. If an order is for more than a round lot (100 shares for stock), then it is assumed that the customer will accept a partial execution if the whole order cannot be filled. For example, if a customer wants to buy 400 shares at 30 and the trader can only get 300 shares at 30, then 300 shares will be bought.

Day Order

The duration of the order is specified: An order is assumed to be a day order if nothing is said on the ticket. In this case "Day" is circled. Day orders are canceled at the end of the day if the order is not filled.

Good Til Canceled (GTC)

The order can be entered "GTC" - Good Til Canceled. This order sits with the exchange until it is canceled by the customer. Orders can be entered by a customer with special instructions such as "Good Thru the Week" or "Good Thru the Month." These orders are entered as "GTC" orders and if the order isn't filled in that time period, it is the firm's responsibility to cancel the order.

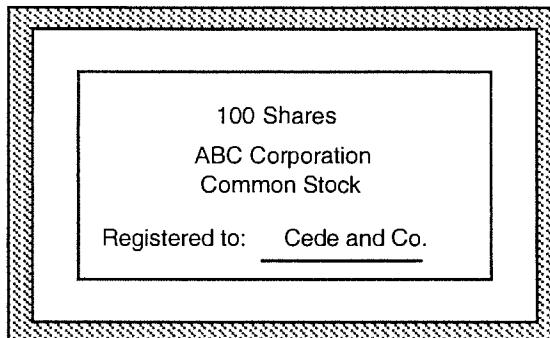
Short Sale Example

1. Customer #1 buys 100 shares of ABC stock in a margin account.

When opening a margin account, the customer signs a margin agreement and a loan consent agreement. By signing the margin agreement, the customer pledges the securities in the account to the brokerage firm as collateral for the margin loan. Such shares are held in "Street Name", with a common depository name being "Cede and Co." By signing the loan consent agreement, the customer permits his or her shares to be loaned out on short sales.

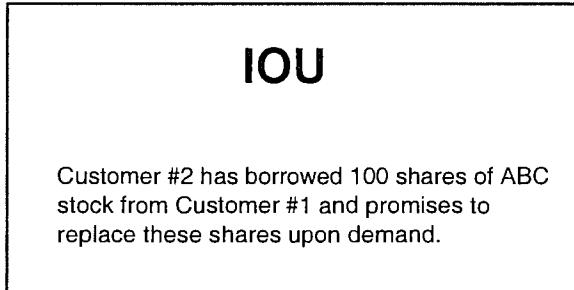
The brokerage firm deposits the 100 shares of ABC stock in its vault.

Customer
#1 Stock
Position
In Firm's
Vault



2. Customer #2 comes into the same brokerage firm and wishes to sell 100 shares of ABC stock "short". The brokerage firm goes to its vault and "borrows" the 100 shares of ABC owned by Customer #1, selling these shares for Customer #2. An "IOU" is placed in the vault, representing the borrowed shares that Customer #2 owes Customer #1.

Customer
#2 "IOU"
To Customer
#1 For
Borrowing
His Shares



3. During the period of the "stock loan", Customer #2 pays any dividends on the borrowed shares to Customer #1 (because the issuer now sends dividend checks to the person who bought the shares that were sold short). At a later date, Customer #2 buys back the ABC shares and the firm replaces them in the vault. During this whole time Customer #1 never knew that the shares were missing!



Other special instructions are:

AON

AON: "All or None" - either the entire order is filled or the order is not executed. Depending on the duration specified in the order, a trader is free to attempt an entire execution again and again until the order expires. Note that NASDAQ prohibits AON orders.

FOK

FOK: "Fill or Kill" - either the entire order is filled on the first try or the order is canceled. There can be no extra attempts at executing the order.

IOC

IOC: "Immediate or Cancel" - either part or all of the order is filled on the first try and the balance is canceled. There can be no extra attempts at executing the order.

Either/Or

Either/Or: An "Either/Or" order specifies **two** possible trades, e.g., **Either** Buy 500 ABC at \$40 **Or** Sell 500 ABC at \$60. If one side of the order is filled, the other side is canceled. If one side of the order is partially filled, the remaining amount applies to both orders. For example, if 300 shares were purchased at \$40, the remaining order would be "Either Buy 200 ABC at \$40 or Sell 200 ABC @ \$60."

Not Held

Not Held: Not held is used in conjunction with an order to be filled at the market price. A simple market order is to be filled immediately at the prevailing price. If the order is marked "Not Held," the trader is free to "hold back" and determine the best time and price of execution during that day. If the trader believes the market will rise and it is a buy order, he would fill the order immediately. If he believes that the market will fall, he will hold back and wait till later in the day. Firms with astute traders may encourage customers to place market orders "not held" - but the customer has no recourse if he doesn't like the price or time of execution. Also note that "market-not held" orders given verbally by a customer must be filled that day. If the order has a life or more than one day, the customer must give the instruction in writing.

Discretion Over Price And Time Of Execution

Must Be Filled That Day If Price/Time Discretion Is Given Verbally

Discretionary

Discretionary: The registered representative is placing an order where the customer has not specified the security and size of the order. The registered representative has chosen this under a power of attorney granted by the customer. Discretionary accounts are covered in the Customer Accounts chapter.

DNR

DNR: "Do Not Reduce" - On ex-date, when the price of the stock is adjusted by the exchange, certain orders are also reduced to reflect the loss of the dividend or any other distribution. This is covered later in this chapter.

Market On Opening (MOO)	At The Opening or At The Close: An order placed "At The Opening" is to be filled at the opening price or else canceled. An order placed "At The Close" is to be filled at the closing price, otherwise the order is canceled. Also note that the NYSE will accept MOC (Market on Close) orders until 3:40 PM; while NASDAQ accepts them until 3:50 PM.
Market On Close (MOC)	
Security Name	Name of Security: The ticket specifies the name of the corporate security to be traded - in this case, ABC common. If the trade were in preferred stock, the ticket would say "Pfd;" if the trades were warrants, it would say "wts" etc.
Execution Price	Price of Execution: In this case, the order is a "MKT" or market order, to be filled at the prevailing market price.
Market Order	Notice that no specific price is being specified in the order.
Limit Order	If a price is specified, e.g., "Buy 100 ABC @ 42," the price is the limit. A limit order to buy is to be filled at that price or better (lower). A limit order to sell is to be filled at that price or better (higher).
Stop - Limit Order	Stop and Stop-Limit: In addition to market and limit orders, orders may be placed to "stop a loss." These are stop or stop-limit orders and are covered with all order types in the next section.
	The NYSE accepts stop orders in its systems, but no longer accepts stop limit orders, since they were an extremely small percentage of order flow to the NYSE floor.
Principal Approval	In addition, the customer name and account number are on the order, as well as the date, registered representative number (so the registered representative gets credit for the trade), and a space for the principal's initialing of the order.
Alterations Prohibited	The order ticket must be completely filled out. Alterations to the order ticket after it is written out are prohibited unless the change is approved, in writing, by a Principal.

1d. TYPES OF ORDERS

There are four basic order types:

Market Order;
Limit Order;
Stop Order;
Stop Limit Order.

**Market Order**

A market order is to be filled immediately at the prevailing market price. There is no price specified on the order. A market order - NOT HELD is to be filled at whatever time and price the trader thinks best - but it must be completed that day. Thus, market orders do not carry over to the next day.

Market Not Held**Limit Order
Specifies A Price**

Limit orders specify a price at which to buy or sell. To understand how these orders (and stop orders) are used, you must focus on the security's price at the time the order is placed.

Assume that XXX stock is now trading at 70. A customer wishing to buy XXX stock at this price would simply place a market order. But what if the customer only wants to buy at 65 or lower? The order would be placed as:

Buy 100 XXX @ 65 GTC

(BUY LIMIT ORDER)

Buy Limit Order

A limit order to buy has been placed (the price is the limit). The order was placed GTC, because it would be canceled at the end of the day if it were a Day order.

**Placed Below
Current Market**

If the market falls to 65 or lower, the order will be filled. Thus, limit orders to buy are placed **BELLOW** the current market and are executed only if the market **DROPS**. Again, with XXX trading at 70, a registered representative has a customer who wishes to sell XXX stock that he owns (a long sale) if the price reaches 75. The following order would be placed:

Sell 100 XXX @ 75 GTC

(SELL LIMIT ORDER)

Sell Limit Order

A limit order to sell has been placed (the price is the limit). The order was placed GTC, because it would be canceled at the end of the day if it were a Day order. If the market rises to 75 or higher, the order will be filled. Thus, limit orders to sell are placed **ABOVE** the current market and will be executed only if the market **RISES**.

**Placed Above
Current Market****Specialist Acts As
"Broker's Broker"**

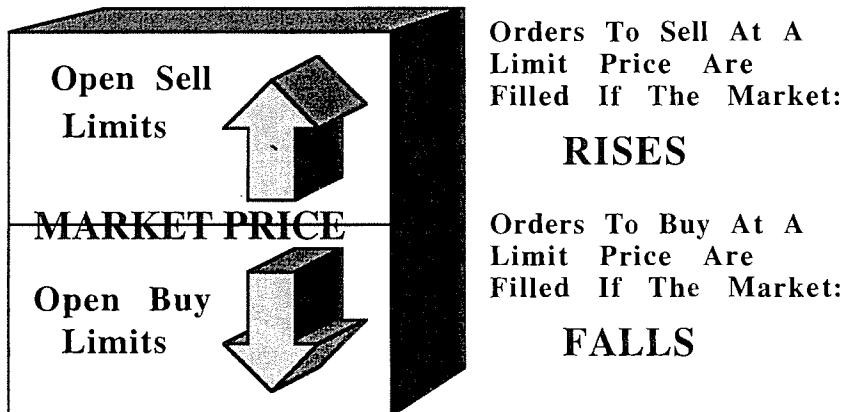
Limit orders to buy and sell are given to the specialists on the stock exchanges. The specialist is at the center of trading and executes these orders for the retail firms. In this case, the specialist is acting as a broker for another brokerage firm, "a broker's broker."

For performing this function, the retail firm shares its commission with the specialist. So, in addition to acting as a dealer, specialists handle limit orders for retail firms, acting as a "broker's broker."

OTC File Of Open Limit Orders

"Over-the-counter" trading desks at each firm keep a file of limit orders and execute them if the market price moves to the customer's limit.

To summarize for limit orders:



Assume that XXX is now trading at 70 and the registered representative has a customer who owns XXX stock, purchased at that price. The customer tells the registered representative that he wishes to sell if the market drops to 65, to "stop" any further loss. If the registered representative entered the following order, he or she would be in trouble with the customer:

Sell 100 XXX @ 65 GTC

(ERRONEOUS ORDER)

Since XXX is now trading at 70, someone will be only too happy to buy the stock from this customer at 65. The buyer could then turn around and sell it for its true value of 70. This order is entered in error. A limit order to sell has been entered at a price lower than the market. Limit orders to sell can only be entered above the market (see prior diagram). This order would be returned to the registered representative for correction. The registered representative reenters the order as:

Sell 100 XXX @ 65 Stop GTC

(SELL STOP ORDER)

**Sell Stop Order**

**Used To Limit Loss
On A Long Stock
Position**

**Placed Below
Current Market**

The stop on the order tells the trader that this order cannot be executed until the market reaches the specified price (65). Once a trade occurs at 65 or lower, this order is triggered and turns into a market order. The order is then filled on the next trade (which can be higher or lower than \$65).

Sell stop orders are used to limit losses on long stock positions in falling markets. Thus, they are always placed **BELLOW** the current market and are executed if the market **FALLS**.

Again with XXX now trading at 70, assume that the registered representative has a customer who has sold short XXX stock at that price. The customer tells the registered representative that he wishes to buy in, if the market rises to 75, to "stop" any further loss. If the registered representative entered the following order, he or she would be in trouble with the customer:

Buy 100 XXX @ 75 GTC

(ERRONEOUS ORDER)

Since XXX is now trading at 70, someone will be only too happy to sell the stock to this customer at 75 (since he or she can buy it at its true value of 70). This order is entered in error. The registered representative has entered a limit order to buy at a price higher than the market. Limit orders to buy can only be entered below the market (see prior diagram). This order would be returned to the registered representative for correction. The registered representative reenters the order as:

Buy 100 XXX @ 75 Stop GTC

(BUY STOP ORDER)

Buy Stop Order

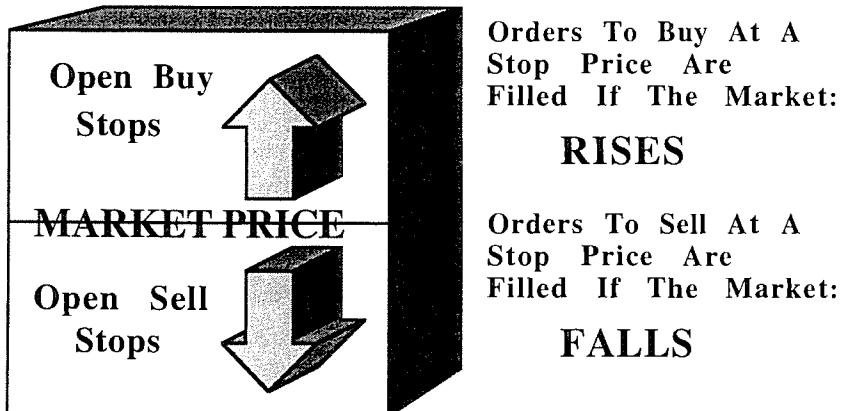
**Used To Limit Loss
On A Short Stock
Position**

**Placed Above
Current Market**

The stop on the order tells the trader that this order cannot be executed until the market reaches the specified price (75). Once a trade occurs at 75 or higher, this order is triggered and turns into a market order. The order is then filled on the next trade (which can be higher or lower than \$75).

Buy stop orders are used to limit losses on short stock positions in rising markets. Thus, they are always placed **ABOVE** the current market and are executed if the market **RISES**.

To summarize for stop orders:



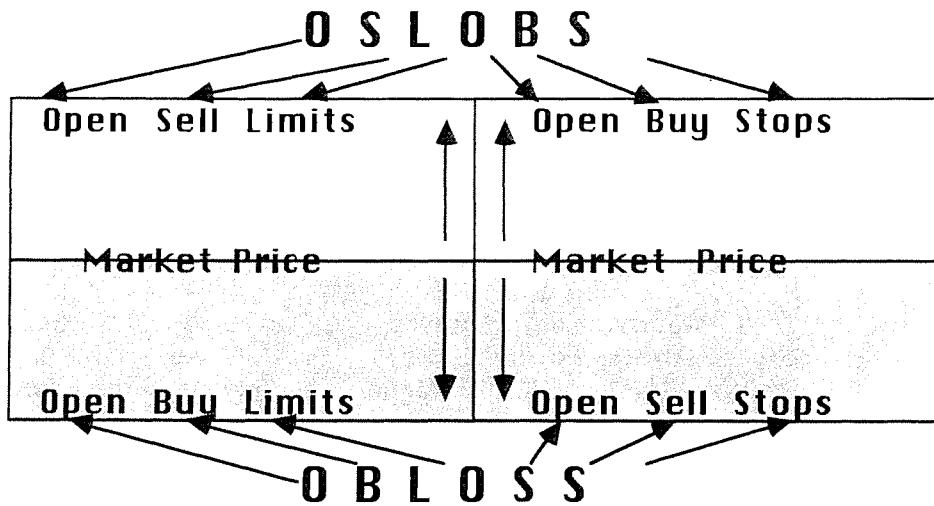
Stop-Limit Order

If a simple stop order is triggered, it becomes a market order to be filled on the next trade. If an order is entered stop-limit, when the stop price is hit, the order is to be filled at the limit price or better. If the market never hits the limit price, the order will never be executed. The limit price at which the order is to be executed can be different from the stop price.

For example, a customer wishes to sell 100 shares of ABC if the market falls to 30, but doesn't want to sell for any less than 28. The order to be placed is **not** "Sell 100 ABC @ 30 Stop" because when triggered it turns to a market order and the stock may be sold for less than 28.

The appropriate order is "Sell 100 ABC @ 30 Stop Limit 28." If the price falls to 30, the order is triggered. It turns into a limit order to sell for 28 - meaning sell for 28 or higher.

If we put together the diagram for limit orders and stop orders, the composite picture is found following:



Orders Above The Current Market Are OSLOBS

The orders that are always placed **ABOVE** the market are open sell limits and open buy stops (**OSLOBS**). The orders that are always placed **BELOW** the market are open buy limits and open sell stops (**OBLOSS**).

Orders Below The Current Market Are OBLOSS

You must memorize OSLOBS (above market) and OBLOSS (below market). These will be used later in the chapter.

1e. EX-DATE ADJUSTMENTS TO ORDERS

Orders that are above the market and that are below the market are placed on an exchange's "book" for execution. The NYSE calls the book "Super Display Book;" NASDAQ calls its book "Single Book," etc.

Ex-Date For Cash Dividends Is 2 Business Days Prior To Record Date

On the ex-date for a cash dividend, the price of the stock is reduced by the amount of the dividend. This is done to stop individuals from day trading simply to capture cash dividends. The ex-date for cash dividends is set at 2 business days prior to record date. This is the first day where the purchaser of the stock will not settle on or before the record date, and therefore is not entitled to the cash dividend.

On Ex Date, Stock Price Is Reduced For Cash Dividend Amount

For example, if a stock closes to \$50 and goes ex-dividend for a \$.25 cash dividend, it will open at \$49.75 on the morning of the ex-date. If the cash dividend is not a rounded penny amount (e.g., a \$.245 cash dividend), then dividend amount is rounded up to \$.25 and this is the subtraction amount, since stocks trade in minimum penny increments.

**If Customer Wants To
Buy Stock In Time To
Get Cash Dividend -
Must Buy Before The
Ex Date**

Because of the ex-date adjustment, if a customer wants to buy stock in time to get a cash dividend, the stock must be purchased 3 business days prior to the record date in a regular way trade. This is the business day prior to the ex-date. Similarly, because exercise of equity call options settles in 3 business days, if a customer wishes to exercise a call option in time to get a cash dividend, the exercise must occur 3 business days prior to record date.

**If Customer That Owns
Stock Wants To Sell Yet
Retain The Cash Dividend
Then The Stock Cannot
Be Sold Until The Ex-Date**

Conversely, if a customer owns a stock and wishes to sell it, yet retain the cash dividend, the stock cannot be sold until the ex-date. If the stock is sold prior to the ex-date, then the trade will settle before record and the customer will not show on the record books to get the cash dividend. If a customer owns stock and owns a put option on that stock, to retain the cash dividend, the put cannot be exercised until the ex-date, again, because exercise settlement for stock options takes place in 3 business days.

**Orders Below The
Market (OBLOSS)
Automatically
Reduced On Ex
Date For Cash
Dividends**

On the ex-date, because the price of the stock is dropped at the opening, the orders below the market could become "fillable" simply due to the dividend reduction. To stop this from happening, the orders that are below the market ("OBLOSS") are automatically reduced on ex date. If the customer does not care about the dividend reduction, the order can be noted as "DNR" - "Do Not Reduce" and the order will not be reduced on the ex-date. Because the orders above the market are not impacted by this (the "OSLOBS" orders), they are left alone and are not adjusted.

**All Orders Adjusted
For Stock Splits /
Stock Dividends**

On the other hand, for non-cash distributions, such as stock splits and stock dividends, all of the orders, both above and below the market, are adjusted.

**All Orders Canceled
For Reverse Stock
Splits**

Finally, for reverse stock splits, all of the orders are canceled and new orders must be entered (because these are rare events and the exchanges do not want to incur the programming costs to support this).



TRADING MARKETS BASICS SECTION EXAMINATION

1.

A customer has asked you to sell 100 XYZ if the market falls to 50, but he does not want to sell for less than 45. The proper order is:

- a. Sell 100 XYZ @ 50 Stop Limit
- b. Sell 100 XYZ @ 45 Stop Limit
- c. Sell 100 XYZ @ 50 Stop 45 Limit
- d. Sell 100 XYZ @ 45 Stop 50 Limit

2.

Referring to the prior question, this type of order is a:

- a. stop order
- b. limit order
- c. stop limit order
- d. split order

3.

A trade of a listed security takes place between an over-the-counter market maker and a bank during the hours that the exchange is closed. This trade took place in the:

- a. First market
- b. Second market
- c. Third market
- d. Fourth market

4.

All of the following must be on an order ticket before it can be entered **EXCEPT:**

- a. size of transaction
- b. execution price if the order is not a market order
- c. commission
- d. customer account name and/or number

5.

An order to sell 100 shares of ABC at 50 GTC on the Specialist's (DMM's) book is a:

- a. market order
- b. limit order
- c. stop order
- d. stop limit order

24.

Which orders, if executed, do **NOT** guarantee a specific price or better?

- I Buy Limits
- II Buy Stops
- III Sell Limits
- IV Sell Stops

- a. I and II
- b. III and IV
- c. I and III
- d. II and IV

7.

In a falling market, which orders will be executed?

- I Open Buy Stops
- II Open Buy Limits
- III Open Sell Stops
- IV Open Sell Limits

- a. I and II
- b. III and IV
- c. I and IV
- d. II and III

8.

An order placed "market - at the close:"

- a. will either be executed at the closing price that day or will be canceled
- b. will be executed as close to the closing price that day
- c. will be executed as close to the closing price the next trading day
- d. will be executed during the day at the discretion of the trader

9.

Rule 605 of Regulation NMS requires that:

- a. market centers prepare monthly reports on quality of trade executions
- b. broker-dealers prepare quarterly reports on their order routing procedures
- c. ECNs limit their payments for order flow
- d. NMS securities be quoted in minimum 1 cent increments

10.

The "Third Market" trades:

- a. listed and unlisted stocks between institutions without the use of a broker
- b. listed securities on the trading floors of regional exchanges
- c. unlisted securities over-the-counter
- d. listed securities over-the-counter

11.

The Second Market is a(n):

- a. auction market
- b. negotiated market
- c. unregulated market
- d. primary market

12.

All of the following must be disclosed to customers by member firms upon request **EXCEPT**:

- a. which market received the customer order
- b. whether the order was directed or non-directed
- c. the time of execution of the order
- d. the best market for the security at the time of execution

13.

Which of the following is **NOT** an ECN?

- a. INET
- b. Archipelago
- c. LavaFlow
- d. NASDAQ

14.

Which statements are true regarding SEC Rule 606 of Regulation NMS)?

- I If a firm makes a payment for order flow, this must be disclosed on the customer trade confirmation
 - II If the firm makes a payment for order flow, this is not required to be disclosed on the customer trade confirmation
 - III On request, the firm must disclose the identity of the markets to which that customer's orders were routed for execution
 - IV There is no requirement for the firm to disclose, on request, the identity of the markets to which that customer's orders were routed for execution
- a. I and III
 - b. I and IV
 - c. II and III
 - d. II and IV

15.

The Specialist is a(n):

- a. exchange employee
- b. exchange member
- c. SEC employee
- d. SEC member

**16.**

Just before the exchange opens, an order is placed as "market - at the opening." The order is transmitted immediately, but reached the exchange floor after the opening. The order will be:

- a. executed immediately as a market order
- b. canceled
- c. executed at the opening the next morning
- d. executed as a "not held" order at the best time and price for the customer

17.

Which of the following orders would be reduced on ex-date?

- I Buy 100 ABC @ 50 DNR
- II Buy 100 ABC @ 60 Stop
- III Sell 100 ABC @ 60
- IV Sell 100 ABC @ 50 Stop

- a. I and II
- b. III and IV
- c. IV only
- d. I and IV

18.

An open order is in SuperDisplayBook to sell 400 XYZ at 50 Stop GTC. The company has declared a 25% stock dividend. On the morning of the ex-date, the order on the book will be:

- a. Sell 400 XYZ at 50 Stop
- b. Sell 500 XYZ at 50 Stop
- c. Sell 400 XYZ at 40 Stop
- d. Sell 500 XYZ at 40 Stop

19.

A NASDAQ Global Market issue that closes at \$20.00 per share goes ex-dividend the next morning for a \$.045 cash dividend. The opening price of the stock will be set at:

- a. \$19.94
- b. \$19.95
- c. \$19.96
- d. \$20.00

20.

Which statement about a stock exchange is **TRUE**?

- a. The exchange will step-in to buy or sell a listed security to maintain a stable price
- b. The exchange will assign trading of a listed security to a specific post
- c. The exchange will establish the opening price of a listed security
- d. The exchange will maintain the book of open orders that are away from the current market

TRADING MARKETS BASICS SECTION EXAMINATION EXPLANATIONS

1. The best answer is c. An order to sell that is placed **BELOW** the market must be a sell stop order (sell limit orders are placed above the market). The customer wants to sell if the market falls to 50, so the order is "Sell 100 XYZ at 50 Stop." If triggered, this order becomes a market order to sell (which will happen at the prevailing market price). But the customer has also specified that he doesn't want to sell for less than 45 per share, meaning there is a limit on the execution price. The proper order is "Sell 100 XYZ at 50 Stop 45 Limit."
2. The best answer is c. The order in the previous question is a stop limit order. There is no such thing as a "split" order. Note that the stop price and the limit price do not have to be the same.
3. The best answer is c. Listed securities are traded over-the-counter in the "Third Market." Most Third Market trades are effected when the exchange where that security is listed is closed.
4. The best answer is c. The commission is calculated after the trade is executed - it is not on the order ticket that is used to enter the order. The ticket must include the size of the trade, desired execution price, and customer identification.
5. The best answer is b. A limit order specifies an execution price ("the limit"). An order to sell at 50 is a limit order. Market orders do not specify a price. Stop orders must state "Stop" with a price.
6. The best answer is d. If a "Stop" order is elected, it becomes a market order to be filled at the first opportunity. Thus, the actual price at which the order is executed is not known. On the other hand, a "Limit" order specifies that the execution must comply with the limit price specified or better. Thus, limit orders are filled at that price or better.
7. The best answer is d. The orders that are executed if the market drops are "OBLOSS" - open buy limits and open sell stops. The orders that are executed in a rising market are "OSLOBS" - open sell limits and open buy stops.
8. The best answer is a. An order placed "market - at the close" receives an execution at the closing price that trading day, or is canceled.
9. The best answer is a. Rule 605 of Regulation NMS requires that market centers prepare monthly reports on the quality of their trade executions. The "Rule 605" report is posted on each exchange's website.

Rule 606 requires that each broker-dealer discloses payments for order flow; that the broker-dealer will provide each customer that requests with a report detailing where the customer's orders over the prior 6 months were routed and whether a payment for order flow was received; and requires the broker-dealer to prepare a quarterly report that breaks down the different market venues to which is sent its orders and whether payments for order flow were received. This quarterly report is posted on the broker-dealer's website.



10. The best answer is **d**. The "Third Market" is over-the-counter trading of exchange-listed securities. It can be viewed as a competitor for the exchanges as a place to execute trades of exchange listed stocks.

11. The best answer is **b**. The Second Market is trading of securities in the over-the-counter market that are not exchange listed. This is a negotiated market. In comparison, the First Market is trading of exchange listed securities on the exchange floor - this is an auction market

12. The best answer is **d**. Rule 605 requires that, upon customer request, a member firm must disclose which markets the customer's orders were routed to during the past 6 months; whether the orders were directed (that is, the customer specified the market where the order was to be filled) or non-directed (the member firm chose the market where the order was to be filled); and the time of execution of the orders. There is no requirement to disclose the best market available for that security at the time, since SEC rules require that execution must occur at the "best market."

13. The best answer is **d**. "ECN" stands for "electronic communications network." These are firms that match buyer and seller for a matching fee, and used mainly by institutional investors. The larger ECNs are INET and Archipelago. ECNs act as agent only, matching buyer and seller. They do not make markets in the stock. In contrast, NASDAQ uses a system of competing market makers, who post their quotes in the system, and also shows open agency orders from customers for NASDAQ stocks.

14. The best answer is **a**. SEC Rule 606 requires the disclosure of "payment for order flow" on customer trade confirmations; and requires that on customer request, the member firm must disclose the markets to which that customer's orders were routed in the preceding 6 months. For example, if a customer places an order to buy 100 shares of Pfizer stock, the order must always be routed to the market that is posting the best price. But if all markets are posting the same price, then the order can be routed to the market that will "pay" the member firm for the order. Even though the NYSE is the dominant market trading Pfizer stock, the order could be routed to a regional exchange that dual lists the stock, or to a Third Market Maker - as long as the "best execution" requirement is met.

15. The best answer is **b**. The Specialist is the market maker on the floor of an exchange and is an exchange "member" - that is, the Specialist owns a seat on the exchange that gives the firm the privilege to trade on the floor.

16. The best answer is **b**. An order placed "at the open" is to be filled at the opening price or it is canceled.

17. The best answer is **c**. The orders that are reduced on ex-date are "OBLOSS" - Open Buy Limits and Open Sell Stops. These are the orders below the current market. Therefore, choices I and IV would be reduced normally. However, choice I is "Buy 100 ABC @ 50 DNR"- this buy limit order says "Do Not Reduce" on ex-date and therefore would not be adjusted. Only choice IV is reduced.

18. The best answer is d. To adjust the order for the 25% stock dividend, the number of shares is multiplied by a factor of 1.25 (since there are 25% extra shares) while the order price is divided by a factor of 1.25.

400 shares x 1.25 = 500 shares on the adjusted order

\$50 price / 1.25 = \$40 adjusted order price

19. The best answer is b. On ex-date, the opening price of the stock is reduced for the cash dividend amount. If the cash dividend is not an exact “penny,” then the convention is that the dividend amount is rounded “up” to the next highest penny and this is the subtraction amount. The cash dividend of \$.045 is rounded up to \$.05. The opening price will be \$20.00 - \$.05 = \$19.95.

20. The best answer is b. It is the Specialist (not the exchange) that acts as the buyer and seller of last resort; that maintains the book of public orders that are “away” from the market; and that sets the opening price of the assigned security. The exchange designates the physical location (the trading post) at which the security will be traded by the Specialist.



SECTION 2: OPTIONS TRADING RULES

2a. LISTED OPTIONS TRADING

Chicago Board Options Exchange

Listed options are traded on exchanges - almost no trading occurs OTC. The principal options exchange is the Chicago Board Options Exchange (CBOE)

The CBOE has a different structure from the stock exchanges, modeled on the "futures" markets that are based in Chicago. On stock exchanges, the specialist acts as market maker and also acts as a "broker's broker" handling limit and stop orders via the "book," for other firms. The CBOE splits this function between 2 different individuals - the Market Maker and the Order Book Official. Before discussing these individuals, we will start with the Floor Brokers on the CBOE.

Floor Broker

To execute a transaction on the CBOE, your firm will use a "floor broker" to handle the order. The floor broker may either be an employee of the member firm (the "nominee" of the firm) or may be an independent, whose business it is to execute transactions for retail firms on the trading floor.

Cannot Hold An Inventory

The floor broker will trade either with another floor broker, a Market Maker or an Order Book Official, earning a fee for each completed transaction. Floor brokers do not take inventory positions. Sometimes, floor brokers are called "Registered Options Traders ("ROTs").

Can Accept ALL Orders

Floor brokers accept public orders and orders for member firm trading accounts. A floor broker can accept any type of order for execution. Floor brokers are under the obligation to obtain the best available price in the market for their customers.

Find Best Available Market

If a floor broker simultaneously holds a buy and sell order for the same contracts from two different customers, the floor broker cannot simply "cross" the orders at whatever price he sees fit. The price at which a cross is effected must reflect the prevailing market. To insure this, the CBOE imposes a rigid procedure for crossing orders:

Crossing Orders

If a floor broker holds an order to buy an options contract at the market; and also holds an order to sell the equivalent contract at the market, he is only permitted to "cross" the orders if the following procedure is used:

The floor broker must first request bids and offers for those contracts from the trading crowd, including the Order Book Official;

The floor broker must then bid above the highest bid received by the minimum trading increment; and must offer below the lowest offer received by the minimum trading increment;

If this higher bid or lower offer are not taken, he may cross the orders at such higher bid or lower offer by announcing by public outcry that he is crossing, and giving the quantity and price.

Essentially, this procedure forces the floor broker to first attempt an execution with other traders before crossing the orders himself; and also forces the floor broker to cross the orders at a price that truly reflects the current market.

Market Maker

The market maker function is handled by registered "Market Makers" ("MMs") on the CBOE trading floor or these individual can operate as Remote market Makers, where they are electronically linked to the trading floor. These are individuals who trade for their own account in the security in which they are registered. Market Makers trade only with other participants on the floor, such as floor brokers - they cannot deal directly with the public.

Minimum Quote Size Is 10 Contracts

Market Makers must make a continuous market in the option contracts in which they are registered. For example, the IBM contract market maker must continuously make bids and offers on IBM contracts. These quotes are firm, and must be good for a minimum trading unit of 10 contracts. The profit to the market maker is the "spread" between his bid and ask quotes.

For example, the market maker might quote IBM Jan 100 Calls @ 4.00 - 4.50.

Any other trader on the floor who wishes to buy IBM Jan 100 Calls from this market maker may do so from the market maker at 4.50 Offered;

Anyone who wishes to sell IBM Jan 100 Calls may do so at 4.00 Bid by the market maker.

The spread that the market maker earns on each "round turn" is 1/2 point or \$.50.

Designated Primary Market Maker (DPM)

In the past couple of years, the CBOE has changed its trading system to allow for a new participant - a "DPM" - Designated Primary Market Maker. DPMs are similar to stock exchange specialists. A Designated Primary Market Maker is appointed by the CBOE for given classes of options



and acts as both market maker; floor broker; and order book official. Thus, similar to the NYSE Specialist, the DPM will maintain a bid and ask quote in each assigned option; and will handle the book of public limit orders. Unlike the NYSE Specialist system, there are still competing options Market Makers on the floor for these options classes.

Lead Market Makers (LMM) In options classes where there is no DPM, typically because trading is thin, the CBOE can designate a Market Maker as either a "LMM" (Lead Market Maker) or "SMM" -

Supplemental Market Maker (SMM) to the market without taking on all of the obligations of the DPM. LMMs or SMMs are appointed for a period of 1 month; and the appointment can be renewed each month. They are given "preference" in the CBOE's order allocations to MMs for both electronic and open outcry trading.

In return for this preference, LMMs agree to:

provide continuous quotes for the minimum number of contracts specified by the CBOE (usually 10 contracts);

respond to requests for quotes by floor brokers;

participate in the opening rotation (covered following) for each class of option to which they are assigned;

facilitate opening order imbalances by taking the opposite side to those trades.

(SMMs agree to perform only the last 2 functions on this list.)

Maximum Allowable Spreads To insure that market makers do not charge excessive spreads, the CBOE imposes maximum allowable spreads that market makers may charge. These are:

Premium Amount	Maximum Spread
\$0 - \$2	\$.25
\$2 - \$5	\$.40
\$5 - \$10	\$.50
\$10 - \$20	\$.80
Over \$20	\$1.00

If a market maker is registered in a given security, he or she is **not** allowed to act as a Floor Broker in that security. However, the CBOE will permit a Market Maker, in say, IBM contracts, to act as a Floor Broker in another contract. For example, it is acceptable for the Market Maker in General

Motors contracts to also register and act as a Floor Broker, executing trades of Disney contracts.

If a Floor Broker receives an order from a public customer that cannot be executed at the current market price, as quoted by the Market Maker, the order will be given over to the Order Book Official ("OBO").

Order Book Official

The OBO is an exchange employee who works on a salaried basis, maintaining the book of **public** orders (not those from member firms' own trading accounts) and executing these trades when the market moves in the desired direction. As such, the OBO accepts limit orders on the book, but is not permitted to accept so-called "contingency orders" - these are stop orders, stop limit orders, and market-if-touched orders on the book (these orders are defined in the section following).

Will Accept Market Orders Before Opening

The OBO does not ordinarily accept Market orders during the course of the trading day - these are executed by Floor Brokers and never enter the "book." However, the OBO will accept market orders prior to the market opening, to be filled at the opening price.

Cannot Accept Spread Or Straddle Orders

OBOs are also prohibited from accepting spread and straddle orders on the book - these must be handled manually by the Floor Broker and are discussed in more detail below. Finally, OBOs are prohibited from acting as a dealer and cannot take inventory positions.

Order Priority

Public orders entered on the exchange have priority over orders for the account of member firms or market makers entered at the same price. Thus, the highest bid displayed by the Order Book Official (which only show **public** orders) or DPM will have priority, as will the lowest ask shown on the "book."

Trading procedures on the CBOE are also modeled on the futures markets. On the NYSE, the specialist decides at what price a stock should open each morning, based on the balance of buy and sell orders that has accumulated overnight. The opening is "orderly" because a price is set to fill those open orders, and then the normal stream of orders coming in at the opening is handled.

Trading Rotation Opening and Closing

On the CBOE, for each stock, there may be 20 or 30 option series to open (remember, each series has a different expiration and strike price). To open all the series for trading in an orderly manner, the OBO conducts a "trading rotation." He calls for Bids and Offers for each series, to establish opening pricing. After all series have gone through the rotation, the market is open to trade all series. A similar "closing" rotation may be gone through at the



close of the day, and is **always** performed on the last trading day prior to expiration.

Note that the opening and closing rotations are only in **single** specified option contracts. Thus, during the rotation, only single orders can be filled. Combination, spread and straddle orders, which require two or more contracts to be filled simultaneously, cannot be executed.

Spread and Straddle Orders

Certain order types are peculiar to the options markets. A spread or straddle order requires the execution of 2 trades to complete the position. These orders are entered on a single ticket specifying the two positions creating the spread or straddle. If it is a market order, the trades are executed at the prevailing premiums. If it is a limit order, the ticket specifies the **net** debit or credit desired for the spread or straddle. Premiums are not specified for each side of the spread or straddle. This gives the trader the needed leeway to get both positions in the market, as long as he satisfies the limit of the net debit or credit.

Spread Priority Rule

The CBOE also has a "spread priority rule," which states that during the trading day, spread limit orders have priority over single contract limit orders. In this way, it is easier for Floor Traders to satisfy both sides of the position, thus creating the desired spread.

Accommodation Liquidations

The Options Exchanges also perform "accommodation" transactions for persons who have "worthless" options positions. Instead of letting the contract expire, the contract can be closed at a net premium of \$1.00 per contract through this type of transaction. In this manner, there is a closing trade record, which is **very** useful for tax purposes. Accommodation transactions are also known as "Cabinet Trades," because the orders are placed in a "cabinet" for execution.

The rules for accommodation transactions are:

Only orders for a premium of \$1 per contract are permitted (these are limit orders);

The orders are handled by the Specialist, Market Maker or Order Book Official, and are placed "in the cabinet" for execution;

Orders to buy and sell the same contract at \$1 are matched by the Specialist, Market Maker or OBO on a First In, First Out basis;

All cabinet trades must be marked as such, and must be reported following the close of each business day. Note that they are not reported to the "Tape," and are considered to be "off floor" transactions.

Cabinet trades are available for all closing transactions in worthless contracts - both for customer accounts and proprietary (firm trading) accounts. Thus, Order Book Officials, who normally **cannot** take orders for member firm proprietary accounts on the Book, are permitted to effect accommodation liquidations for member firm accounts.

Trading Halts

If two Floor Officials agree, trading on the options exchange may be halted in any option contract for up to 2 consecutive business days. Reasons for trading halts are:

Trading of the underlying security has been halted or suspended in the primary market;

The opening of the security has been delayed in the primary market due to unusual circumstances;

Other unusual conditions are present (e.g., a stock market "crash").

Trading Suspension

Trading is resumed when the 2 Floor Officials agree that the conditions that led to the halt are no longer present. In addition, 2 Floor Officials can agree to "suspend" trading for time periods shorter than 1 day for the same reasons stated above.

Fast Markets

If trading in any options contract is excessive in the judgment of 2 Floor Officials, the Exchange can declare that the market in one or more classes of options is "Fast." To meet the unusual activity level, the Floor Officials may:

Assign the contracts to Order Book Officials that are not assigned the issue;

Authorize the Order Book Officials' clerks (in addition to the OBO) to execute transactions;

Direct one or more trading rotations to be employed;

Take any other actions deemed to be necessary to maintain a fair and orderly market.

These procedures are designed to handle the order "overload." When normal conditions resume, as determined by 2 Floor Officials, these procedures become null and void. If "mayhem" continues, then a Trading Halt may be declared. Also, the Exchange can restrict the entry of stop, stop-limit and market-if-touched orders (covered in the next section), if needed., to calm the market.

Erroneous Trade Reports And Resolution

The CBOE rule for resolution of "clearly erroneous trades" requires that the trade be reported to a Trading Official within 15 minutes of execution. The Trading Official must



review the circumstances of the trade and make a determination within 60 minutes.

Obvious Error Panel

**Final Determination
The Same Day**

If either party disagrees with the determination, an appeal can be made to the Obvious Error Panel within 30 minutes. The Obvious Error Panel reviews the complaint and makes a final determination by the end of that trading day. (Also note that if a trade occurs after 2:30 PM CT, either party has until 8:30 AM CT the next day to request the review, in which case, the determination is made by the end of that day.)

2b. TYPES OF OPTIONS ORDERS

The types of options orders accepted on the exchanges are:

Market Order

Market Order: Does not specify a price, this order is to be executed immediately at the best price available in the market. Market orders have priority over all other orders (except for spread orders at the market under the "spread priority rule").

Limit Order

Limit Order: Specifies a price (the "limit") for execution. A Buy limit order must be executed at the limit price or lower. These orders are used to buy the contracts at prices **LOWER** than the current market. A sell limit order must be executed at the limit price or higher. These orders are used to sell the contracts at prices **HIGHER** than the current market.

Day / GTC

Any limit orders that cannot be executed immediately are placed on the "book" of either the Specialist (AMEX, PHLX), or on the "book" of the Order Book Official (CBOE). If nothing is stated on the order, it is assumed that the order is good for the "Day." If the order cannot be executed that day, it will be canceled. If the order is to remain on the books until it can be executed, it must be marked "GTC" - Good-Til-Canceled.

Stop Limit Order

Stop-Limit Order: Sometimes called "stop loss" orders, these are used to limit losses on long positions (Sell Stops) or on short positions (Buy Stops). The stop price on a sell-stop limit order represents a "trigger." If the market falls to this price, the order becomes a limit order to sell. Thus, sell stop limit orders are used to sell the contracts at prices **LOWER** than the current market.

Buy stop-limit orders are not triggered until the market rises to the "stop price." Then, they must be executed at the limit price or better. These orders are used to buy the contracts at prices **HIGHER** than the current market.

Stop limit orders that cannot be immediately executed are placed on the Specialist's book on the AMEX and PHLX exchanges. Note, however, that as a contingency order, these do not go on the book of the CBOE Order Book Official.

Spread Order

Spread Order: An order to buy and sell the same number and type of option contracts, with different strike prices, or expirations. The orders are entered at a "net debit" or "net credit." Both legs of the order must be filled to satisfy the execution. These orders cannot go on the Specialist's book or be placed with the Order Book Official or Board Broker.

Straddle Order

Straddle Order: An order to either buy the same number of calls and puts on the same underlying security with the same contract terms; or to sell the same number of calls and puts on the same underlying security with the same contract terms. Both legs of the order must be filled to satisfy the execution. These orders cannot go on the Specialist's book or be placed with the Order Book Official.

Combination Order

Combination Order: Is the same as a straddle order, except the contract terms are **not** the same.

Order Qualifiers

The following qualifiers can be placed on an order:

AON

All or None Order: An order to be filled in its entirety in **one attempt**. If execution cannot be accomplished, the floor trader is allowed later re-attempts at execution.

FOK

Fill or Kill Order: An order to be filled in its entirety in **one attempt**. If execution cannot be accomplished, the order is canceled. No further re-attempts are permitted.

IOC

Immediate or Cancel: An order to be filled either in its entirety or in part in **one attempt**. The unexecuted portion is canceled

OCO

One Cancels the Other Order: An order where, if one "side" of the order is filled, the other side is canceled. For example, a customer could place an order to sell if the price rises to \$6 (to take a gain), or sell if the price falls to \$4 (to limit a loss). If one side is filled, the other side is canceled.

Contingency Order

Contingency: An order that is dependent upon the market reaching a certain price for execution. Stop orders are a type of contingency order. A contingency order that is peculiar to the CBOE is a "Market If Touched" (MIT) order.

Stop Order

An MIT order to buy is similar to a buy limit order, in that it will be filled in a falling market. The difference is that if that market falls to a certain

Market If Touched

Order To Buy



price, the order becomes a market order to buy - there is no limit on the price.

Market If Touched Order To Sell

Similarly, an MIT order to sell is similar to a sell limit order, in that it will be filled in a rising market. The difference is that if the market rises to a certain price, the order becomes a market order to sell - there is no limit on the price.

Again, note that all contingency orders are not permitted on the "book" of the Order Book Official on the CBOE.

Not Held

Not Held: The designation "Not Held" can be placed on market orders. If nothing is stated on a market order, it is filled immediately at the market price. If "Not Held" is designated, the floor trader is "not held" to an immediate execution. He can use his best judgment to decide the price and time of execution.

At The Close

At the Close: An order to be filled as close to the close as possible, but there is no guarantee of getting the actual closing price (note that the CBOE definition of a MOC order is very different than the NYSE or NASDAQ, where the order must be filled at the closing price, or it is canceled.)

2c. REPORTS TO OPTIONS EXCHANGES

Position Reports

Position Reports: The Exchanges require member firms to file reports when members exceed specified position amounts. The amounts are usually lower than the position limits specified by the O.C.C. and give the Exchanges an "early warning" indication. Reports must be filed on the business day following the day the position amount was exceeded. The report must include the name, address, and tax I.D. number of any customer that exceeds the reporting level.

Uncovered Short Positions Report

Uncovered Short Positions Report: Upon request of the Exchange, each member firm must submit a report detailing all uncovered short positions, breaking out proprietary and customer positions. The report is due 2 business days after request by the Exchange.

Market Maker Account Reports

Market Maker Account Reports: Market Makers on the CBOE are required to file with the Exchange a report identifying all accounts for stock, options, and related securities in which the Market Maker, directly or indirectly, participates. These reports must be kept "current."

**Market Maker
Activity Reports**

Market Maker Activity Reports: Market Makers on the CBOE are required to file reports of all orders entered for the purchase or sale of the underlying security (or equivalent, such as a convertible) in which the Market Maker deals. This order report must include the names of the firms through which the orders were entered, times of entry and or cancellation, the time that any execution report was received, along with that transaction's quantity and price. Reports must be made on the next business day.

**Transfer Of Accounts
Form**

Transfer of Accounts: If a customer transfers his account from one broker-dealer to another, the Options Clearing Corporation must be notified to transfer ownership of the positions on its books. Both the clearing firm receiving the account and the clearing firm delivering the account must submit input forms to the O.C.C. to effect the transfer.



OPTIONS TRADING RULES SECTION EXAMINATION

1.

Which of the following orders has priority during the trading day on the Chicago Board Options Exchange?

- a. market order
- b. limit order
- c. stop order
- d. spread order

2.

On the CBOE, customer good-till-canceled limit orders are handled by the:

- a. Specialist
- b. Market Maker
- c. Order Book Official
- d. Floor Broker

3.

All of the following statements are true about "cabinet trades" **EXCEPT**:

- a. The trades are handled by the market maker as an accommodation for persons with worthless positions
- b. Only limit orders at an aggregate premium of \$1 are accepted
- c. Trades are handled on a first come, first served, basis
- d. Trades are reported to the Exchange Tape within 90 seconds of execution

4.

An order to be filled in its entirety, or canceled, is known as a(n):

- a. Immediate or Cancel Order
- b. All or None Order
- c. One Cancels the Other Order
- d. Fill or Kill Order

5.

The Specialist will take which of the following options orders onto the "book"?

- I Limit order
- II Not Held order
- III Spread order
- IV Stop order

- a. I and III

- b. I and IV

- c. II and III

- d. II and IV

6.

A market maker on the CBOE displays a quote without any qualifications. This quote is good for:

- a. 1 contract

- b. 10 contracts

- c. 100 contracts

- d. the smallest order presented on the floor at that time

7.

A market maker on the exchange floor would like to handle transactions for family members and a few close friends. Which statement is true?

- a. This is absolutely prohibited under exchange rules

- b. This is permitted if the market maker also becomes a registered representative

- c. This is permitted if the market maker limits his customers to 10 or less

- d. This is permitted under Exchange rules

8.

Opening trading rotations include which of the following orders?

I Market orders

II Limit orders

III Spread orders

IV Straddle orders

a. I only

b. I and II only

c. III and IV only

d. I, II, III, IV

9.

The "spread priority rule" affords precedence to:

I One on one transactions

II Accommodation liquidations

III Simultaneous purchase and sale of option positions

a. I only

b. II only

c. I and III

d. I, II, III

10.

The OBO will take which of the following orders onto the "book"?

a. limit order

b. stop order

c. spread order

d. all of the above

11.

Accommodation liquidation orders are placed at an aggregate premium of:

a. \$1 per contract

b. \$10 per contract

c. \$100 per contract

d. \$1000 per contract

10.

All of the following may trade for their own account, or for the firm's account, on the floor of an options exchange **EXCEPT** a:

a. DPM

b. LMM

c. SMM

d. OBO

13.

A market maker on the CBOE is inundated with a flood of orders because of a major news announcement about the issuer in which he makes a market. The market maker cannot keep up with the order flow and declares a "FAST" market. This action is:

- a. permitted because of the influx of orders
- b. permitted if the primary market for the stock also declares a "FAST" market
- c. prohibited because the market maker does not have the authority to declare a "FAST" market
- d. prohibited because market makers must have the ability to keep up with all orders they receive

14.

What is the purpose of the opening rotation?

- a. To insure that opening trades in every option contract are conducted at the same price
- b. To insure that the opening price of a listed option is fair and reasonable
- c. To insure that all orders present in the market are filled at the opening
- d. To insure that all markets open each option contract at the same price



15.

All of the following can participate in an opening rotation **EXCEPT**:

- a. OBO
- b. DPM
- c. LMM
- d. Floor Official

OPTIONS TRADING RULES SECTION EXAMINATION EXPLANATIONS

1. The best answer is d. Spread orders entered on a one to one basis (both sides of the spread are on one ticket) have priority during the trading day on the CBOE. This rule helps spread orders be completed, since both "legs" of the order must be filled to complete the spread position.
2. The best answer is c. The CBOE splits the specialist function into two. The order book official handles the book of customer limit orders. The market maker acts as the dealer in the security.
3. The best answer is d. Cabinet trades are **not** reported to the "Tape" - they are treated as though they were "off floor" transactions. They are simply a means of producing a transaction record for the close out of worthless contracts. Cabinet trades are handled by Specialists on AMEX and Order Book Officials on the CBOE on a first in, first out basis. All trades are for aggregate premiums of \$1 per contract (\$.01 per share for equities).
4. The best answer is d. A "Fill or Kill" order must be filled in its entirety in one attempt, or it is canceled. An order placed "All or None" must also be filled in its entirety, but if execution is not possible, the floor trader can reattempt a later execution. This order is **not** canceled. An immediate or cancel order requires execution in part or in full, in one attempt. The unexecuted portion of the order is canceled. A "One Cancels the Other" order (OCO) is a type of contingency order. If one side of the order is executed, the other side is canceled.
5. The best answer is b. A specialist on an options exchange is prohibited from accepting "Not Held," Spread, Straddle, and Combination orders on its book. These orders must be handled by floor traders. Specialists on stock exchanges can take limit and stop orders on their books. On the CBOE, Order Book Officials can only take limit orders on their books.
6. The best answer is b. Quotes by market makers on the CBOE that do not specify a size are good for 10 contracts.
7. The best answer is a. Market makers are prohibited from executing trades for non members of the exchange. They are only allowed to trade with other members on the exchange floor.
8. The best answer is b. The opening rotation is a brief trading period in 1 option series exclusively, moving on to the next options series, etc. Since only 1 contract is trading at any moment during the rotation, the filling of spread and straddle orders is impossible. Only single orders (e.g., market or limit) can be filled at the rotation.
9. The best answer is c. Accommodation liquidations are simply a means of closing out worthless contracts for an aggregate premium of \$1. They have no bearing on the spread priority rule. This rule gives priority to "combination" orders (e.g., spreads and straddles) that require 2 positions to be filled at 1 net debit or credit. Choice III describes a spread position and falls under the rule. A "one on one" transaction describes an order that requires one trade followed by another (e.g., a long straddle requires the purchase of a call and the purchase of a put) and also falls under the rule.



10. The best answer is a. On the CBOE, Order Book Officials can only take limit orders on their books. They cannot take so-called contingency orders such as stop, stop limit, and market-if-touched orders on their book. Note that this differs from the exchange Specialists, who can take limit, stop, and stop limit orders on their books.

11. The best answer is a. An accommodation liquidation order is placed by a customer who wishes to receive a closing trade confirmation for a worthless option contract (if one is audited by the IRS, the IRS really appreciates having a closing trade confirmation showing that the option position was liquidated rather than simply having the contract expire). An order is placed to close the contract at an aggregate premium of \$1 (\$.01 per share). This is a limit order. The order book official handles these orders as an "accommodation" to the public, hence the name.

12. The best answer is d. On the Options Exchanges, OBOs (Order Book Officials) handle trades as agent only. They accept orders from the public for execution but do not trade for their own account, nor do they trade for proprietary (firm) accounts. Market makers on the exchange floor make markets in option contracts and are buying and selling for their own account. They can be designated as DPMs (Designated Primary Market Makers), LMMs (Lead Market Makers), or SMMs (Supplemental Market Makers).

13. The best answer is c. A market maker cannot declare a "FAST" market - it can only be declared with the approval of 2 Floor Officials. If an options market is "FAST," meaning that trading is exceptionally heavy, the Exchange rules provide for the following measures to help execute all of those orders. The exchange may shift trading in that class of contracts to alternate posts, increasing the number of locations at which trading may occur. The exchange may allow other Order Book Officials and their clerks to execute transactions in that class of contracts, increasing the number of personnel trading that class of contracts. If trading becomes disorderly, the Exchange may impose trading rotations in that class of contracts.

14. The best answer is a. The purpose of the opening rotation is to insure that opening trades in every option are conducted at the same price. For each contract, the DPM sets an opening price that result in a "match" of the existing buy orders to the sell orders present in the opening rotation. The DPM (Designated Primary Market Maker) opens each contract for trading in an established order (longest expiration with highest strike price is opened first), rotating through all contracts with that expiration in sequence from highest to lowest strike price. Then the DPM rotates to the next (closer) expiration and rotates through all of those contracts, etc. Once all of the contracts have been rotated through, then the market is opened for trading.

During the rotation, there is no trading of options contracts, not even in contracts that have been "opened." The rotation must be completed and then the entire market is opened for trading.

Note that the price set by the DPM to clear the existing orders can be erratic; that limit orders to buy or to sell that are too far away from the opening "match" price will not be filled in the rotation; and that each market conducts its own rotation prior to opening, so the fill price in the rotation can be different in each market.

15. The best answer is d. The opening rotation is conducted by the Designated Primary Market Maker (DPM) or the Order Book Official (OBO). Floor brokers can participate in the opening rotation, as can LMMs (Lead Market Makers). Floor officials do not trade - they oversee the options trading floor.

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SECTION 3: MAJOR TRADING RULES

3.a. REGULATION SHO

In mid-2004, the SEC approved a new short sale regulation, called “Regulation SHO.” The intent of the rule is to have a uniform federal rule that can be applied to all securities markets and to curb the potentially manipulative practice of “naked short selling.”

Basic Short Sale Rule Is Eliminated

The basic premise of the original “short sale rule” that dates back to the 1930’s - that is, short sales can only be effected when the market is rising, was rescinded effective July 2007. The SEC, after a 2 year test, determined that the potential to manipulate stocks downward in price by relentless short selling was no longer an issue. However, in 2010, the SEC reversed course and issued a “short sale rule” that is specific to each stock (Rule 201 covered following).

Short Sale Definition - Sale Of Shares Not Owned By Seller

Rule 200 of Regulation SHO defines a “short sale” as the sale of a security:

that the seller does not own; or

any sale that is settled by the delivery of a security that the seller does not own; or

any sale that is settled by the delivery of a security borrowed by the seller or borrowed for the account of the seller.

Long Sale Definition - Sale Of Shares Owned By Seller And Delivered On Settlement

In order to be considered to be “long” a security:

the seller must own the stock and deliver on settlement; or

if the seller owns a convertible or derivative security, the seller must convert or exercise and deliver the underlying security on settlement.

Sale Of Shares To Be Received From Conversion Or Exercise Is A Long Sale

Also, the SEC has added a provision to the rule, explicitly stating that if a customer is long a convertible security; or long an option or warrant; and the customer has either tendered the shares for conversion or has exercised the option or warrant; then the sale is considered to be long, even if the security cannot be delivered by settlement. This recognizes the fact that the transfer agent may take a longer amount of time to handle the conversion or exercise than the 3 business days needed for regular way settlement.

Long Sale Of Shares To Be Received From Conversion Or Exercise - If Seller Fails To Deliver, Buy In 35 Days From Trade	However, in no event can such "long sale" fails to deliver last more than 35 days, since the SEC requires that if delivery is not made within 35 days of the trade, the broker-dealer must either borrow those securities or close out the open position by making an offsetting purchase.
Only "Long" To Extent Of Net Long Position	In determining whether an order ticket to sell is marked "long" or "short," a customer is only considered to be "long" to the extent of the seller's net long position in the security. Consider the following position held by a customer:
	Long: 1000 ABCD Short: 1000 ABCD
Short Against The Box	(This customer is "short against the box" 1000 shares of ABCD - meaning that the customer has sold 1000 shares of ABCD short against 1000 shares being held long by the firm (in the firm's box, or vault). This is a strategy that is used to lock-in a gain on an appreciated stock position.
	This customer has a "net long position" of "0." If the customer places an order to sell any of the ABCD position, this is a technical short sale, and the short sale rule would apply.
	Now consider the following position held by a customer:
	Long: 1000 ABCD Short: 600 ABCD
	This customer has a net long position of 400 ABCD shares. If the customer places an order to sell 1000 shares of ABCD, the order to sell would be: Sell 400 Long and Sell 600 Short. The short sale portion of the order is subject to the provisions of Regulation SHO.
	Rule 200 of Regulation SHO requires that every order ticket to sell be marked either:
Marking Sell Order As Long	Long Sale: When the seller is delivering securities that are owned on settlement.
Marking Sell Order As Short	Short Sale: When the seller is delivering securities that are borrowed on settlement. Short sales are subject to the provisions of Regulation SHO.
Short-Exempt Order Ticket Marking	There used to be a provision for marking an order ticket "sell short - exempt," that was meant to be used where a short sale was being effected, but the sale was not subject to the "uptick" requirement. This is now used for short



sales that are exempt from the provisions of Rule 201, covered next.

Short Sale Rule Triggered In A Stock If Price Falls By 10%

Can Only Sell Short ABOVE Best Bid For Rest Of The Day And The Entire Next Day

Rule 201 of Regulation SHO is new (2010) and was put in place due to market volatility that was experienced in specific stocks.

Once a specific stock's price drops by 10% or more from the previous day's closing price, a circuit breaker is triggered for that security and, for the remainder of that day and the entire next day, a short sale is only permitted at a price above the national best bid for that security.

For example, if ABCD closes at \$20 and the next day, a trade occurs at \$18 or lower, the circuit breaker is triggered. If a short sale at the market is entered the next business day when the NBBO is: \$17.50 - \$17.75, it can only be executed at \$17.51 or higher.

The rule only applies to NMS stocks (NYSE, AMEX and NASDAQ). It does not apply to OTCBB or Pink Sheet issues.

Furthermore, the short sale rule does not apply to:

Short sales effected above the national best bid;

Technical short sales where the seller actually owns the security but delivery is delayed;

Odd lot transactions;

Arbitrage transactions;

Riskless principal transactions;

Volume Weighted Average Price (VWAP) transactions (these are filled right after the market close).

Short Exempt

These transactions are designated on the order as "short exempt" - meaning that they are exempt from the Rule 201 circuit breaker.

Rule 203 of Regulation SHO specifically addresses a potentially manipulative practice on the part of hedge funds, where these investors have shorted stock without first having borrowed the shares to make delivery. This is known as "naked short selling." If the shares are "difficult to borrow," then the trade may not settle because the seller "fails to deliver" the stock to the buyer on settlement.

Borrowed Securities' Location Must Be Determined Prior To Short Sale	The rule requires short sellers in all equity securities to locate the source from which the shares can be borrowed before effecting a short sale. The "locate" requirement must be documented in writing prior to effecting the short sale.
Locate Requirement	<p>Specifically, Rule 203 states that a broker-dealer cannot execute a short sale for its own account or for the account of another person unless;</p> <p style="padding-left: 40px;">the security has been borrowed or an arrangement has been entered into to borrow the security; or</p> <p style="padding-left: 40px;">there are reasonable grounds to believe that the security could be borrowed and delivered on settlement.</p>
Easy To Borrow List - Updated Daily	<p>To meet the "reasonable grounds" test, a broker-dealer can create a list of "Easy To Borrow" securities that is less than 24 hours old. These "Easy to Borrow" securities are readily available and are unlikely to create a fail to deliver on settlement.</p>
Threshold Securities Are "Hard To Borrow"	<p>The rule also requires the exchanges to create a daily list of securities that are "Hard To Borrow." These are known as the "threshold" securities.</p> <p>A "threshold list security" is one which has:</p> <p style="padding-left: 40px;">a clearing short position at NSCC (National Securities Clearing Corporation division of DTCC) of 10,000 shares or more; and</p> <p style="padding-left: 40px;">this clearing short position represents at least 1/2% of the total shares outstanding.</p>
List Is Updated Daily	<p>To be on the list, the security must meet these tests for 5 business days. The NYSE and NASDAQ update the list every day.</p>
Threshold List Includes NASDAQ, OTCBB And Pink Sheet Issues	<p>Basically, a threshold list security is one that has a large outstanding short position - the SEC and FINRA/NASD do not want large outstanding short positions that cannot be covered, to build over time. Note that the NASDAQ threshold list covers not only NASDAQ securities, but OTCBB and Pink Sheet issues as well.</p>
Buy-In Of Undelivered Shares 10 Bus. Days From Settlement If On The Threshold List	<p>If a customer sells short a security and fails to deliver on settlement, the rule requires that the position be bought after 10 business days from settlement if the security is on NASDAQ's threshold list as of trade date and remains there for the 10 business day window following settlement.</p>



**Buy In Of
Undelivered Shares
If On Threshold
List For 13
Consecutive
Settlement Days**

Because of the mandatory buy-in requirement, large outstanding naked short positions in "difficult to borrow" securities should not occur. Also note that Regulation SHO's wording requires that the buy-in occur if the security is on the threshold list for "13 consecutive settlement days" following the trade date. This is another way of saying 10 business days past settlement, since regular way settlement is 3 business days.

**Rule 144 Threshold
List Undelivered
Shares -
35 Settlement Days
For Buy In**

Note that this 13 business day close out requirement is extended to 35 settlement days for Rule 144 restricted threshold securities, because of the additional processing steps needed by the transfer agent to "wash" the resale restriction off the shares.

**Customer Sells Long
And Fails To Deliver
Buy-In 10 Business
From Settlement**

On the other hand, if a customer sells long a security and fails to deliver on settlement, SEC Rule 15-c-3-3 applies, which requires that customer fails to deliver be bought in after 10 business days from settlement.

**Rule 204 - Buy In
Of Any Fail To
Deliver, Otherwise
Firm Cannot Short
Stock**

The "buy-in" requirements of Regulation SHO were expanded in 2009 with the adoption of Rule 204. While the original buy-in rule only applied to threshold list securities, this rule applies to sales of ALL NMS securities where there is a fail to deliver on settlement.

If a firm sells an NMS security and fails to deliver on settlement, the firm must immediately borrow that security or purchase that security, no later than the next business day ($S + 1$, which is the same as $T + 4$ for regular way trades), otherwise the firm can no longer place orders to sell short that security.

Note that the mandatory borrow or buy in is extended to 3 business days past settlement ($S + 3$, which is the same as $T + 6$) if the fail to deliver resulted from a long sale or resulted from a broker-dealer's bona-fide market making activities.

**Regulation SHO
Applies To Trades
Originated In The
U.S. That Are
Executed Offshore**

Regulation SHO applies to any person that effects a short sale in equity securities "using the means or instrumentalities of interstate commerce." It applies this to mean that if the trade is agreed to in the United States, even if the trade is effected on a non-U.S. market, then the provisions of Regulation SHO apply.

**Reporting Of
Short Interest**

(Also note that under a separate rule, NASDAQ requires all member firms to report outstanding short positions in NASDAQ securities on the 15th and last day of each month. NASDAQ aggregates this information and reports it as the outstanding "short interest" in each NASDAQ issue. The major exchanges, such as the NYSE, have a similar rule.

3 b. LIMIT ORDER RULES

Limit Order Protection Rule

Manning Rule

Limit Order Protection Rule

Upon Activation, Limit Order Filled Within 1 Minute

Proprietary Orders Not Protected

Price Improvement Allowed Without Executing Customer Order

All of the SROs have rules prohibiting trading ahead of customer limit orders. These are called "limit order protection rules." The first limit order protection rule was adopted because an investment adviser named "Manning" sued NASDAQ market makers for front running his orders and won. Hence, this rule is often called the "Manning Rule."

Customer limit orders must be filled, in full or in part, before proprietary limit orders at that price or better can be filled.

For example, if a member accepts a customer limit order to buy 500 shares at 21.25, and in its market making capacity buys 200 shares at that price, it must fill that customer's order for 200 shares at the 21.25 price and protect the remaining 300 shares.

"Protect" means that if the market moves back within the limit price, the customer order will be filled contemporaneously, or before, the filling of a proprietary order at that price.

Once a limit order is "fillable," it must be executed promptly - specifically, that is within 1 minute after the order has been activated. If a firm has multiple limit orders, it must use a consistent methodology for the sequence of filling these orders - for example, choosing first in; first out.

All customer limit orders, whether they came from the firm's own retail base or from another member or member's customers, must be so protected. Proprietary orders for a firm's own trading account are not subject to the rule.

Also note that the limit order protection rule is not violated if a market maker fills an order for its own account at a better price than that offered by a standing customer limit order.

For example, assume that a market maker is quoting ABCD at 10.00-10.25. A customer sends in a limit order to buy 500 shares of ABCD at \$10.00. At the same time, another customer enters a market order to sell 500 shares, which the market maker offers to execute at 10.05. The market maker does not have to execute the limit order, because the firm has offered a "price improvement" of \$.05.



Minimum Price Improvement Increment Is \$.01

“Price improvement” means that the market maker is narrowing the bid-ask spread - bidding higher than an existing customer limit order to buy; or offering to sell lower than an existing customer order to sell. The minimum increment necessary to qualify for price improvement is \$.01.

Chinese Wall Requirements

Member firms that have proprietary trading desks are obligated under the rule to establish a “Chinese Wall” or information barrier between the proprietary market making desk and:

non-market making trading desks that handle customer orders;

non-market making desks, such as a risk arbitrage desk or a bond trading desk that trades convertible bonds (which are equity equivalents); and

other potential sources of information such as the firm’s research department or investment banking department (this is not a requirement of the limit order protection rule, but rather a requirement of the insider trading rules, covered later).

Trading Ahead Is Prohibited

These rules prevent the market making desk from obtaining knowledge of customer limit orders and “trading ahead” of such orders - which is, of course, prohibited. In addition, non-market making trading desks, such as risk arbitrage desks, are also prohibited from trading ahead of a customer limit order placed with a market maker.

As long as there is a Chinese Wall in place, then the risk arbitrage desk could trade without worrying about front running a customer limit order placed with that firm. If this information barrier is not in place, then customer limit orders would have to be protected from front running by these non-market making trading desks.

Best Execution

In customer transactions, members must use reasonable diligence to determine the best inter-dealer market for a security; and to execute the transaction so that the resulting price is as favorable as possible under prevailing market conditions. The following are considered when determining if members are following the “best execution” requirement:

Character of the market (price, volatility, liquidity);

Size and type of transactions;

Number of primary markets checked; and

Location and accessibility of primary markets and quotation sources.

Best execution means more than price. Equally important are speed of execution, fill rates (the number of executions that it takes to fill the order), and price improvement.

The SROs require members to perform a “regular and vigorous” review of their policies and procedures regarding executions of customer orders.

The SEC requires that member firms route their orders to the market that is posting the best available price. So if a Third Market Maker is offering an NYSE listed stock for a cheaper price than can be obtained on the NYSE floor itself, then the order must be sent to the Third Market Maker.

Customer Limit Orders Priced At, Or Better Than, MM's Quote Must Be Displayed

SEC Rule 11Ac1-4 (now renamed Rule 604 of Regulation NMS) requires that a market maker that receives limit orders priced at or better than its current quote to immediately (within 30 seconds of receipt) display the order's price and/or size.

This is an “older” rule, that pre-dated the existence of electronic centralized limit order books. In the “old days,” market makers would keep customer limit orders in a separate file and they would not be displayed. The market maker would simply display its current quote. Thus, the true level of buying and selling interest in the marketplace was unknown to the public.

Now, any customer limit order received by a member firm must be entered into an “electronic” book and thus is displayed in conformity with the rule. However, the rule still stands as part of Regulation NMS (covered in the last section of this chapter), and it must be known for the exam.

Below are examples of how the Limit Order Display Rule was applied before the creation of the “electronic single book” - and this information must be known for the exam.

Assume that a market maker's current quote is:

\$10.00 - \$10.50 (5 x 10)

(1000 shares offered at \$10.50; 500 shares bid at \$10)



If the market maker receives a customer limit order to buy 200 shares at \$10.25, it must update its quote within 30 seconds of receipt to:

\$10.25 - \$10.50 (2 x 10)

Assume that a market maker's current quote is:

\$31.00 - \$31.25 (5 x 5)

(500 shares offered at \$31.25; 500 shares bid at \$31)

If the market maker receives a customer limit order to buy 200 shares at \$31.00, it must update its quote within 30 seconds of receipt to:

\$31.00 - \$31.25 (7 x 5)

De Minimis Customer Orders At Inside Market Do Not Have To Be Displayed

If, however, a customer limit order is of a "de minimis" size in comparison to the market maker's displayed quote size, and the market maker's quote represents the inside market, then no updating is required. De minimis orders are defined as those that are equal to, or less than, 10% of the market maker's displayed size.

For example, assume that a market maker's current quote, which also happens to be at the "inside market," is:

\$10.00 - \$10.50
15 x 10

(1000 shares offered at \$10.50; 500 shares bid at \$10)

If the market maker receives a customer limit order to buy 100 shares at \$10.00, no updating is required, since the limit order is at the same price (no price improvement) and is less than 10% of the size of the market maker's current quote.

Undisplayed Customer Limit Orders

Finally, if a market maker holds an undisplayed customer limit order (which is permitted if the customer so requests) that is better priced than the market maker's quote, it must match any incoming orders against the undisplayed limit order before it can match to its own quote.

Limit Order Display Rule Exemption

This rule does **NOT** apply to:

Customers who ask that their orders not be displayed;

Odd lots;

Blocks of at least 10,000 shares or a value of \$200,000;

All or none limit orders;

De minimis size orders - which are defined as orders that are 10% or less of the displayed quote size that happen to be at the inside market;

Limit orders delivered to ECNs - Electronic Communications Networks (covered following).

ECNs - Electronic Communications Networks - are FINRA member broker-dealers that accept agency orders from customers to buy and sell. They attempt to "match" these orders internally, or with other market participants - and in doing so, earning a matching fee. Some of the better known names of ECNs are Instinet and Archipelago. ECNs operate 24 hours a day, and collectively account for over 1/2 of the trading in equity securities.

Ineligible ECN

In the past, market makers could enter a quote into an ECN such as INSTINET that was better-priced than its NASDAQ quote. Investors, including other market makers, would not know about it unless they subscribed to that ECN's service. This type of ECN is now termed an "ineligible ECN," which means that quotes placed on it are not necessarily available to all market participants.

If Market Maker Enters Better Priced Quote Into Ineligible ECN - MM Must Update NASDAQ Quote

Under Rule 11Ac 1-4 (now renamed Rule 604 of Regulation NMS), the SEC changed all that by requiring market makers to update their NASDAQ quote if they entered a better priced order into an ineligible ECN.

For example, assume that market maker in a Global Market stock is quoting 37.38 - 37.60 (15 x 15). If the firm enters a customer buy order into an ineligible ECN at 37.50 for 1,200 shares, it must update its NASDAQ quote to 37.50 - 37.60 (12 x 15).

Eligible ECN

Instead of updating its NASDAQ quote to reflect the better priced order, the market maker may comply with the display requirements by delivering it to an "eligible ECN." An "eligible ECN" must:

distribute its best priced orders not only through the ECN, but also to NASDAQ; and

trade with non-subscribers who wish to trade at these quotes through NASDAQ.



If MM Enters Better Priced Quote Into Eligible ECN - No Need For MM To Update NASDAQ Quote By distributing its better-priced quote through the eligible ECN, the market maker is then, not obligated to change its NASDAQ quote to match, since the ECN itself will post the better-priced quote in NASDAQ. Note that other terms for an eligible ECN is a "linked" or qualifying ECN.

Regulation ATS

The SEC wrote Regulation ATS in the year 2000, specifically to address the growth of ECNs. Regulation ATS requires Alternative Trading Systems, which include ECNs, member firm internal crossing systems and dark pools, to register with the SEC and be regulated as broker-dealers (as opposed to registering as an exchange and being regulated as such). Exchanges are SROs - Self-Regulatory organizations, that create rules for their members and can discipline their members for rule violations. ATSs are not SROs - they have no rules for their users other than the types of orders that can be placed and they cannot discipline their users, other than restricting access to the ECN.

ECN Must Link If It Trades 5% Of NMS Issue's Volume

Regulation ATS requires that any ATS:

that displays orders to anyone other than ATS employees; and

that has average daily trading volume in an NMS security of 5% of aggregate volume in that issue for 4 of the last 6 months; must

link with a national securities exchange so that the ECN's quote is displayed and can be accessed under Regulation NMS.

Alternate Display Facility - ADF

NASDAQ created the ADF - Alternate Display Facility - to display ECN quotes. Of course, since NASDAQ has its own captive ECN (Instinet), other ECNs are not so happy about posting their quotes there.

A regional exchange - the National Stock Exchange - (NSX) - has "rebranded" itself into the destination for ECNs that wish to link and show their quotes. It does this by offering cheaper hosting and no conflicts of interest. Just about all ECNs that are required to link have either migrated to the NSX from the ADF; or they have actually got themselves licensed by the SEC as an electronic exchange.

3c. CERTAIN DEFINITIONS UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

Short Sale

Short Sale - is defined under the Act as the sale of any security the seller does not own or which is consummated

by delivery of a borrowed security. A person is considered to be "long" that security if he has:

title to the security;

entered into an unconditional contract to buy the security (e.g. effected a purchase that has not yet settled);

owns a convertible security **and** has tendered for conversion;

owns options, rights, or warrants, **and** has exercised.

Furthermore, a person is only considered to be long to the extent of his "net long position" in that security. (If this seems like "deja vu," this definition was already used in the investment banking chapter of this text and for Regulation SHO earlier in this chapter.)

Clearing Agency

Clearing Agency - is defined under the Act as an intermediary in making payments or deliveries in connection with transactions in securities; or who provides facilities for making comparisons of data relating to the settlement of securities transactions.

Market Maker

Market Maker - is defined under the Act as any specialist permitted to act as a dealer; or any dealer who holds himself out as being willing to buy or sell a security for his own account on a regular or continuous basis.

Listed

"Listed" - is defined as a security admitted to full trading privileges upon application by the issuer (or banker engaged in distributing foreign securities via an ADR).

Qualified OTC Market Maker

Qualified OTC Market Maker - is defined under the Act as any broker-dealer who is registered with the SEC under Section 15 of the Act. (Registration of broker-dealers is covered in the Sales Supervision Chapter of this text.) The firm must meet minimum capital standards; must regularly publish bona fide quotes; must stand ready to effect transactions in reasonable amounts; and must have a reasonable turnover in each security in which a market is made.

Qualified Third Market Maker

Qualified Third Market Maker - is defined under the Act as a dealer in any stock registered on a national securities exchange who is registered with the SEC under Section 15 of the Act. A Qualified Third Market Maker must meet higher capital standards than an OTC market maker; and must meet the bona fide quote, turnover, and readiness to trade standards specified for OTC Market Makers.



Qualified Block Positioner

Qualified Block Positioner - is defined under the Act as any broker-dealer who is registered with the SEC under Section 15 of the Act that engages in the purchase or sale of blocks of stock of \$200,000 or more. A Qualified Block Positioner must meet higher capital standards than Qualified Third Market Makers. In executing block transactions, the firm must exercise reasonable diligence so that the block could not be sold to or purchased from others at better terms; and that the shares comprising the block are sold as rapidly as possible under the circumstances.

3d. NATIONAL MARKET SYSTEM RULES

Under the Securities Act Amendments of 1975, Congress mandated the creation of a "National Market System," fostering competition among the various exchanges. The exchanges were forced to participate in a Consolidated Quotation System, so that participants could get quotes from all markets in a security from one source; and were forced to participate in Consolidated Transaction Reporting System (the Consolidated Tape).

Rule 11Aa2-1 - Designation of National Market System Securities: Defines a "reported security" - as any equity security for which real time transaction reports are required to be made.

Rule 11Aa3-1 - Dissemination of Transaction Reports: Requires each exchange to develop a transaction reporting plan in listed equity and NASDAQ securities.

Rule 11Ac1-1 - Dissemination of Quotes For Reported Securities: Requires each exchange to establish a mechanism for collecting bids, offers, quotation sizes from broker-dealers and for disseminating this information to "quotations vendors" (for example, Bloomberg buys quotes and provides them to subscribers). (This rule forced the development of CQS - Consolidated Quotations Service.) The rule also obligates broker-dealers to promptly communicate changes in bids and offers to the exchange or association.

Exchanges Must Publish Real Time Trade Reports

Exchanges Must Collect And Display Bids And Offers

SEC Regulation NMS

SEC Regulation NMS (National Market System) is a comprehensive update to the "patchwork" of SEC rules that have been enacted from 1975 until now to foster competition between market centers in trading of "National Market Securities."

Regulation NMS consists of Rules 600 - 612. Some of these are "new" rules, and others are simply the renumbering of existing rules.

There are 3 basic new rules within Regulation NMS that impact market participants (Rules 610 - 612):

- 1) All market centers (defined as an order execution facility of any exchange or NASDAQ) are required to establish and enforce policies to prevent "trade throughs" - which is an execution of an order in that market at an inferior price to that displayed in another market. This is covered under Rule 611
- 2) All market centers must provide a "level playing field" when providing access to their markets (e.g. market access fees must be consistent across all market participants and cannot favor one firm over another). This is covered under Rule 610.
- 3) Sub-penny pricing is prohibited unless the stock trades below \$1.00. This is covered under Rule 612.

In addition, the other "older" SEC rules (already covered in the material) are now incorporated into Regulation NMS. Specifically:

Rule 11Ac1-1, the "Quote Rule" is now Rule 602. This was already covered on the previous page.

Rule 11Ac1-4, the "Limit Order Display Rule" is now Rule 604. This was already covered on Page 3-48.

Rule 11Ac1-5, the "Disclosure of Order Execution Information Rule" is now Rule 605. This was already covered on Page 3-7.

Rule 11Ac1-6, the "Disclosure of Order Routing Information Rule" is now Rule 606. This was already covered on Page 3-6.

The details of Regulation NMS's new rules are:

RULE 611: TRADE-THROUGH RULE

A "trade through" occurs when an order is executed in a given market at a price that is inferior to that currently being posted by another market center. In a perfect world, this would not occur, since all trades are subject to "best execution" requirements. However, the old CQS (Consolidated Quotations Service) and ITS (Intermarket Trading System), which were the first attempt at preventing "trade throughs," date back to 1978 and are pretty "clunky." They produce a high level of "trade throughs" that current computer software technology would eliminate.



**Applies To All
NYSE, AMEX And
NASDAQ Stocks**

The new “trade through” rule applies to NYSE, AMEX and NASDAQ listed issues. These are now called the “NMS” stocks. Any order execution facility that executes orders internally in its market, even if its quote is not the NBBO (National Best Bid and Offer, also known as the “inside market”), must execute that trade at the NBBO. Thus, the rule forces the exchanges to update their linkages to other markets to attempt to eliminate “trade-throughs.”

1 Second Execution

The quotes that must be protected under the rule are “immediately accessible” automated quotes. These quotes must be accessible within 1 second.

**Trade-Through
Rule Exceptions**

**ISO - Intermarket
Sweep Orders**

- 1) An institution can place an “ISO” - “Intermarket Sweep Order.” Such an order will electronically “sweep” the exchange’s limit order book. An ISO is a limit order sent to a particular exchange when another market center is posting better quotes. The recipient exchange is alerted by the “ISO” that the trader will also be sending the ISO to the other exchanges in an attempt to access their better-priced orders. That way, the first exchange does not have to re-route the order to the “better priced” market and can attempt a fill, subject to “best execution” requirements.

This forces the markets to compete with each other. Because of this, there will be no more negotiation of block trades - the process will be automated with sweep orders being routed electronically to the market centers posting the best quotes.

**Volume Weighted
Average Price Trade**

- 2) An institution can place a trade based on an “average price” or “closing price.” Also known as “VWAPs” - Volume Weighted Average Price transactions, the rule calls these “benchmark” trades.

Stopped Orders

- 3) An institution can place a “stopped” order - this is a block trade (a block is 10,000 shares or more or a trade of \$200,000 or more under Regulation NMS) that either sets a guaranteed minimum price to sell; or a maximum price to buy. Thus, the broker-dealer handling the block might take a loss in the block (an “underwater stop”). To complete the block trade, the price is likely to be inferior to the NBBO. Thus, a trade-through will have occurred. The SEC will permit this (but only for block trades with a stop price).

**Rule Applies
To All National
Securities
Exchanges**

The “trade through” rule applies to all national securities exchanges, the NASDAQ Market, ECNs such as Archipelago, OTC market makers and block positioners, and any broker-dealer that executes trades internally, **regardless** of whether they are posting a quote for that issue. Thus, broker-dealers must have internal policies and procedures in place to insure that “trade-throughs” do not occur.

**Rule Only Applies
During Regular
Market Hours
9:30 AM - 4:00 PM**

The rule only applies to “NMS” securities (NYSE, AMEX and NASDAQ issues). It does not apply to OTCBB or Pink Sheet issues. Finally, the rule only applies during regular market hours (9:30 AM - 4:00 PM ET).

RULE 610: MARKET ACCESS

There are multiple trading venues for equity securities.

For example, NYSE securities are traded on the NYSE floor, on regional exchanges, in the Third Market via the Intermarket Trading System, and also there is limited trading via ECNs. Currently, about 25% of NYSE trading takes place “off the floor.”

NASDAQ securities are traded via Single Book, unlinked ECNs quote NASDAQ securities in the ADF (Alternate Display Facility) and trade them, NASDAQ securities are traded on regional exchanges on a “UTP” basis (Unlisted Trading Privilege). Currently, about 50% of NASDAQ trading occurs outside of Single Book.

Because of this market fragmentation, there has been an increasing incidence of “locked” and “crossed” markets - evidence of imperfect linkages between market venues because those quotes should have traded with each other. Competing market centers offer different types of access and speeds of execution. For example, Single Book trades of NASDAQ stocks are completely automated (a “fast” market) whereas a NASDAQ stock traded via a UTP (Unlisted Trading Privileges) plan on a regional exchange might be handled manually (and thus, slowly).

**Quoting Market
Centers Must
Offer Automated
Executions**

The rule requires quoting market centers and quoting market participants to offer automatic execution of orders, and they cannot discriminate by offering members faster automatic execution than that offered to non-members. (This was one of the driving forces behind the NYSE purchase of Archipelago - it gave the NYSE (a “slow” market) an instant “fast” market (Archipelago).



RULE 612: SUB-PENNY QUOTING

While the NYSE, AMEX and NASDAQ quote stocks in minimum price increments of \$.01, the ECNs display quotes in their proprietary systems in "sub-pennies." These quotes are effectively hidden from the public, because the public display of these orders rounds them to the nearest penny. However, broker-dealer routing software accesses the unrounded quotes, so there is a "hidden" market where Securities trade at prices that are not transparent to the public.

The SEC is not too crazy about the fact that these superior sub-penny quotes on alternative markets are not available to the average investor. Furthermore, by using "sub-penny" pricing, market professionals can "step-ahead" of customer limit orders, without the customer being aware of this.

No Sub-Penny Quotes For NMS Stocks Priced At \$1 Or More

So the SEC solution is simple - no sub-penny pricing on NMS stocks trading at \$1.00 or more - the minimum quote increment is \$.01.

For stocks that are trading for less than \$1.00, the minimum quote increment is set at \$.0001.

Also note that Rule 612 does not apply to non-NMS stocks, such as OTCBB or Pink Sheet issues. These may be quoted by member firms in sub-penny increments.

TRADING RULES EXAMINATION

1.

A customer is long 500 shares of ABCD stock and short 300 shares of ABCD stock. The customer places an order to sell 500 shares of ABCD. The order ticket must be marked:

- a. Sell 500 ABCD Long
- b. Sell 500 ABCD Short
- c. Sell 200 ABCD Long; Sell 300 ABCD Short
- d. Sell 300 ABCD Long; Sell 200 ABCD Short

2.

The threshold list is prepared:

- I by NASDAQ
- II by NSCC
- III daily
- IV weekly

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

3.

Which of the following are included on the threshold list?

- I NASDAQ Global Market (NGM) issues
- II NASDAQ Capital Market (NCM) issues
- III OTCBB issues
- IV Pink Sheet issues

- a. I only
- b. I and II only
- c. III and IV only
- d. I, II, III, IV

4.

A market maker, quoting 21.00-21.50 (10 x 10) receives a customer limit order to buy 800 shares at 21.10. The customer requests that the order not be displayed. The firm receives a market order to sell 500 shares. Under the Limit Order Protection Rule, the market maker

- a. may execute the market order at 21.00
- b. must execute the market order at 21.10
- c. must execute the market order at 21.50
- d. must direct the order to another market maker for execution

5.

Under SEC rules, limit orders for NASDAQ securities must be displayed within:

- a. 15 seconds of receipt
- b. 30 seconds of receipt
- c. 45 seconds of receipt
- d. 60 seconds of receipt

6.

The "locate requirement" Regulation SHO must be completed in which of the following circumstances?

- I A customer enters a sell order where the member is in possession of the securities
 - II A customer enters a sell order where the customer is in possession of the securities
 - III A customer enters an order to sell short where the customer is not in possession of the securities
- a. II only
 - b. I and II
 - c. II and III
 - d. I, II, III



7.

Under FINRA rules, member firms must create Chinese Walls between all of the following **EXCEPT**:

- a. Research Department and NASDAQ Trading Desk
- b. Investment Banking Department and NASDAQ Trading Desk
- c. Mergers and Acquisitions Department and NASDAQ Trading Desk
- d. Reorganization Department and NASDAQ Trading Desk

8.

A market maker is quoting 21.00-21.35 (15 x 10) and this quote is at the inside market. The firm receives a limit order to buy 100 shares at 21.00. Which two of the following statements are true?

- I The market maker must update its displayed size
 - II The market maker is not obligated to update its displayed size
 - III The order must be protected at 21
 - IV The order is not required to be protected at 21
- a. I and III
 - b. I and IV
 - c. II and III
 - d. II and IV

9.

All of the following are permitted to trade for their own account **EXCEPT**:

- a. Specialist (DMM)
- b. Floor Broker
- c. Qualified Block Positioner
- d. Over-the-Counter Market Maker

10.

A customer places a sell limit order for ABC stock at \$30 with your firm. Without executing the customer's order, the member is permitted to sell stock for its own account at:

- a. \$30.10
- b. \$30.00
- c. \$29.90
- d. any price

11.

A firm has received a limit order to buy an NYSE-listed stock from a customer. The market price has fallen to the customer's limit. Prior to executing the customer's order, the firm may:

- a. buy the stock for the firm's inventory account
- b. buy the stock for the account of an officer of the firm
- c. buy the stock for long-term investment
- d. sell the stock to fill an order from another customer

12.

A customer is considered to be "long" a security in all of the following examples **EXCEPT**:

- a. Stock has been purchased but the certificates have not yet been received
- b. A warrant to purchase shares of stock has been exercised
- c. A call option has been purchased and is fully paid
- d. Stock has been purchased but payment has not yet been tendered

13.

All of the following are considered to be "long" sales **EXCEPT**:

- a. A sell order for the stock placed after warrants to buy the stock have been exercised
- b. A sell order for the stock placed after the customer is exercised on a put option on that stock that was previously sold
- c. A sell order for the stock placed after convertible bonds of that issuer have been purchased
- d. A sell order for the stock placed after call options to buy the stock have been exercised

14.

Regulation NMS applies to:

- I NYSE listed issues
- II AMEX listed issues
- III NASDAQ listed issues

- a. I only
- b. I and II
- c. II and III
- d. I, II, III

15.

Under Regulation NMS, an ISO order:

- I is only sent to one exchange
- II is sent to multiple exchanges
- III is subject to the "trade-through" rule
- IV is exempt from the "trade-through" rule

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV



TRADING RULES EXAMINATION EXPLANATIONS

1. The best answer is c. A customer is only considered to be long to the extent of his or her “net” long position in a security. This customer is long 500 shares of ABCD and short 300 shares of ABCD, for a net long position of 200 shares. If the customer places an order to sell 500 shares, the order ticket must be marked “Sell 200 ABCD Long” and Sell 300 ABCD Short.”
2. The best answer is a. The threshold list of “hard to borrow” securities is prepared each day by the exchange, which is NASDAQ in this case. If a security on the threshold list is sold short, and the securities are not delivered on settlement, then Regulation SHO requires mandatory buy-in “in 13 settlement days.”
3. The best answer is d. The threshold list of “hard to borrow” securities includes exchange listed issues and OTC equity issues (NASDAQ, OTCBB and Pink Sheet stocks).
4. The best answer is b. If a market maker holds an undisplayed limit order priced better than its displayed quote, and subsequently receives a market order (or marketable limit order - which is a limit order at the inside price) on the other side of the market, the market maker is required to execute against the undisplayed limit order.
5. The best answer is b. SEC rules require that limit orders be displayed within 30 seconds of receipt. This rule applies to exchange listed and NASDAQ stocks, and this rule is now incorporated in NASDAQ Single Book programming. The limit order display rule does not apply to limit orders for OTCBB or Pink Sheet issues.
6. The best answer is c. The “locate requirement” of Regulation SHO applies when a customer is selling securities that must be borrowed for delivery by settlement. There is no requirement to “locate” the securities when the member is in possession of the securities, since the member has them in safekeeping, ready for delivery on settlement when a customer sells.
7. The best answer is d. Each SRO requires member firms to create “Chinese Walls” to stop the flow of information between the member firm’s research department and its trading desk. This is to stop the trading desk from “trading ahead” of an impending research report - a prohibited practice. Similarly, member firms must place Chinese Walls between their investment banking department and their trading desk; and their mergers and acquisitions department and their trading desk; since it would be tempting to trade based on news of an upcoming investment banking or takeover deal. The reorganization department of a broker-dealer notifies existing shareholders of corporate reorganizations (such as bankruptcies). This department is dealing with “already released” news, so there is no need for a Chinese Wall between it and the member firm’s trading desk.
8. The best answer is c. Limit orders that are “de minimis” do not have to be displayed if the order is priced the same as the dealer’s quote, which must be at the inside market. Such an order is one equal to, or less than, 10% of the market maker’s displayed size. This order is for 100 shares at 21.00, when the market maker is currently displaying 1,500 shares at 21.00, so it represents less than 10% of the display size and is not required to be displayed.

9. The best answer is **b.** Under SEC rules, floor brokers are prohibited from trading for their own accounts. They act as agent only, trading for their or other firms. Specialists are market makers on exchange floors; block positioners are OTC market makers. Any market maker can trade its own account.

10. The best answer is **c.** With a sell limit order, the customer has specified a price at which he wishes to sell if the market rises. Once the market hits \$30 or higher, the customer's order to sell at \$30 must be filled before the firm can trade for its own account at that price. The firm is free to sell for its own account below \$30 prior to executing the order, since this does not compete.

11. The best answer is **d.** Under SEC rules, a firm cannot execute an order for its own account or for the account of a person associated with the firm before executing customer orders that it holds at that price. Before the firm can buy, it must fill the customer's order to buy. There is no prohibition on the firm selling the stock, since this does not compete with the customer's buy order.

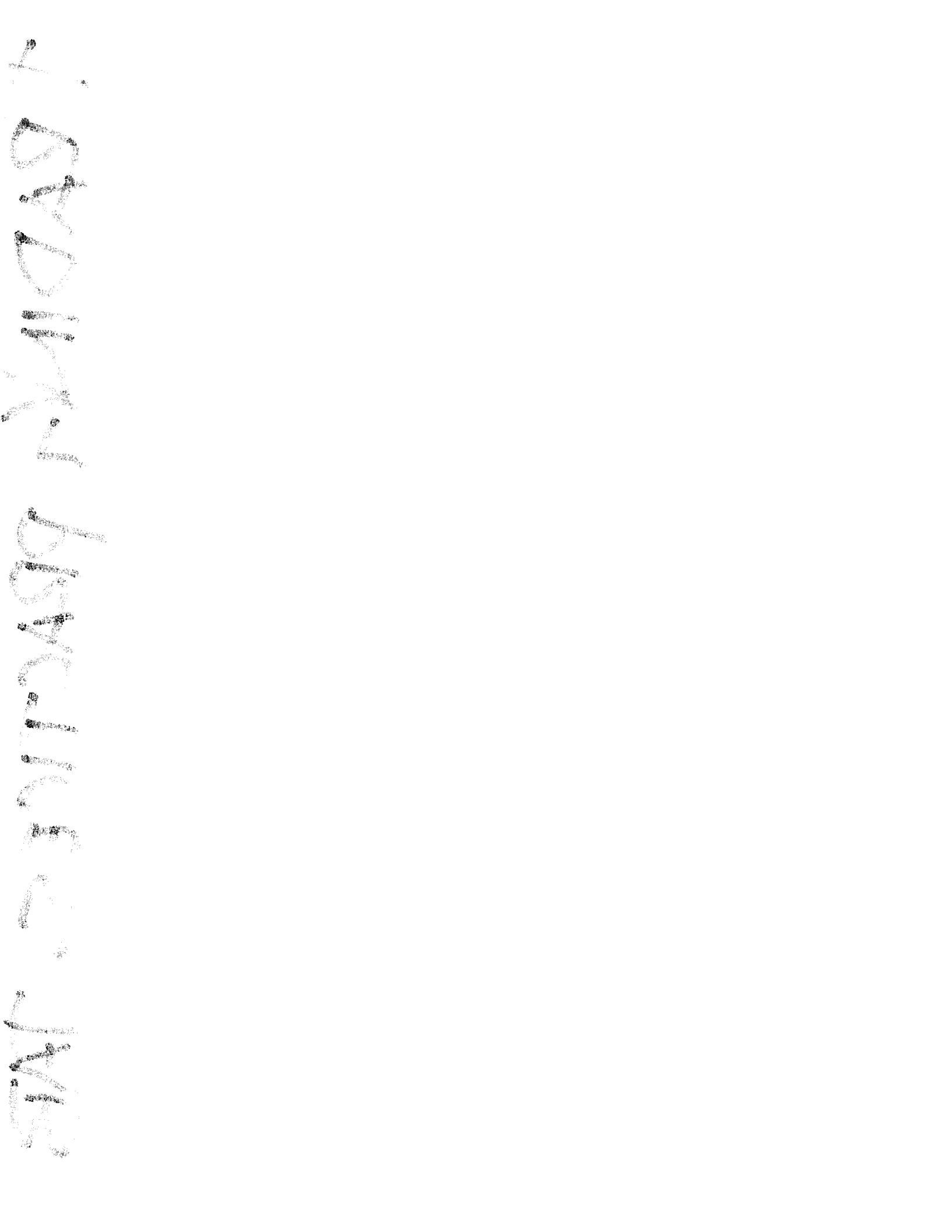
12. The best answer is **c.** A call option is not considered to be a "long" position in the underlying stock unless it is exercised (creating a binding contract to purchase the stock). Stock that is purchased, but is not yet paid, is considered to be "long," since the trade is binding on the customer.

13. The best answer is **c.** A customer is not considered to be long the stock unless convertible bonds of that issuer **have been tendered for conversion**. Simply owning the bonds is not sufficient. If a customer exercises any contract to buy the stock; or is exercised on any contract requiring him to buy; he is considered to be "long." Note that under Rule 203 of Regulation SHO, the shares must be delivered no later than 35 days from trade date, otherwise they must be bought-in by the executing broker.

14. The best answer is **d.** Regulation NMS applies to National Market System stocks, which are defined as NYSE, AMEX and NASDAQ listed issues - these are actively traded equity issues. This means that Regulation NMS does not apply to thinly traded OTCBB or Pink Sheet issues.

15. The best answer is **d.** An "ISO" is an Intermarket Sweep Order, which is exempt from the "trade-through" rule of Regulation NMS. Such an order will electronically "sweep" the exchange's limit order book. An ISO is a limit order sent to a particular exchange when another market center is posting better quotes. The recipient exchange is alerted by the "ISO" that the trader will also be sending the ISO to the other exchanges in an attempt to access their better-priced orders. That way, the first exchange does not have to re-route the order to the "better priced" market and can attempt a fill, subject to "best execution" requirements. This forces the markets to compete with each other.

TRADING PRACTICES TAG





TRADING PRACTICES CHAPTER (4)

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SECTION 1: FEDERAL REGULATIONS

1 a. INSIDER TRADING REGULATIONS UNDER THE EXCHANGE ACT OF 1934

Congress strengthened insider trading regulations in 1988 under the "Insider Trading and Securities Fraud Enforcement Act of 1988." This Act amends the insider trading provisions of the '34 Act.

The unusual problem with insider trading rules is that the SEC has never really defined an "insider" and has never really defined the point where "inside information" has been made public and hence can be used for trading.

Technical Definition Under '34 Act	Under the Securities Act of 1934, an "insider" is defined as an:
	Officer; Director; 10% shareholder of the issuer's equity securities.
Initial Filing - Form 3	Upon becoming an "insider", an initial filing must be made with the SEC on Form 3 within 10 business days; and
Trade Filing - Form 4	Changes in ownership by any defined insider must be filed with the SEC on Form 4 no later than 2 business days after the event.
Short Swing Profits Must Be Disgorged	Any short swing profits (defined as profits derived from trades within a 6-month period) in that stock must be paid back to the corporation. Insiders are prohibited from selling their own company's stock short except that they can "short against the box" at year-end to lock in a gain and defer tax (under very specific conditions in the Internal Revenue Code) to the next year - however, the position against the box must be closed out within 20 days.
Insiders Cannot Sell Short Their Own Company's Shares	
Prohibition On Trading On Material Non-Public Info.	Insiders are prohibited from trading based on "material non-public information" (this is covered in much greater detail following);
	The SEC has used Rule 10b-5 (the "catch-all" fraud rule, discussed later in this section) to bring action against persons who do not fit this definition - and has succeeded. In a famous court case, an engineer for a company that discovered a rich mineral field, and who bought the shares

before the information was made public, was considered to be an "insider."

Court's Definition Of An Insider

Through court cases, the current definition of an "insider" is any person who has received material non-public information that can be expected to influence the price of a company's stock. If that person trades on the information prior to its becoming public, he is an insider who is in violation of the Act.

Liability For Both "Tipper" and "Tippee"

Please note that giving someone "inside information" is not a violation. A violation occurs if the recipient ("the tippee") uses the information to trade for profit. If this occurs, then the "tipper" is **also** liable under the Act.

The Act states that trading of equivalent securities or options of that issuer is a violation as well.

Inside Information Not Public Until News Media Release

Once the information is made public, that person can trade. Information is considered to be public once it has been released by the news media.

Under the Insider Trading and Fraud Enforcement Act of 1988 ("the Act"), insider rules were strengthened by Congress.

Broker-Dealers Must Have Procedures To Prevent Misuse Of Material Non-Public Information

This Act requires broker-dealers to establish, maintain, and enforce written policies and procedures designed to prevent the misuse of material, non-public information by any associated person.

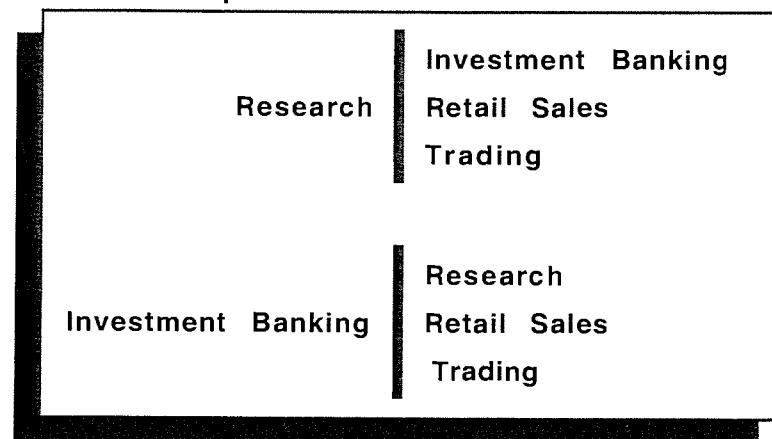
In particular, this legislation was aimed at investment bankers engaged in takeovers. Large broker-dealers have divisions for investment banking; mergers and acquisitions; trading; and retail. Inside information is routinely received through investment banking and merger activities. It is not a violation to receive inside information. It is a violation to use the information to trade for profit.

Chinese Walls

To insure that such inside information is not communicated to the firm's trading or retail operations, all firms set up "Chinese Walls" that fully segregate the information flow. For example: A company's true identity may only be known to one or two top people; all communications about that company use a pseudonym.



Required "Chinese" Walls



Violation For Insider - Defined As Person Who Misuses Material Inside Information

If a person violates the insider trading rules by purchasing or selling a security while in the possession of material non-public information or by giving that information in connection with a transaction in those securities, he is liable for civil penalties. The penalty can be up to 3 times the profit realized or loss avoided (treble damages). Criminal penalties for individuals include a fine of up to \$5,000,000 and up to 20 years in jail for each violation.

Violation For Controlling Person If He Knew About Misuse

In addition, if that person is "controlled," e.g., that person is an employee of a broker-dealer that was supposed to have procedures designed to prevent misuse, the controlling person is liable under the Act. The liability for such firms is greater (since they have deeper pockets!) and is set at a \$25,000,000 fine.

However, the SEC will not impose damages on the controlling person **unless** it can be proven that the person knew or recklessly disregarded the fact that a violation occurred and that such failure substantially contributed to the occurrence of the Act.

Informer Bounty

Furthermore, the Act allows informants to be paid up to 10% of the amounts recovered under civil penalties.

Insiders Can Be Sued By Any Person Who Traded That Security

The Act also states that private parties have the right to institute action against persons who have violated the "insider trading" rules. Thus, anyone who bought or sold that security during the time period when the inside trades occurred can sue the "insider" for profit gained or loss avoided. The statute of limitations in such suits is 5 years.

Rule 10b-5-1 Pre-Arranged Trading Plan

Insiders can avoid the "worry" that they will be accused of an insider trading violation under the provisions of Rule 10b-5-1 if they establish a pre-arranged trading plan. This is a "safe-harbor" rule that permits statutory insiders

(officers, directors and 10% shareholders) to set up a written plan for trading that company's securities.

Such a written plan specifies the future date with amount on which securities are to be bought and sold; or specifies the algorithm to be used for determining the amount and date of future purchases or sales. Once the plan is in force, the "insider" cannot have any further influence on trades effected under the plan. As long as the insider adheres to such a written trading plan, that person is given a "safe harbor" from being accused of using "inside information" as the basis for the trades that occur based on adhering to the plan.

1 b. REGULATION FD (FAIR DISCLOSURE)

Regulation FD

In the year 2000, the SEC passed Regulation FD to address specific issues related to insider trading rules. The new rules were designed to address three issues:

Selective Disclosure By Issuers

The selective disclosure by issuers of material non-public information;

When A Trader Is Deemed To Be An "Insider"

When insider trading liability arises in connection with a trader's "use" or "knowing possession" of material non-public information; and

Family Member Trades

When the breach of a family or other non-business relationship may give rise to liability under the misappropriation theory of insider trading.

The rules are designed to promote the full and fair disclosure of information by issuers, and to clarify and enhance existing prohibitions against insider trading.

Selective Disclosure By Issuers Is Prohibited

The regulation provides that when an issuer, or person acting on its behalf, discloses material non-public information to securities market professionals and holders of the issuer's securities who may well trade on the basis of the information, it must make public disclosure of that information.

In the past, issuers used to hold quarterly conference calls with securities industry research analysts and big institutional money managers to give them "earnings guidance" and to "clue them in" as to the outlook for the company for that quarter. The problem was that the SEC viewed this selective disclosure as causing these conference call participants to become "insiders." Now, under Regulation FD, issuers can no longer make such selective disclosures. There must be broad public distribution of the information, otherwise the issuer can



be considered to be a “tipper” and the recipients “tippees” under the insider trading rules.

If an issuer makes a disclosure of non-public information at such a meeting, the issuer can avoid liability by:

For an intentional disclosure, simultaneously disclosing the information by broad distribution to the public; or

For a non-intentional disclosure, promptly (defined as within 24 hours) disclosing the information either by filing an 8K report with the SEC (which makes the report public) or by a broad distribution of the information to the public.

When A Trade Is Considered To Be Made On Inside Information

The rule also gives a “definition” of when a trade is considered to be made based on “inside information.” The rule defines an “inside trade” as one made on the basis of material non-public information, if the trader was aware of the material, non-public information when the person made the purchase or sale.

Specific Defense Against Alleged Insider Trading

The rule also provides specific defenses that a person can show to prove that a trade was not made based on such “inside” information. These are:

The person, before becoming aware of the information, had entered into a binding contract to buy or sell the security;

With respect to this purchase or sale contract, the person demonstrates that the contract specified the amount, date, and price of the trade (or gave a formula for this); and that the person had no further influence over the trade; and

The resultant trade happened because of the prior contract instruction.

In essence, the rule outlines Martha Stewart’s insider trading defense - coincidence, perhaps?

Family Member Insider Trading

Finally, the rule details the situation under which family members are deemed to be “insiders.” The rule states that a duty of trust or confidence exists when:

a person agrees to maintain information in confidence;

two people have a history, pattern, or practice of sharing confidences such that the recipient of the information knows or reasonably should know that the person communicating the material non-

public information expects that the recipient will maintain its confidentiality; or

a person receives or obtains material non-public information from certain close family members: spouses, parents, children, and siblings.

If, in these situations, a family member trades based on "inside information," liability exists. An affirmative defense permits the person receiving or obtaining the information to demonstrate that under the facts and circumstances of that family relationship, no duty of trust or confidence existed.

1c. PROHIBITIONS AND RULES UNDER THE EXCHANGE ACT OF 1934

Section 9: Unlawful Practices

Section 9 of the Act lists a number of unlawful practices. These are:

Effecting transactions in securities where there is no beneficial change of ownership ("wash trades") with the purpose of creating a misleading appearance of activity in that security. This is also called "painting the tape." Note that such pre-arranged trading is prohibited.

Placing an order for a security upon knowledge of orders that have been, or will be placed, at substantially the same price.

Effecting a series of transactions in a security to create the impression of rising or falling prices.

Offering to buy or sell a security for a customer by giving information to the effect that the price is likely to rise or fall because of market operations of certain persons.

Inducing the sale of a security by using false or misleading statements.

Accepting payment for disseminating information that the price of a security is likely to rise or fall.

Pegging (stabilizing) the price of a security in the market other than under the prescribed rules set by the SEC.



Suits Brought Within 2 Years Of Discovery; 5 Year Statute Of Limitations Willful violations of these prohibitions make that person liable for damages sustained by investors in the security. Any suit must be brought within 2 years of discovery, but no later than 5 years after the violation occurred.

Manipulation Is Fraud

Section 10 of the Act states that it is unlawful for any person to use or employ any deceptive or manipulative device in violation of the Act. The rules written under Section 10 detail a number of prohibited practices:

Rule 10b-1 - States that this section of the Act applies to manipulation of **both** exempt and non-exempt securities. Therefore, if a person manipulates U.S. Government bond transactions, a violation under the Act has occurred.

Rule 10b-3 - States that it is unlawful for broker-dealers, including municipal broker-dealers, to use or employ any deceptive or manipulative device.

Rule 10b-5 - Known as the "catch-all" fraud rule, makes it illegal for any person to commit undefined actions that would operate as a fraud.

Broker-Dealer Registration With SEC

Section 15 of the Act places requirements on broker-dealers. Section 15-a-1 requires broker-dealers that effect transactions in securities (other than exempt securities) to be registered. It also allows the SEC to censure, suspend, or revoke the registration of a broker-dealer or associated person.

1d. SALES OF PENNY STOCKS - SEC RULES 15g-1 THROUGH 15g-6

Broker-dealers are required to pre-qualify new customers that wish to purchase penny stock as the result of a solicitation. SEC Rules 15g-1 through 15g-6 are designed to prevent high pressure telephone sales tactics when selling low price securities.

These rules apply to sales of "designated securities." These are equity securities that are not exchange listed, or are not included on NASDAQ, and which have a price of less than \$5 per share. Only a few of the penny stock rules are included in the exam.

If a firm wishes to sell "designated securities" to someone who is not an "established customer" it must first:

Obtain detailed information from the customer about his or her financial situation; investment experience; and investment objectives;

	Determine, based on the above information, that the proposed transactions are suitable for the customer and that the customer has sufficient knowledge and experience in financial matters to evaluate the risks and merits of the recommended investment;
Written Suitability Statement	Deliver a written statement to the customer, setting forth the basis upon which suitability was determined and stating in boldface that it is unlawful for the broker-dealer to effect the trade until the customer signs the statement; and also stating that the customer should not sign unless the statement is accurate.
Customer Signature Before Confirmation	The firm must obtain this written, signed statement from the customer before the trade can be effected.
Disclosures When Effecting Principal Transactions In Penny Stocks	<p>Prior to effecting a customer transaction in a penny stock on a principal basis (where the dealer buys into inventory or sells out of inventory), the broker-dealer must:</p> <p>disclose the current inside bid and ask quote for the penny stock;</p> <p>if an inside market does not exist, the dealer must:</p> <p>disclose its current bid or offer price (as appropriate), if in the last 5 days, the dealer has effected 3 bona-fide transactions with other dealers;</p> <p>or if there were not bona-fide 3 transactions in the last 5 days, disclose if the quote accurately reflects the price at which the dealer is willing to buy or sell to another dealer.</p> <p>(If the dealer's quote does not meet these requirements, the dealer must disclose that it has not consistently effected inter-dealer trades at its bid or offer prices and it must disclose the last price at which it actually effected a trade in that stock with another dealer.)</p>
Disclosures When Effecting Agency Transactions In Penny Stocks	<p>Prior to effecting a customer transaction in a penny stock on an agency basis (where the firm acts as a middleman matching the client to a dealer), the broker-dealer must:</p> <p>disclose the best inter-dealer bid or offer (as appropriate) obtained by contacting at least 3 dealers; or all known market makers if there are less than 3.</p>



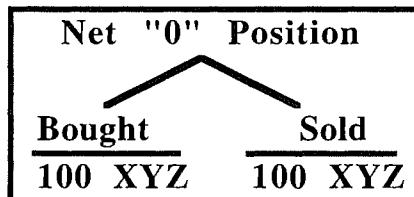
Disclosure Of Quote Size	<p>Regardless of whether the bid or ask is disclosed on an agency or principal basis under this rule, the size of the quote must also be disclosed.</p> <p>The bid and ask disclosures required by the rule must be given orally, or in writing, prior to effecting a trade in a penny stock for a customer and must be disclosed in writing on the written trade confirmation sent to the customer. These must also be retained by the broker-dealer as a record for 3 years.</p>
	<p>The following are exempted from the "penny stock" rules:</p> <ul style="list-style-type: none"> Broker-dealers whose transactions in penny stocks comprise less than 5% of revenues; Transactions where the customer meets the definition of an "accredited investor" under the private placement rule; Transactions with "insiders;" Transactions not recommended by the broker-dealer.
	<p>1 e. TENDER OFFER RULES</p>
Rule 10b-4 "Short Tender Rule"	<p>Rule 10b-4 - Prohibits any person from tendering securities in a tender offer unless that person is "long" the security and will tender within the specified period</p>
Definition Of "Long" Position	<p>A sale is considered to be long if:</p> <ul style="list-style-type: none"> The customer owns the stock and will deliver on settlement day to satisfy the sale. The customer owns a convertible security, has given orders to convert, and will deliver on settlement day to satisfy the sale. The customer owns rights, warrants, or call options and has exercised and will deliver on settlement day to satisfy the sale. <p>For example: If a customer owns a call option on a stock and wishes to tender that stock, the option must be exercised and the stock delivered for the customer to be considered "long."</p>
"Long" To Extent Of Net Long Position	<p>Furthermore, a customer is considered to be "long" only to the extent of his "net" long position in a security. As an example of how a "net" position is created assume a</p>

customer owns 100 shares of XYZ purchased at \$20 and the stock is worth \$30 at year end. If the stock is sold "long," meaning delivered on the sale, the customer must pay tax on a \$10 capital gain.

Instead, the customer borrows another 100 shares of XYZ and sells those shares. The sale of borrowed shares is a tax strategy known as "shorting against the box" - that is, selling short shares that are held "long" in a box somewhere. Under 1997 tax law revisions, this will result in a taxable gain, unless the customer meets very specific tests (which are not on the Series 56 exam). Assuming that the customer meets these tests, the sale does not result in a taxable gain at that point, since different shares were sold. The customer has created the following position:

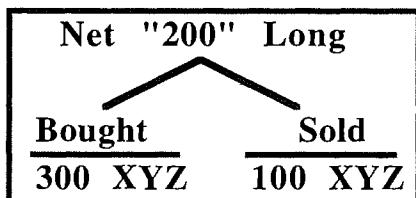
<u>Long</u>	<u>Short</u>
100 XYZ	100 XYZ

At a later date, the customer cover the short position by buying in the borrowed shares, and will pay tax at that point. However, assume that there is a tender offer for XYZ stock at \$40 per share, and the customer wishes to tender. Here is a picture of the customer's net position:



The customer has no ownership position and cannot tender the 100 shares that he holds "long." To tender, the customer has to buy back 100 shares to cover the short and then can tender the remaining net long 100 share position.

If the customer had a position of 300 shares held long and 100 shares held short, then the customer has a "net" long position of 200 shares. In this case, 200 shares of XYZ stock could be tendered. This is pictured following.



Short Tender Rule

This rule, requiring that a customer can tender only to the extent of his or her net long position, is called (confusingly) the "short tender rule." If a customer is net



“0” or net short a security position, the customer cannot tender. The customer can only tender if he or she is net “long” the stock.

1f. ISSUER PURCHASING ITS OWN SECURITIES UNDER THE 1934 ACT

**Rule 10b-18
Sets Requirements
For Issuers That
Wish To Acquire
Their Shares In
The Open Market**

Rule 10b-18

Rule 10b-18 sets the ground rules for issuers or affiliated persons who wish to buy their shares in the open market. If an issuer aggressively buys its stock in the market, or bids for its stock, it can manipulate the market price upwards. Bids and purchases that are made in compliance with Rule 10b-18 will not be considered manipulative activities under Rule 10b-5 (“catch-all” fraud rule).

Rule 10b-18 purchases, as they are known,:

Must be effected through 1 broker/dealer on any given day;

Cannot be the opening transaction;

Cannot be executed within 10 minutes of market close if the security is “actively traded” as designated by Rule 101 of Regulation M (covered next); otherwise, the purchase cannot be executed within 30 minutes of market close;

Must be effected at prices no higher than the current highest independent bid for that security or last reported sale price (whichever is higher);

Cannot exceed 25% of the trading volume in the security that day (except for block purchases handled outside the normal flow of orders).

In essence, the rule says that if an issuer buys in its stock during market “quiet” hours; does not bid up the price of the stock; and does not buy too aggressively; then it will **not** be considered to be manipulating the price of its own securities. Generally, corporations buy back shares and either retire them (increasing reported Earnings Per Share) or use them to fund pension and stock option plans.

SEC REGULATIONS SECTION EXAMINATION

1.

All of the following meet the statutory definition of an "insider" EXCEPT:

- a. Officer of a company
- b. Holder of 10% of the equity securities of a company
- c. Holder of 10% of the debt of a company
- d. Director of a company

3.

Which statements are true regarding broker-dealer requirements regarding "insiders" under the Insider Trading Act Amendments of 1988?

- I Broker-dealers are obligated to establish and enforce procedures to detect and prevent insider violations
 - II Insider rules have forced broker-dealers to adopt "Chinese Wall" policies
 - III Broker-dealers can be held liable for insider trading of their "controlled" employees
- a. I only
 - b. I and II
 - c. II and III
 - d. I, II, III

2.

Under the Securities Act of 1934, liability for misuse of "inside information" rests with the:

- I Tipper if the information results in a securities transaction
 - II Tippee if the information results in a securities transaction
- a. I only
 - b. II only
 - c. I and II
 - d. None of the above

4.

Who can sue to recover damages from convicted "insiders"?

- a. The entire investing public
- b. Any current owner of the issuer's securities
- c. Any person who traded the issuer's securities during the period of "inside trading"
- d. No public suits can be brought after conviction

**5.**

Under SEC Rule 10b-18, which of the following statements are true regarding an issuer purchasing its own securities in the open market?

- I Purchases cannot affect the opening or closing price of the security
 - II Purchases on any given day must be made through 1 market maker or specialist
 - III Purchases on any given day cannot exceed 25% of average daily trading volume (ADTV)
 - IV Block purchases are prohibited
- a. II and III only
 - b. I and IV only
 - c. I, II, III
 - d. I, II, III, IV

6.

A broker comes into possession of material non-public information as the result of a conversation with the chief financial officer of a publicly traded company. At this point in time, which statement is true?

- a. The chief financial officer has violated the insider trading rules
- b. The broker has violated the insider trading rules
- c. Both the chief financial officer and the broker have violated the insider trading rules
- d. Neither the chief financial officer nor the broker has violated the insider trading rules

7.

The SEC "Penny Stock Rule" applies to which of the following stocks trading at \$4 per share?

- I Pink Sheet stock
- II OTCBB stock
- III Capital Market stock
- IV Global Market stock

- a. I and II only
- b. III and IV only
- c. I, II, III
- d. I, II, III, IV

8.

Another name for pre-arranged trading is:

- a. painting the tape
- b. interpositioning
- c. block positioning
- d. dual capacity

9.

Under SEC Rule 15g-1, member firms are exempt from the provisions of the "penny stock rule" if its penny stock business is less than:

- a. 20% of its revenue
- b. 15% of its revenue
- c. 10% of its revenue
- d. 5% of its revenue

10.

SEC Regulation FD covers:

- a. notification to customers of a member firm's privacy policies and practices
- b. selective disclosure of material non-public information by issuers
- c. standardization of disclosure of financial and non-financial information by issuers
- d. registration filings with the SEC by small business issuers

SEC REGULATIONS SECTION EXPLANATIONS

1. The best answer is c. The Securities and Exchange Act of 1934 defines an "insider" as any officer; director; or 10% shareholder of the **equity** securities of the issuer.
2. The best answer is c. The misuse of material non-public information that leads to a securities transaction is a violation for **both** the tipper and the tippee.
3. The best answer is d. All of the statements are true. Under the Insider Trading Amendments of 1988 to the Securities Exchange Act of 1934, broker-dealers are obligated to establish procedures to detect and prevent insider violations by their employees. This has led firms to establish so called "Chinese Walls." If it is found that the firm failed to have the proper procedures in place and that it recklessly disregarded evidence of potential insider violations, the firm can be held liable as well for insider violations.
4. The best answer is c. Insider trading violators can be sued by any investor who held or traded the stock during the period that the violations took place.
5. The best answer is c. Purchases by issuers of their own stock under Rule 10-b-18 cannot affect the opening or closing price of the issuer; must be effected through 1 market maker; and purchases on any given day cannot exceed 25% of average daily trading volume. Block purchases are permitted (since they are handled under special rules that minimize the market impact of the block transaction) and do not count against the daily volume limit.
6. The best answer is d. A violation of the insider trading rules occurs only if a trade occurs using the "inside information" - with both the "tippee" who traded, and the "tipper" who gave the information - being potentially liable. Being in possession of the information, and not trading on it, is not a violation.
7. The best answer is a. The "Penny Stock Rule" applies to non-exchange listed, non-NASDAQ issues trading for less than \$5 per share. Thus it applies to solicitation of customers to buy OTCBB or Pink Sheet issues priced under \$5.
8. The best answer is a. Pre-arranged trading is a prohibited manipulative practice. Another name for this is "painting the tape" - since prearranged trades that are reported represent fictitious pricing and trading activity and are used to induce trading by others to move market prices up or down.
9. The best answer is d. If a member firm's revenue from penny stock transactions is less than 5% of total revenue, then the member firm is exempt from the penny stock disclosure rule requiring that when a customer is solicited to buy a penny stock, the customer must sign and return a detailed suitability statement prior to confirmation of sale. The intent of the rule is to make life difficult for firms that, as a majority of their business, push penny stocks.
10. The best answer is b. Regulation FD (Fair Disclosure), passed in 2000, is basically an elaboration of the insider trading rules. It prohibits issuers from making selective disclosure of non-public information to research analysts, mutual fund managers, and other industry professionals, unless at the same time, the information is broadly disseminated to the public.



SECTION 2: PROHIBITED TRADING PRACTICES

2a. OVERVIEW

Certain trading practices, by market makers and non-market makers alike, are violations of SRO and SEC rules. The most important of these are covered following.

2b. FRONT RUNNING

Front running a customer order is prohibited. For example, if a market maker receives a large block order that is likely to have a market impact, it cannot take a position in that stock prior to filling the order (that is, "front run" the order). This prohibition applies to the member firm's proprietary accounts; accounts of the member firm's employees; and accounts over which the member firm has discretion.

In addition, a member cannot get around the front running prohibition by taking positions in derivative securities prior to effecting the large block order. For purposes of the rule, a block is defined as an order for 10,000 shares or more. Finally, a member firm cannot avoid the rule by "arranging" for partial executions of the full block amount so that the portions filled fall below the "block" definition.

2c. TRADING AHEAD OF RESEARCH REPORTS

No Trading Ahead Of Research That Will Be Distributed To Customers

If a firm's research department is going to issue a report on that company that is likely to affect the market price of the issue, the firm's market making desk cannot alter its pre-existing inventory position in that issue based on advance knowledge of the recommendation. Once the recommendation is disseminated, the firm is not bound by this restriction.

For example, assume that a member firm is about to issue a bullish research report about ABCD Corp. In order to meet anticipated customer demand, the member accumulates a position. After doing so, the member issues its report, filling customer orders from inventory. Under SRO rules, this action is prohibited.

This prohibition applies to member firms that are market makers in NASDAQ securities and exchange listed securities; and applies to taking positions in derivative securities as well in advance of the issuance of a research report.

The prohibition does not apply when changes in inventory are related to unsolicited order flow or to research done solely for in-house trading purposes (these reports are not released to customers).

Chinese Wall

Each SRO recommends, but does not require, that the member firm place a “Chinese Wall” between research departments and trading departments to prevent traders from obtaining and using advance knowledge of impending research reports.

2d. TRADING AHEAD OF CUSTOMER MARKET ORDERS

Member Cannot Compete With Customer Market Orders

The basic “idea” behind the Limit Order Protection (Manning) rule, covered in the previous chapter, is applied to market orders under this rule.

If a member holds a customer market order, the member cannot trade that security on the same side of the market for its own account, unless it immediately thereafter, executes the customer market order (up to the size and at the same price at which it traded for itself). Thus, customer market orders are filled first! In addition, the rule requires that the orders be filled at the inside market (NBBO - National Best Bid and Offer).

If a member holds multiple market orders on both sides of the market, it must cross them, before it can fill 1 side out of its inventory account.

The rule applies to trades of exchange listed and NASDAQ stocks (not to OTCBB or Pink Sheet issues).

2e. INTIMIDATION / COORDINATION

Based partly on the settlement reached between the Justice Department and NASDAQ market makers that were found to be engaging in a whole range of anti-competitive practices, each SRO issued interpretations relating to intimidation and coordination.



Members Cannot Coordinate Prices

The interpretations state that members cannot coordinate prices with other members, including quotations; nor can firms direct or threaten other firms to alter a price or quotation.

Members Cannot Threaten Other Members

Similarly, members cannot engage in any conduct that harasses, intimidates, or otherwise attempts to force another member to change or maintain a price or quotation. Such intimidation could take the form of threatening phone calls, refusal to trade, refusal to allow participation in underwriting syndicates, etc.

In other words, members must be able to set their own bid and ask quotes, spreads, and quotation size, freely.

2f. INTERPOSITIONING

Interpositioning Prohibited Unless It Is Demonstrated That Better Execution Was The Result

Each SRO prohibits a practice known as interpositioning. When your firm gets an order to buy or sell, the firm cannot go through a middleman firm who in turn goes to the market maker. Therefore, your firm cannot interposition another firm (who would earn a commission on top of your firm's commission) between itself and the market maker. Interpositioning is prohibited unless it can be demonstrated that the use of a middle firm allows for a better execution. Better execution means that the purchase price was lower, or the sale proceeds were higher, than the prevailing inter-dealer market.

Correspondent Relationships Are Allowed

The prohibition on interpositioning does not prohibit "correspondent" relationships that are common to the industry. For example, a small broker-dealer dealing primarily in Pink Sheet issues may not have NASDAQ terminals, and may use another larger member firm to handle NASDAQ trades, as part of a written trade and clearing agreement. Under these agreements, the clearing firm is paid out of the commission charged to the customer. There are no extra charges to the customer - nor are extra charges permitted under SRO rules, since that would be an "interpositioning" violation.

Regarding clearing arrangements, the following must be known:

Clearing Agreement

The clearing agreement between an introducing firm and its clearing agent must specify the responsibilities of each party. The clearing agreement might require that all trades of the introducing firm go to the clearing broker; or it can allow the introducing broker to execute trades through firms other than the clearing broker, with these trades being reported to the clearing broker for settlement and clearance. This might be specified by the introducing

firm when it wants the flexibility to direct a trade to a market maker that it feels is best qualified to handle the transaction.

Give Up Clearing Arrangement

If the agreement allows the introducing firm to execute "away" from the clearing broker, this is termed a "give-up" clearing arrangement. When executing away, the introducing firm "gives up" the name of its clearing broker to each firm with which it enters orders. This alerts these firms that payment for purchases and delivery of securities sold will be handled by the clearing broker, not the introducing firm. The clearing broker in this case, is where the "prime brokerage account" is being maintained by the introducing firm.

Prime Brokerage Account

In prime brokerage, any number of executing brokers can handle parts of a trade, but the entire trade will be cleared and settled by the prime broker. The terms "give-up" and "step-out" are used in prime brokerage arrangements, and their differences must be known for the exam.

"Give-Up"

In a "give-up," the executing broker-dealer provides the clearing number of the prime broker when reporting the trade for comparison and clearance. The executing broker "gives up" the name of the clearing prime broker when the trade is being reported.

"Step-Out"

In a "step-out," the executing broker provides the clearing number of the prime broker **after** the trade is reported for comparison and clearance. Thus, the executing broker "steps-out" of the reported trade for comparison and clearance purposes. A step-out is used to move a reported trade from the account of the executing member to the clearing member. It is a movement of position only.

2g. OTHER PROHIBITED ACTS

Manipulation of the market is prohibited in any form. Various ways in which members have been found to manipulate the market, and thus are violations are:

Trading Pools

Trading Pools: These are groups of traders who band together to trade a security at successively higher and higher prices. The "pool" participants take a long position in the security, and agree to rebate each other for losses incurred on the pooled transactions with each other. As the pool inflates the price of the issue and other investors see the frenetic trading activity, those outside investors



jump in and buy; at which point the pool members jump out at an artificially high price.

Each SRO prohibits members from participating in such pools, from providing credit to such pools and from managing such pools. To monitor member activity, each SRO requires that any member, prior to participating in any joint account, must file a report with the SRO including;

Name of account and each participant;

Purpose of account;

Name of member carrying and clearing the account;

Copies of written agreements relating to the account.

Wash Trades

Wash Trades: This is where a single member buys and sells a security, over and over, to create the appearance of trading activity with no actual change in ownership (so the trades are really a "wash" - hence the name). This is sometimes called "painting the tape," since a series of fictitious trades is being reported. Since false trades are being reported, this is a violation.

Painting The Tape

Marking To Close **Marking To Open**

Marking To Close or Marking To Open:

Marking to Close is trading at the close, or falsely reporting trades at the close, just to affect the stock's closing price.

Marking to Open is trading at the open, or falsely reporting trades at the open, just to affect the stock's opening price.

Each SRO has disciplined program traders for "marking the close" and "marking the open" violations. These firms attempt to arbitrage the difference between an index option's value (which can be based on market open or market close, depending on the index option) against the actual prices of the securities that are included in the index. The illegal practice was placing sequential orders at the open or close for the securities in the index to either move their price up (or down), so that the index arbitrage position would show a profit.

Trade Shredding

“Trade Shredding:” This is the practice of splitting large orders into multiple smaller orders for execution for the primary purpose of maximizing “payments for order flow,” is a prohibited practice. These payments could come in the form of credits, commissions, rebates or fees or any other payment of value.

At The Market Offerings

At the Market Offerings: A member cannot represent to a customer that a security is being offered “at the market, unless the member has reasonable grounds to believe that a market exists for the security, other than the market created by that member.

Selling Dividends

Selling Dividends: A member cannot induce a customer to buy a stock that is about to pay a dividend by claiming that he or she will “miss out” if the stock is not purchased before the ex-date. If the customer buys on the ex-date or after, the customer pays a price that has been reduced for the dividend that the customer will now no longer receive. Thus, from an economic standpoint, it makes no difference if the customer buys prior to the ex date or after the ex date.



PROHIBITED TRADING PRACTICES SECTION EXAMINATION

1.

Interpositioning is:

- a. permitted without restriction
- b. permitted if it results in the same or better execution for a customer
- c. permitted if it results in a better execution for a customer
- d. prohibited in all circumstances

2.

Under SRO rules, member firms must create Chinese Walls between all of the following **EXCEPT**:

- a. Research Department and NASDAQ Trading Desk
- b. Investment Banking Department and NASDAQ Trading Desk
- c. Mergers and Acquisitions Department and NASDAQ Trading Desk
- d. Reorganization Department and NASDAQ Trading Desk

3.

The prohibition against increasing inventory in anticipation of the release of a bullish research report applies to:

- a. NASDAQ securities
- b. Listed securities traded in the Third Market
- c. Both of the above
- d. Neither of the above

4.

The prohibition against trading ahead of a known block order applies to:

- I Proprietary accounts
- II Employee accounts
- III Employee-related accounts
- IV Accounts where the member has discretion

a. I only

b. I and II only

c. II and III only

d. I, II, III, IV

5.

An institutional customer selects one firm to provide custody and financing of securities, while orders to buy or sell are placed with executing brokers. This is an example of a:

a. wrap account

b. give up (clearing) agreement

c. prime brokerage account

d. step out account

6.

The last trade in ABCD stock occurred at \$50 per share. An OTC Equity Trader effects multiple buy-sell trades in that stock for the firm's account at successive prices of \$40, \$45, \$50, \$55 and \$60 per share. These transactions are:

a. wash trades

b. matched sales

c. boxed trades

d. pattern day trades

7.

A proprietary trading desk trades ahead of a customer limit order placed with the firm's market making desk. This action is:

- a. permitted without restriction
- b. permitted as long as a Chinese Wall is in place
- c. permitted as long as the firm has a no-action letter from the SEC
- d. prohibited

8.

"Marking the Close" is best described as a:

- a. series of trades at or near the close
- b. series of trades at or near the close intended to down-tick the security
- c. series of trades at or near the close intended to up-tick the security
- d. series of trades at or near the close intended to either up-tick or down-tick the security

9.

A trader at a large market making firm calls a counterpart at another firm and strongly suggests that the firm raise its offer by 5 cents in order to allow his firm to reduce inventory. In return, the trader promises order flow. This action is

- a. permitted
- b. permitted if the agreement is documented in writing
- c. permitted with the approval of the general principal
- d. prohibited

10.

A member that has knowledge of a client order that has not been entered on a marketplace that could reasonably be expected to affect the market price of the security is prohibited from:

- I entering a proprietary order for the purchase or sale of that security
 - II soliciting an order from another person for the purchase or sale of that security
 - III informing any other person, other than in the necessary course of business of the client order
- a. I only
 - b. I and II
 - c. II and III
 - d. I, II, III



PROHIBITED TRADING PRACTICES EXAMINATION EXPLANATIONS

1. The best answer is c. Interpositioning a "middle-man" firm between a customer and the best available market is prohibited unless it can be demonstrated that the use of the "middle-man" firm will result in a better (not just the same) execution for the customer.
2. The best answer is d. EACH SRO requires its member firms to create "Chinese Walls" to stop the flow of information between the member firm's research department and its trading desk. This is to stop the trading desk from "trading ahead" of an impending research report - a prohibited practice. Similarly, member firms must place Chinese Walls between their investment banking department and their trading desk; and their mergers and acquisitions department and their trading desk; since it would be tempting to trade based on news of an upcoming investment banking or takeover deal. The reorganization department of a broker-dealer notifies existing shareholders of corporate reorganizations (such as bankruptcies). This department is dealing with "already released" news, so there is no need for a Chinese Wall between it and the member firm's trading desk.
3. The best answer is c. Purposefully increasing inventory in anticipation of the release of a bullish research report is termed "trading ahead of research" and is a violation of SRO rules. The rule applies to member firms who trade NASDAQ stocks; exchange listed stocks; and derivatives on these securities.
4. The best answer is d. Front running a block order is a prohibited practice. The prohibition on front running applies to member proprietary accounts; employee and employee-related accounts; and accounts where the member has been given discretionary authority.
5. The best answer is c. A prime brokerage account is one where a customer, generally an institution, selects one broker (the prime broker) to provide custody and financing of securities purchased, and other brokers (executing brokers) to buy and sell on behalf of the customer. Unlike a prime brokerage account which involves a customer, a give-up clearing arrangement is between two members. For example, member firm A agrees to settle and clear all trades entered by member firm B.
6. The best answer is a. Effecting a series of buy-sell transactions (these are wash trades, since they "wash" each other out) without any change of ownership is a "time-honored" manipulation known as "painting the tape" - it gives the appearance of active trading in a security when this is not the case. Note that Choice d is incorrect because only retail customers can be defined as "pattern day traders."
7. The best answer is b. This one is interesting. A member firm cannot "trade ahead" of, or front-run, a customer limit order. However, if the firm has a Chinese Wall in place between its proprietary trading desk and its market making desk, then each should have no knowledge of what the other is doing. In that case, there is no violation because the proprietary trading desk does not know about the customer limit order received by the firm's market making desk. On the other hand, if there were no Chinese Wall in place, this would be a clear violation.

8. The best answer is d. “Marking to close” refers to trading, at or near the close, to influence the closing price of the security, either up or down. This is a prohibited manipulative practice.

9. The best answer is d. This is a form of intimidation, which is prohibited under SRO rules.

10. The best answer is d. Consider this question to be a learning lesson in everything that is prohibited about “front running.” Prior to entering a customer order that is likely to have market impact (meaning a big institutional order), a member firm cannot place an order in that security for the firm’s account; cannot solicit others to place orders; and cannot inform others about the existence of the market-impact order so that they can “front run” it.



SECTION 3: OPTIONS CLEARING CORPORATION RULES

3a. EXERCISE PROCEDURES

The Options Clearing Corporation allows "American Style" option contracts to be exercised by the member firm at any time prior to expiration. The exercise notice must be tendered to the O.C.C. between 9:00 AM and 7:00 PM Central Standard Time (the O.C.C. is based in Chicago) on any business day. The tender becomes irrevocable at 7:00 PM Central Standard Time on the date of tender.

If the exercise notice is to be tendered on the day prior to expiration (this would normally be the most active day for exercises), the O.C.C. requires more time to handle the exercise. On the day prior to expiration, the O.C.C. delivers a Preliminary Report to each member before 7:00 AM CST listing each expiring option contract for that member's account.

**Customer Exercise Cut Off Time:
4:30 PM CST On Day Prior To Expiration**

The Exchanges have established an exercise "cut off" time of 4:30 PM CST (5:30 PM EST) on the business day prior to expiration. This is the latest time at which the member can accept exercise instructions from customers. Based upon this information, the member knows which contracts are to be exercised.

The member must indicate on the Preliminary Report which contracts, if any, that it wishes to exercise. The Preliminary Report must be returned to the O.C.C. by 9:00 AM CST on the expiration date.

By 2:00 PM CST on the expiration date, the O.C.C. will deliver a Final Exercise Report to each clearing member. It is the same report as the "Preliminary," but it now includes the member's exercise instructions.

Automatic Exercise If Contract Is \$.01 In The Money

The O.C.C. will exercise those contracts designated by the member and, in addition, if the Final Report is **not** returned, or if exercise instructions are not given on the report, the O.C.C. will:

exercise all option contracts that are "in the money" by \$.01 or more; and

Options Expire At 10:59 CST

all unexercised contracts will expire at 10:59 PM Central Standard Time (11:59 PM EST).

CEA - Contrary Exercise Advice

A special form called a "CEA" - Contrary Exercise Advice - must be used to stop the automatic exercise or to change the parameters of the automatic exercise. This instructs the OCC of the customer's "contrary intention." These are accepted for up to 2 hours after the 4:30 PM CST (5:30 PM ET) exercise cut-off (so they are accepted until 6:30 PM CST (7:30 PM ET) on the third Friday).

3b. ASSIGNMENT OF EXERCISE NOTICES

O.C.C. Assigns Exercise Notices To Members On Random Basis

Once an exercise notice has been accepted by the O.C.C., it is assigned to an open short position that day based upon a random selection program. Since the O.C.C. keeps all position records in the name of the clearing member firms, the member firm receives the exercise notice.

Exercise notices accepted by the O.C.C. are assigned on or before 7:00 PM CST on the following business day for regular way trades. If a cash trade in an option is effected, the contract can be exercised and assigned on the same day as the trade.

Member Assigns Exercise Notices To Customers On Either FIFO or Random Basis

Once the member firm receives the exercise notice, it must assign the notice to a specific customer that has that position with the member firm. It is allowed for the member firm to use either a "First In, First Out" (FIFO) selection basis or a random selection basis. The "random basis" used must be approved by the Exchange. Furthermore, members cannot change their allocation method unless this is approved, in advance, by the Exchange.

Customer Informed In Writing Of Allocation Method

Each member firm is obligated to inform its customers, in writing, of the method that it uses to allocate exercise notices to customers, explaining its manner of operations and the consequences of that system.

Assignment Records Kept For 3 Years

All work papers and documentary materials relating to the assignment procedure and allocation methods used by the firm must be retained for 3 years.

3c. CLEARANCE PROCEDURES

If a customer who is short a call is assigned an exercised notice, he is obligated to:

For Equity Options: Deliver the underlying security in good form "promptly." This is defined as no later than 12:00 Noon CST, 3 business days after exercise date. Please note that the assignment notice may come 1 or 2 days after



exercise, leaving the writer 1 or 2 business days to deliver within the definition of "promptly."

The assignment notice will specify the place of delivery, which can be to the O.C.C. or directly to offices of the member firm that exercised the contract. The Delivering Member pays all expenses of delivery. Partial deliveries must be accepted. The delivering firm can require payment in the form of a certified, cashier's or bank check.

**Exercise Of Call
Prior To Ex Date With
Settlement Occurring
After Record Date
Requires Due Bill**

If the exercise occurred prior to an "ex date," then the receiving firm is entitled to any dividend payments made on the underlying stock. If the exercise occurred on, or after an "ex date," then the delivering firm is entitled to any dividend payments made on the underlying stock. If exercise occurs **before** the ex date, and the stock is delivered **on or after the record date**, then the receiving firm will not be on the corporation's record books to get the dividend to which it is entitled. The corporation will issue the dividend check in the name of the delivering firm (which is still on the record books). In this case, the delivering firm must deliver the underlying securities with a "due bill check" in the amount of the dividend.

If a customer who is short a put is exercised, he is obligated to:

For Equity Options: Deposit the funds to buy the securities "promptly," as defined under Regulation T. In practice, the funds must be deposited no later than 12:00 Noon CST on the 3rd business day after exercise. If the customer purchases the security in a cash account, 100% of the aggregate exercise price must be deposited (plus any commission costs). If the customer purchases the security in a margin account, 50% of the aggregate exercise price must be deposited.

Regarding exercise settlement of index options, debt options, and foreign currency options, the following rules apply.

If a the writer of a call contract is exercised:

For Index Options: Deliver the "in the money" amount to the Options Clearing Corporation by the business day after exercise. The funds are due to the O.C.C. by 9:00 AM CST, and are credited by the O.C.C. to the clearing member's account at 10:00 AM CST that day.

For Treasury Bill Options: Deliver the contract amount of Treasury Bills (\$1,000,000 face amount) by Thursday of the week following exercise.

For Treasury Note and Bond Options: Deliver the contract amount (\$100,000 face) on the 2nd business day following exercise.

For World Foreign Currency Options: Deliver the "in the money" amount to the Options Clearing Corporation by the business day after exercise.

If the writer of a put contract is exercised for any of the above contracts, he or she must deposit 100% of the purchase amount for the contracts in a cash account, or the appropriate margin percentage to buy in a margin account no later than settlement date

3d. O.C.C. REPORTS

The reports created by the O.C.C. are:

Daily Position Report

Daily Position Report: Every day, before 9:00 AM CST, the Options Clearing Corporation issues to its clearing members, a report that details:

All Exchange transactions by that member that will settle that day;

The amount of net premiums either due the member, or due to the O.C.C. as a result of those transactions.

Any net premium due must be paid to the O.C.C. no later than 10:00 AM CST that day. In addition, the report shows all exercises, and assignments for that day, so that the report really represents a complete activity report of **all** of the firm's transactions.

Daily Margin Report

Daily Margin Report: Every day, before 9:00 AM CST, the Options Clearing Corporation issues to its clearing members, a report that details:

The amount of margin required for the Clearing Member based upon that firm's outstanding short positions and exercised contracts;

The amount of margin on deposit by the member;

The amount of any margin excess or deficiency;

Any margin deficiency must be satisfied no later than 9:00 AM CST on the day the report is issued.



Note that both the Daily Position Report and the Daily Margin report are prepared by S.I.A.C (Securities Industry Automation Corporation) for the O.C.C..

If there is a margin excess, it may be applied against any net premiums due, as shown on the Daily Position Report.

Acceptable Margin Deposits

To satisfy a margin deficiency, the following are acceptable deposits from clearing members (**not** from retail customers):

Acceptable Margin Deposits

Cash;

In lieu of cash, members are permitted to deposit negotiable Government securities, Letters of Credit from approved institutions, and marginable common stocks to meet margin calls;

For open short call positions, exercised short call positions, and exercised long put positions - deposit of the underlying instrument, or properly executed escrow receipt;

For open short put positions, exercised short put positions, and exercised long call positions - deposit of cash; or properly executed bank guarantee letter;

For open short put positions, and exercised short puts, instead of depositing cash, the O.C.C. also allows the deposit of Treasury Bills with a currently market value equal or greater to the exercise settlement amount;

For spread positions, the O.C.C. assumes that all positions in clearing member accounts are "unsegregated," that is, long and short positions are separately margined. The O.C.C. requires that the member firm specify those positions that shall remain "unsegregated." These unsegregated positions must be "bona-fide" spreads, are subject to the deposit of "spread margin" in cash.

Depository Record (Escrow Report)

Depository Record: Any bank or other depository that has an "escrow agreement" with the O.C.C. receives a report of the escrow deposits made to the O.C.C. This is sometimes called the "Escrow Report." This report is made daily, and details escrow deposits, escrow rollovers, and escrow releases due to contracts expiring.

3e. POSITION AND EXERCISE LIMITS

Position limits were covered in the options chapter, but this section of the exam goes into them in greater detail. We know that position limits are applied to each “side” of the market, with:

the “upside” consisting of long calls and short puts;

the “downside” consisting of long puts and short calls.

The actual position limits are based on the trading volume of the underlying stock, over the preceding 6 months. For the CBOE, these are:

Limit	Required Trading Volume
25,000 contracts	None
50,000 contracts	20 Million Shares
75,000 contracts	40 Million Shares
200,000 contracts	80 Million Shares
250,000 contracts	100 Million Shares

Acting In Concert Prohibition

The position limits are applied to both individuals and parties “acting in concert.” The acting in concert prohibition applies when an individual makes the investment decisions for an account or accounts or materially influences the investment decisions of any person. The following are presumed to be “acting in concert:”

all parties to a joint account;

general partners in a partnership account;

when an individual holds an ownership interest of 10% or more in an entity or shares in 10% or more of the profits or losses of an account;

when accounts have common directors or management;

when a person or entity has authority to execute transactions in an account (meaning that person has discretionary authority).

In addition, the Exchange can require aggregation of accounts if it finds similar trading patterns among separate entities; common supervision which extends beyond the “norm;” and the degree of contact and communication between the managers of separate accounts.



Exempted from the position limits are bona-fide hedge transactions. These include:

“Equity Hedges”

Long Stock / Long Put;
Short Stock / Long Call
Long Stock / Short Call
Short Stock / Short Put

“Collars and Reverse Collars”

Long Put / Short Call vs. Long Stock Position
Short Put / Long Call vs. Short Stock Position

“Box Spreads”

Long Call / Short Call and Long Put / Short Put (Diff. Strike Prices)

Delta Neutral Positions

Finally, the rules exempt “Delta Neutral Hedges” from the position limits. If a customer establishes a “delta neutral” stock position, then he or she is long and short the stock at the same time. Therefore, any movement in stock price will produce no gain or loss. A “delta neutral” hedge adds an option position to profit from something other than price movement. For example, the customer could sell call and put options that were getting close to expiration against the stock positions to profit from accelerating time decay. This would be exempt from the position limits.

Exercise Limits

Exercise limits are set by the CBOE at the same levels as the position limits. The holder of long options contracts cannot exercise in excess of 25,000, 50,000, 75,000, 200,000 or 250,000 contracts, as applicable, over 5 consecutive business days.

Regarding index option contracts, the position limits and exercise limits are set at different levels, depending on the popularity of the index option.

OPTIONS CLEARING CORPORATION RULES SECTION EXAMINATION

1.

Which of the following options positions will be automatically exercised by the Options Clearing Corporation on expiration date?

- a. Equity options that are "in the money at least \$.01
- b. Equity options that are "in the money at least \$.02
- c. Equity options that are "in the money at least \$.03
- d. Equity options that are "in the money at least \$.05

2.

The latest time for a customer to exercise an equity option is:

- a. 4:30 PM Central Standard Time on the business day prior to expiration
- b. 4:30 PM Central Standard Time on expiration date
- c. 10:59 PM Central Standard Time on the business day prior to expiration
- d. 10:59 PM Central Standard Time on expiration date

3.

Assignment of exercise notices to customers by member firms is permitted on a:

- I First In, First Out Basis
 - II Random Selection Basis
 - III Last In, First Out Basis
 - IV Size Priority Basis
- a. II only
 - b. I or II only
 - c. I or III only
 - d. I, II, III, or IV

4.

Which of the following statements are true regarding the exercise of an equity put contract?

- I The holder is obligated to make delivery of the stock 3 business days after exercise date
 - II The holder can borrow the shares to make delivery by depositing 50% margin in cash
 - III The writer is obligated to take delivery of the stock 3 business days after exercise
 - IV The writer is obligated to pay 50% margin if the trade is effected in a margin account
- a. I and II only
 - b. III and IV only
 - c. I and III only
 - d. I, II, III, IV

5.

Which of the following are acceptable margin deposits to the O.C.C. from the writer of a put?

- I Cash
- II Treasury Bills
- III Underlying Stock

- a. I only
- b. II only
- c. I and II
- d. I, II, III

6.

Exercise settlement of index options takes place:

- a. on exercise date
- b. on the business day following exercise date
- c. 3 business days after exercise date
- d. on the Wednesday following the week of exercise

**7.**

Daily position reports issued by the Options Clearing Corporation will show:

- I All opening and closing purchases of puts and calls for that day
 - II Net premiums debited or credited to the member
 - III Net margin to be deposited by the member
 - IV Escrow positions held for the member
- a. I and II only
 b. III and IV only
 c. I, II, III
 d. I, II, III, IV

10.

Which of the following positions is subject to position limits?

- a. Put-Protected Long Stock
- b. Collar
- c. Delta Neutral Hedge
- d. Short Stock / Long Put

8.

A customer exercises an equity put option on Monday, May 10th. The writer receives the exercise notice on Wednesday, May 12th. The writer is obligated to:

- a. deliver stock on Thursday, May 13th
- b. deliver stock on Monday, May 17th
- c. deliver cash on Thursday, May 13th
- d. deliver cash on Monday, May 17th

9.

Which of the following reports are prepared daily by the O.C.C.?

- I Position Report
- II Margin Report
- III Depository Record

- a. I only
- b. II only
- c. III only
- d. I, II, III

OPTIONS CLEARING CORPORATION RULES SECTION EXAMINATION EXPLANATIONS

1. The best answer is a. The O.C.C. will automatically exercise any contracts for equity options that are in the money by \$.01 more as of the close of trading on the third Friday of the month.
2. The best answer is a. The last time for a **customer** to exercise an equity option is 4:30 PM Central Standard Time (5:30 PM Eastern Standard Time) on the Friday prior to expiration (unless that Friday is a legal holiday, in which case the last day to exercise the contracts would be Thursday).
3. The best answer is b. Member firms are permitted to assign exercise notices to customers on either a First In, First Out basis, or a random selection basis approved by the Exchange. The O.C.C. itself only assigns exercise notices to clearing members on a random basis.
4. The best answer is d. If an equity put contract is exercised, the holder is obligated to deliver the stock in 3 business days, and the writer must take delivery on that date. If the holder does not own the stock, he can borrow the shares and sell them short in a margin account. Short sales require the deposit of 50% margin under Reg. T. If the writer takes delivery in a cash account, he is obligated to deposit 100%; if he takes delivery in a margin account, he must deposit 50% under Reg. T.
5. The best answer is c. The Options Clearing Corporation accepts margin deposits of cash or Treasury Bills from clearing members that have short positions. If these contracts are exercised, the member is obligated to buy the stock. The Treasury Bills are essentially a "cash equivalent" and can be applied against required payment if exercised. The deposit of the underlying stock is **not** acceptable for short put positions, since, if exercised, the customer is obligated to buy **more** stock. The deposit of stock is only acceptable for short call positions (where if the contract is exercised, those shares will be delivered).
6. The best answer is b. The exercise of index options settles in cash on the business day following exercise.
7. The best answer is a. The Daily Position Report shows all options transactions and open positions, with premiums credited or debited to the member firm account, for that day. Net Margin would be shown on the Daily Margin Report; escrow positions would be shown on the Daily Depository Record Report.
8. The best answer is c. The writer of an equity put option is obligated to buy (pay cash) if exercised. Settlement takes place 3 business days after **exercise** date - the same as a regular way stock trade.
9. The best answer is d. All of the reports listed are prepared daily by the O.C.C. - the Position Report, Margin Report, and Depository Record.
10. The best answer is d. Speculative position limits to not apply to bona-fide hedge positions. A long put used to hedge a long stock position is therefore excluded, as is a collared long stock position (buy a put and sell a call against the stock). Delta neutral



hedges are excluded. A short stock / long put position is not excluded from the position limits because these are both on the "downside" of the market and do not offset (hedge) each other.

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SECTION 4: SUPERVISORY RULES

4a. GENERAL SUPERVISORY RULES

Copy Of Written Supervisory Procedures Kept In Office Of Supervisory Jurisdiction	Members must establish, maintain and enforce written supervisory procedures over the activities of all registered representatives and associated persons. It is the responsibility of the principal, in the designated Office of Supervisory Jurisdiction (or simply a designated supervisory office), to carry out the procedures. A copy of the written procedures must be kept in each OSJ.
OSJ Defined	An OSJ as an office where any of the following activities take place: <ul style="list-style-type: none"> Order execution and/or market making; Structuring of new issue offerings; Final approval of new accounts; Review and approval of customer orders; Review and approval of advertising/sales literature; Responsibility for supervising activities at one or more branch offices.
OSJ Reviews And Endorses All Orders	Every member is required to review and endorse, in writing, all transactions of registered representatives. This function must be performed by the registered principal.
OSJ Review Of Correspondence Sent And Received	Every member is required to review all incoming and outgoing correspondence of its registered representatives with the public (both written and electronic) that relates to its investment banking or securities business. Part of this review is the requirement to include procedures that identify and handle customer complaints.
Correspondence Compliance Procedures	If the member firm institutes a program that includes procedures to train representatives in the firm's procedures governing correspondence; and that audits these communications to insure compliance; then advance written approval of correspondence sent is not required. On the other hand, if the firm does not implement such a program, then written approval by a registered principal of each piece of correspondence sent by a representative is required.

Periodic Account Inspection At Branches	Every member is required to review the activities of each branch office, including periodic inspections of customer account records, to detect irregularities.
Annual Reviews	<p>The supervisory rules require the following annual reviews</p> <p>Annual inspection of each OSJ;</p> <p>Annual review of the businesses in which the firm engages, designed to detect and prevent violations of securities laws and rules;</p> <p>Annual review with each registered representative and each registered principal of compliance matters relevant to that person's activities. This review can be performed individually or collectively; and can be done in person or remotely. The main requirement is that the review be "interactive."</p>
Review Of Each Applicant's Registration Via U-4	<p>For each registered representative hired by the member firm, the principal in the OSJ is responsible for investigating and ascertaining the applicant's:</p> <p>Good character;</p> <p>Business Repute;</p> <p>Qualifications; and</p> <p>Experience.</p> <p>The principal's signature on the applicant's U-4 form (Uniform Securities Industry application) certifies that this occurred.</p>
Annual Firm Element Continuing Education	<p>In addition, the OSJ is responsible for preparing and delivering a Continuing Education program annually to all registered persons (except those that solely trade with other industry professionals). The annual training plan must consider compliance issues, recent regulations and products, customer complaints, and any other items that are deemed to be of importance.</p> <p>This annual "Firm Element" Continuing Education program must be documented in a written training plan. Delivery of the training to all participants must be documented, and some form of measurement of the participant's understanding of the training must be employed.</p>



4b. ANTI-MONEY LAUNDERING (AML) RULES

PATRIOT Act

After the September 11th World Trade Center bombing, Congress quickly passed the PATRIOT (Providing Appropriate Tools Required to Intercept and Obstruct Terrorism) Act. This Act requires securities firms and financial institutions to:

- establish written anti-money laundering programs;
- provide ongoing training to all employees in procedures to detect and prevent money laundering;
- report suspicious transactions and activity.

High Risk Customers Or Transactions

Because of this, the "Suitability" rule now must consider the risk posed by particular customers or transactions. Thus, a higher level of scrutiny must be given to customers:

- whose home country is **NOT** a member of FATF - the Financial Action Task Force - an inter-governmental body of 29 countries that combats money laundering worldwide;
- who reside in, are incorporated, or operate from, foreign jurisdictions that have bank secrecy laws;
- who operate cash-intensive businesses.

Verification Of Name/Address

When opening an account for a customer, the firm must independently verify the customer's name and address as given (most firms are now doing this by getting a photocopy of the customer's driver's license or other government issued identification).

Non-Resident Alien Passport Number

For non-resident aliens, the firm must obtain the customer's passport number and all necessary U.S. tax forms. (Note that most firms are also getting a photocopy of the passport as well, to meet the requirement to independently verify the customer's name and address.)

Matching To Terrorist Watch List

As part of the account opening procedure, the member firm must match the customer's name against a terrorist watch list maintained by the federal government - and if there is a match, the member firm cannot open the account and must notify the appropriate federal authorities. In addition, the customer must be given notice that this will occur.

Suspicious Activity Reports (SARs) Within 30 Days

The Act requires broker-dealers to file SARs (Suspicious Activity Reports) with FINCEN within 30 days. FINCEN - Financial Crimes Enforcement Network - part of the Department of Homeland Security - acts as the central

collection point for these reports. FinCEN provides this intelligence information to the appropriate law enforcement groups.

Potential Money Laundering Acts At Account Opening

Some indicators of potential money laundering at the account opening stage are the customer:

- having an unusual concern with the firm's compliance with government reporting requirements;
- being reluctant to reveal information about his or her business activities;
- furnishing unusual or suspect identification or business documents;
- wishing to engage in transactions that lack business sense or that are inconsistent with the customer's investment strategy;
- acting as agent for another entity but is evasive or reluctant about providing information about that entity;
- having difficulty describing his or her business or lacking general knowledge of his or her industry.

Potential Money Laundering Acts Related To Account Activity

Some indicators of potential money laundering related to account activity are the customer:

- attempting to make frequent or large deposits of currency or cash;
- engaging in cash transactions structured to be under the \$10,000 reporting limit (cash transactions of over \$10,000 are required to be reported to FinCEN within 15 days);
- engaging in multiple transfers of funds or wire transfers to countries that are considered to be non-cooperative by FATF and FinCEN;
- engaging in sudden and unexplained extensive wire activity;
- making a funds deposit followed by an immediate request that the funds be transferred to another party, without any apparent business purpose;
- making a funds deposit for the purchase of making a long-term investment, followed shortly thereafter by a request to liquidate the position and transfer the proceeds out of the account;



having multiple accounts under single or multiple names with a large number of inter-account transfers, for no apparent business reason; engaging in excessive journal entries between accounts without an apparent business purpose;

depositing bearer bonds followed by an immediate request for the disbursement of funds;

exhibiting a total lack of concern regarding risks, commissions and other transaction costs.

In addition, the firm should monitor account activity, specifically looking for unusual:

wire transfer activity;

deposits of cash aggregating in excess of \$10,000;

deposits of cash, cashier's checks, money orders and travelers checks, to detect structuring of such deposits.

Each SRO has created a specific rule to deal with money laundering issues. These require that each member firm:

establish and implement policies and procedures to detect and report suspicious transactions;

provide for independent testing for compliance to be conducted by member personnel or a qualified outside party;

designate a principal responsible for implementing and monitoring day-to-day operations and internal controls of the program;

provide for ongoing training of appropriate personnel.

The rule on creating a firm's AML (Anti-Money Laundering) policy is quite generic, however industry interpretations include the following:

AML Program Should Include Risk-Based Know Your Customer (KYC) Evaluations

The AML Policy should include "KYC" (Know Your Customer) procedures that permit the firm to make a reasonable risk-based determination as to its customers, its customers' sources of income, and expected activity. In doing so, the firm must assess the special risks that different types of accounts present and base the nature and amount of account documentation and ongoing account monitoring on this.

The AML Policy should break down types of suspicious activity into 3 areas for monitoring - wire transfers; deposits; and monetary instruments. It should centralize its systems for filing SARs (Suspicious Activity Reports); and should designate a person to determine whether an activity is reportable and for maintaining SARs.

4c. PORTFOLIO MARGINS

The “standard” method of computing margin requirements is “strategy based.” This means that a prescribed percentage margin is applied, as set by Regulation T for initial margins, and each SRO, such as the CBOE or FINRA, for minimum maintenance margins. These margin requirements do not take into account the actual “risk” of loss involved in each security position taken, and are very conservative, resulting in high margin requirements.

Large institutional customers, such as hedge funds that have international operations, found that margin requirements in offshore markets such as London are much lower, and started to move their trading overseas. Concerned about losing market share, the NYSE and CBOE asked the SEC to approve a different method of computing margins for institutional customers and sophisticated wealthy individual customers. The result is “portfolio margin,” approved in mid-2007.

Risk-Based Margin

Portfolio margins assess the “risk” involved with a securities position to establish the margin requirement.

For example a customer that buys 100 shares of ABC stock in a margin account at \$50 per share and who buys a protective ABC 50 Put @ \$5 would be required to deposit 50% of the stock position and 100% of the put option premium under Regulation T for a deposit of $\$2,500 + \$500 = \$3,000$.

However, this customer cannot have a loss greater than \$500 on this position (the stock that was purchased at \$50 can be sold via the put at \$50, so the only loss is the \$500 premium paid). This would be the margin requirement under portfolio margin.

Reduced Margin For Hedged Stock Positions

The most dramatic effect of portfolio margin is to reduce the margin requirement for stock positions that are hedged by options positions, since the margin becomes the maximum potential loss, as in the example above. In contrast, portfolio margins have no benefit for long options positions or spread positions, where the margin requirement already is the maximum potential loss.



**Portfolio Margin
Not Permitted
For Bond Positions**

Initially, portfolio margins were only used for options positions and stock positions hedged by options. However, the SEC approved expansion of the program, and allows portfolio margins to be used for equity securities as well. Note that portfolio margin can only be used for equities and options/derivatives positions used as hedges. It cannot be used for bond positions.

The basis for the margin requirement is to “stress test” securities positions by applying probability-based loss percentages, based on historical volatility of both the security itself and the overall market. Based on this, portfolio margins generally result in overall lower margin requirements and greater leverage.

For example, for most equities, the maximum portfolio margin is 15%, as opposed to 50% under Regulation T. If the position is deemed to be “concentrated” - too large a percentage of the portfolio in a single security, the margin is doubled to 30%. (Note, do not be concerned about memorizing these percentages; only the general concept must be known for the exam.)

**Only Sophisticated
Investors Qualify**

Only sophisticated customers are eligible for these dramatically lowered margin requirements.

**\$100,000 Equity For
Individual Accounts**

Individual customers must maintain minimum account equity of \$100,000.

**\$500,000 Equity For Prime
Brokerage Accounts**

Prime brokerage accounts must maintain minimum account equity of \$500,000.

**\$5,000,000 for Accounts
Carrying Unlisted
Derivatives Or Day
Trading Accounts**

Customers who are not broker-dealers or futures firms that wish to carry unlisted derivatives or conduct day trading must maintain minimum account equity of \$5,000,000

**Prior Approval Of
SRO To Offer
Portfolio Margin**

Any brokerage firm that wishes to offer portfolio margins must get approval of its SRO to do so, and must demonstrate that it has the sophisticated computer systems in place necessary to compute and monitor these margin requirements on a real-time, intra-day basis.

**Margin Deficiency
Be Paid In 3 Business
Days**

If a portfolio margin account has a margin deficiency at the end of the day, each SRO requires that payment to meet the margin call be received within 3 business days (this contrasts with Regulation T that requires “prompt” payment, but no later than 5 business days).

4 d. LEVERAGED ETF MARGINS

**Leveraged ETFs
“Multiply” Returns
Through The Use
Of Derivatives**

**Minimum Margin
Requirement Is
Multiplied By The
ETF’s Leverage**

Leveraged ETFs (Exchange Traded Funds) are a subset of traditional ETFs that are designed to generate multiples (e.g., 200%, 300%) of the performance of the underlying index that they track. Some of these are “short” or inverse ETFs, because they seek to deliver performance that is exactly opposite to the index they track. Leveraged ETFs use derivatives, including options, futures and swaps to multiply their returns, but this means that their price movements also have multiplied volatility as compared to the benchmark index.

The SRO’s concern is that the increased volatility associated with these products means that traditional strategy based margins are not sufficient to provide an adequate buffer against a daily market movement wiping out an investor. The basic thrust of the margin rule is that a 200% leveraged ETF should have 2 times the normal margin requirement; a 300% leveraged ETF should have 3 times the normal margin requirement; etc.

Note that the SRO applies these “multiples” to both strategy based margins (traditional margin accounts) and risk based margins (portfolio margin accounts).

STRATEGY BASED MARGIN EXAMPLES

For example, a customer is long 100 shares of ABC ETF at \$28 per share. The ETF has 200% leverage. The normal minimum maintenance margin is 25% of \$2,800 = \$700; but because of the 200% leverage, the minimum maintenance margin becomes 200% of \$700 = \$1,400. Note that this happens to be the same as the Regulation T initial margin, meaning that if the customer bought this position, the initial margin requirement would be the same \$1,400 and this would also be the minimum requirement.

For example, a customer is long 100 shares of ABC ETF at \$28 per share. The ETF has 300% leverage. The normal minimum maintenance margin is 25% of \$2,800 = \$700; but because of the 300% leverage, the minimum maintenance margin becomes 300% of \$700 = \$2,100. Note that this is more than the Regulation T initial margin, meaning that if the customer bought this position, the customer must deposit \$2,100 and this would also be the minimum requirement.



RISK BASED MARGIN EXAMPLE

For example, a customer has a portfolio margin account with a portfolio market value of \$1,000,000 and a stress range of -15%/+15%. The margin requirement would be 15% of \$1,000,000 = \$150,000. If the portfolio consisted entirely of ABC ETF with 200% leverage, then the margin requirement becomes 200% of \$150,000 = \$300,000.

4 e. ORDER TAKING, TRADE REPORTING AND ERRONEOUS TRADE RULES

All orders are now entered electronically. The NASDAQ system is called "OATS" - Order Audit Trail System; the options exchanges' system is called "COATS" - Consolidated Options Audit Trail System.

Systematized Order Entry

COATS requires that all orders be "systematized" - meaning that the order must be entered electronically. An order that is sent to the exchange "non-electronically," such as telephonically, must be entered into the exchange's electronic order system on receipt, before the order can be represented on the trading floor.

The minimum information required for a market order is:

- Option symbol;
- Expiration month;
- Expiration year;
- Strike price;
- Buy or sell;
- Call or put;
- Number of contracts;
- TPH (Trading Permit Holder) identifier.

The time of execution must be recorded. If the order is canceled prior to execution, the time of cancellation must be recorded.

Note that these order recording rules do not apply to accommodation liquidations (close-out of worthless contracts at an aggregate \$1 premium); nor do they apply to orders for FLEX (flexible) options, since these are custom negotiated contracts.

Order Priority

Orders are filled on the CBOE floor (and all other markets) based on the following priority rules:

Priority of Bids / Offers

The highest bid price has priority. If there are 2 or more high bids at the same price, and one represents a displayed customer limit order, the customer limit order is filled first. If there is more than 1 public customer order (bid) at the best price (high bid), the customer orders are filled FIFO.

The lowest offer price has priority. If there are 2 or more low offers at the same price, and one represents a displayed customer limit order, the customer limit order is filled first. If there is more than 1 public customer order (offer) at the best price (low offer), the customer orders are filled FIFO.

Orders from non-customers (Floor Brokers, DPMs (Designated Primary Market Makers), OBOs (Order Book Officials), PAR Officials and Market Makers are filled based on best price first (high bid or low ask); if the orders are at the same price, they are filled in sequence in which they are made (FIFO). If the sequence of multiple orders made at the same price cannot be determined, then the fill is apportioned equally among all orders at that price.

Firm Quote Rule

The CBOE has adopted its version of the “firm quote” rule required under SEC Rule 11ac1-1. It requires that quotes of market makers be firm for the minimum number of contracts set by the CBOE (usually 10 contracts). If a market maker receives an executable order, it must be filled within 30 seconds. If the order is larger than the displayed quote, the market maker has the choice of either filling the entire order; or it can fill the portion of the order equal to the quote size and immediately revise its bid or offer.

Note that if a market maker has revised its quote and communicated this to the exchange, but the revised quote has not yet been displayed, then the market maker is not obligated to honor the “old” quote. If the market maker is in the process of executing an order at the displayed quote and receives another order, it can either fill it at the “old” price; or it may revise its quote and fill it at the revised price.

Note that the firm quote rule does not apply during “fast” markets, where 2 Floor Officials agree that trading activity is so rapid that the exchange cannot process quote changes in real time; and does not apply during the opening rotation.



Transaction Reporting

All transactions are required to be reported to the Clearing Corporation (OCC for options; NSCC or DTC for equities) for settlement and reporting. The CBOE requires that transactions be reported within 90 seconds of execution.

While each side must report the trade to the Clearing Corporation for matching, clearance and settlement, for trade reporting purposes, only the sell side reports (thus the "tape" will not show a double report of the same trade). Also note that any options transactions effected off the exchange floor must also be reported. If the transaction is reported after 90 seconds, it must be reported as late. (In contrast, equity trades effected on NASDAQ or OTC are required to be reported to the tape within 30 seconds by the executing member. Note that the SROs differ on this point.)

For options trades, the buyer and seller must immediately record the following information:

- Assigned broker code and clearing firm;
- Name of contra-TPH (Trading Permit Holder)
- Symbol of underlying security;
- Type, expiration month and exercise price of option;
- Transaction price;
- Transaction time;
- Number of contracts.

The sell side must report the trade to the tape (within 90 seconds of execution) and must use best efforts to make sure that the DPM or OBO is aware of the transaction and price.

Trade Adjustment Or Nullification

All trades are binding on both parties, however the SROs provide for nullification or adjustment of transactions for what the CBOE calls "obvious errors," while NASDAQ calls these "clearly erroneous trades."

The CBOE rule sets theoretical options prices using options pricing models and minimum variance from this price to establish an obvious error. It also sets a larger variances that define a "catastrophic error."

Where both parties to the trade are CBOE market makers, the erroneous transaction will be adjusted to the theoretical price by Floor Trading Officials net of an "adjustment penalty," unless both parties agree to adjust the transaction to a different price or to bust the trade within 15 minutes of being notified of the obvious error.

Where one party to the trade is a non-broker-dealer customer and the other party is a CBOE market maker, the non-broker-dealer customer can request

that the price be adjusted, with no adjustment penalty, within 15 minutes of being notified by a Trading Official of the obvious error, unless both parties agree to adjust the transaction to a different price or to bust the trade.

(Where one party to the trade is a non-broker-dealer customer and the other party is a non-CBOE market maker, the same rule as above applies, but the 15 minute window is extended to 30 minutes.)

Also note that the CBOE will nullify options trades for disruptions or malfunctions of exchange systems and for erroneous quotes or transaction prices disseminated for underlying instruments.

Any TPH (Trading permit Holder) that participated in a transaction which it believes should adjusted or nullified must notify a Trading Official no later than 15 minutes after execution. The Trading Official is obligated to review the transaction and make an initial determination within 60 minutes and give verbal notice to the participants of his decision.

If either party disagrees with the determination, an appeal may be made to the "Obvious Error Panel." The request must be made within 30 minutes of receipt of the Trading Official's decision.

If either party disagrees with the Obvious Error Panel's decision, an appeal may be made to a CBOE Appeals Committee. Its decision is binding and no further appeals are permitted.

Error In Trade Reporting Is Not Binding

Note that these procedures do not apply to erroneous trade reports; they only apply to erroneous executions. If a trade was executed properly, but reported improperly, the price of the trade is still binding.

Unmatched Trade Report

Each day, the CBOE matches the trade information submitted by Trading Permit Holders (TPH) and issues an Unmatched Trade Report to each Clearing TPH. It contains a list of the trades for which the exchange did not receive matching trade data from that Clearing TPH. Promptly upon receipt of the report, the TPH must reconcile all unmatched trades and report the reconciliations and corrections to the CBOE.

If an unmatched option trade remains unresolved after trade date, it must be resolved no later than 15 minutes prior to opening the next business day.



4f. SETTLEMENT RULES

Regular Way	"Regular Way" settlement of stock, corporate bond, and municipal bond trades is 3 business days after trade date.
Regular Way Options / Treasurys	"Regular Way" settlement of U.S. Government bonds and listed options is next business day.
Cash	"Cash" settlement is same day settlement, before 2:30 PM EST. Prices that sellers receive for cash settlements are typically lower than for regular way settlements because of the difficulty of arranging the settlement on that day.
Seller's Option	"Seller's Option" settlement is used when the seller needs more time to deliver than "regular way" (3 business days) settlement allows. Settlement will be made when the seller gets the securities, but not before the 4th business day after trade date. The seller gives the buyer 1 day's notice, and settlement takes place the next business day. "Buyer's Option" settlement is also available for a buyer who can't pay by the regular way settlement date.

Some general rules on settlements:

If a security is delivered prior to the agreed settlement date, the buyer has the choice of either accepting or rejecting the shipment.

On settlement, the buyer must accept the securities. If a partial delivery is received; or if no delivery is received, the buyer must set up a "fail to receive" on its books.

If a security is available in "book entry" form, there is no physical delivery of securities. The member must use a securities depository such as DTCC (Depository Trust and Clearing Corporation) for book-entry settlement.

If the security is not available in book entry form, then there must be a delivery of the physical certificates. Certificates must be delivered in "good form." The basic rules covering good delivery follow.

Good Delivery Conditions For good delivery, the following conditions must be met:

Assignment Registered securities must be endorsed on the back by the registered owner in exact name. This endorsement is called an "assignment." Often, securities are not endorsed on the certificate itself, but rather on a "stock power" or "bond power." In this case, the brokerage firm is

registered as the owner of the security, and has transferred ownership with the "stock power" to the customer. If the customer signs the "power," the security can now be transferred with a new "stock power" to another customer. In this way, the certificate doesn't have to be canceled and replaced after each trade.

**Signature
Guarantee
By Medallion
Member**

The signature is not acceptable to the transfer agent unless it is guaranteed. Signature guarantees can be made by financial institutions that participate in the Medallion Signature Guarantee Program. Medallion members can be commercial banks, savings banks, credit unions and broker-dealers. (Note that before the Medallion program existed, the only acceptable guarantors were NYSE member firms and commercial banks.) If the signature turns out to be counterfeit, any loss is the guarantor's problem.

Registered to principal bonds must have a proper assignment and a signature guarantee. These bonds have bearer coupons attached, and since only the face amount is registered, all unpaid coupons must be attached. Certain older municipal bonds fall into this category.

**All Unpaid
Coupons Attached**

Bearer bonds must be delivered with all unpaid coupons attached (even if the bond is in default). No assignment or signature guarantee is required since the bonds are held by the "bearer."

Units Of Delivery

Stock certificates must be delivered in round lots of 100 shares, or multiples of 100 on one certificate. If certificates of less than 100 are used, they must add up to units of 100.

For example, for a 400 share trade, 1 certificate of 400 shares is good, 4 certificates of 100 shares are good, 8 certificates of 50 shares are good (two 50s = 100), 10 certificates of 40 are not good since $40 + 40 = 80 + 40 = 120$.

Registered bonds must be delivered in \$1000 minimum face amount or multiples of \$1000, up to a maximum of \$100,000 per bond.

**Mutilated Securities
Are Not Good Unless
Validated**

Securities cannot be accepted if mutilated unless they are accompanied with a validation letter from the transfer agent or issuer stating that the securities will be accepted.



SUPERVISORY RULES SECTION EXAMINATION

1.

Which of the following are duties or requirements of an Office of Supervisory Jurisdiction?

- I Maintenance of required records
 - II Periodic and frequent inspection of customer account records in the branches
 - III Review and approval of all customer transactions and review of sales related correspondence
 - IV Submission to an annual inspection by the member to ensure compliance
- a. I only
 b. II and III only
 c. I, II, III
 d. I, II, III, IV

2.

All of the following are ascertained when an individual applies to be registered with a member firm **EXCEPT:**

- a. The good character of the applicant
- b. The business reputation of the applicant
- c. The business experience of the applicant
- d. The educational history of the applicant

3.

Which one of the following customer actions could be an indicator of money laundering?

- a. Depositing \$50,000 of registered stock into the account and directing that it be transferred into street name
- b. Buying a security in advance of the ex-date and selling after the record date in order to receive a cash dividend
- c. Buying and selling the same security over a short period of time, incurring significant commission costs
- d. Buying a security and selling short an equivalent convertible security to lock in a price difference

4.

At the account opening stage, which of the following customer actions would **NOT** be an indicator of potential money laundering?

- a. Concern regarding the firm's government reporting requirements
- b. Difficulty describing his or her work or lack of industry knowledge
- c. Uncertainty about his or her investment objectives and needs
- d. Ordering transactions that are inconsistent with his or her stated objectives

5.

The AML program established by a FINRA member must:

- I Establish and implement policies and procedures to detect and report suspicious transactions
 - II Provide for annual independent testing for compliance to be conducted by member personnel or a qualified outside party
 - III Designate a principal responsible for implementing and monitoring day-to-day operations and internal controls of the program;
 - IV Provide for ongoing training of appropriate personnel
- a. I and II only
 - b. III and IV only
 - c. I, II, III
 - d. I, II, III, IV

6.

Portfolio margining:

- I is based on the rules of Regulation T
 - II is based on probable loss potential
 - III generally results in lower margin requirements and greater leverage than standard margin calculations
 - IV generally results in higher margin requirements and lower leverage than standard margin calculations
- a. I and III
 - b. I and IV
 - c. II and III
 - d. II and IV

7.

The minimum equity requirement for a portfolio margin account that will trade unlisted derivatives is:

- a. \$100,000
- b. \$1,000,000
- c. \$5,000,000
- d. \$10,000,000

8.

A customer buys 200 shares of XXX Leveraged ETF at \$50 (300% leverage ratio). The FINRA minimum maintenance margin requirement is set at 25%. The customer must deposit:

- a. \$2,500
- b. \$5,000
- c. \$7,500
- d. \$15,000

9.

All of the following information is required on an options order ticket **EXCEPT**:

- a. Option expiration
- b. Option style
- c. Option type
- d. Option strike price

10.

Two orders for a listed option are received at the same time and at the same price. One represents a limit order from a customer; the other order represents a limit order from a non-customer. Which statement is **TRUE**?

- a. The customer order will be filled first
- b. The non-customer order will be filled first
- c. Both orders will be filled on a pro-rata basis at the same time
- d. The priority of filling the orders will be established by random selection

**11**

For clearance purposes, who reports the transaction to the Options Clearing Corporation?

- a. Buy side
- b. Sell side
- c. Both buy side and sell side
- d. Executing member

15.

If a Trading Permit Holder wishes to have a trade with an obvious error adjusted or nullified, it must report the error within:

- a. 30 seconds of execution
- b. 60 seconds of execution
- c. 15 minutes of execution
- d. 60 minutes of execution

12.

For trade reporting purposes, who reports the transaction to the Options Exchange?

- a. Buy side
- b. Sell side
- c. Both buy side and sell side
- d. Executing member

13.

A securities trade takes place at 10:00 AM on Monday, July 10th for "cash." Settlement takes place:

- a. before 2:30 PM on July 10th
- b. before 2:30 PM on July 11th
- c. during business hours on July 15th
- d. during business hours on July 17th

14.

Which is **NOT** a good delivery for a 300 share trade of stock?

- a. One 300 share certificate
- b. Three 100 share certificates
- c. Ten 30 share certificates
- d. Thirty 10 share certificates

SUPERVISORY RULES

SECTION EXAMINATION EXPLANATIONS

1. The best answer is d. The OSJ is required to maintain required records of the firm's written supervisory procedures; must inspect customer account records periodically to detect abuse; must review and approve all customer transactions and review sales related correspondence; and must go through an annual inspection by the member.
2. The best answer is d. When an individual applies for registration, a principal must ascertain the good character, business reputation, qualifications and experience of that person. There is no requirement to obtain that person's educational history, however.
3. The best answer is c. A potential money laundering indicator is buying and selling the same security over a short time frame, while incurring significant commission costs - after all, why would a logical person do this?
4. The best answer is c. It is normal for a customer to be uncertain of his or her investment objectives and needs - it is the guidance of the registered representative that the customer is counting on to select the appropriate strategy. The other 3 choices could all be indicators of potential money laundering.
5. The best answer is d. An AML (Anti-Money Laundering) program must be established by each FINRA member firm. The AML program must:
 - establish and implement policies and procedures to detect and report suspicious transactions;
 - provide for annual independent testing for compliance to be conducted by member personnel or a qualified outside party;
 - designate a principal responsible for implementing and monitoring day-to-day operations and internal controls of the program; and
 - provide for ongoing training of appropriate personnel.
6. The best answer is c. Portfolio margin is a "risk" based margin method that gives substantially lower margin requirements for lower risk positions. It recognizes that if positions are hedged, such as a stock position hedged by the purchase of a put, then the loss potential of the combined position is much lower. Portfolio margin produces a much lower margin requirement for such a hedged position (the margin is basically equal to the maximum loss) than the separately calculated margins for each position that Regulation T would require. Lower margin requirements mean that customers who use portfolio margin get greater leverage. Also note that portfolio margin can only be used by institutional or wealthy sophisticated individual customers.
7. The best answer is c. The minimum equity requirement for a portfolio margin account that will trade unlisted derivatives is \$5,000,000.
8. The best answer is c. The normal minimum maintenance requirement for equities, including ETFs, is 25% of the market value = 25% of \$10,000 = \$2,500. However, because this ETF is 300% leveraged, the minimum requirement is 3 times \$2,500 = \$7,500.



9. The best answer is b. Option style (American or European) is not part of the information recorded on an options order. Also note that any commission charged is not part of the recorded information either, since this is not known until after execution.
10. The best answer is a. The basic rule is that any standing customer orders at a given price are filled first, prior to orders for non-customers (e.g. market makers) at the same price. Note, however, that if the non-customer order is at a better price, it would have been filled first.
11. The best answer is c. For clearance purposes, both the buy and sell side report to the clearing corporation, so the trade can be matched and settled. For tape reporting purposes, only the sell side reports, to stop a "double report" of the same trade.
12. The best answer is b. For tape reporting purposes, only the sell side reports, to stop a "double report" of the same trade.
13. The best answer is a. Cash settlement is same day settlement, before 2:30 PM.
14. The best answer is c. To be a good delivery, certificates must be in round multiples of 100 shares on one certificate or must be delivered in certificates that add up to 100 share units. Certificates of 30 shares each are not good because $30 + 30 = 60$. No addition of 30 share certificates will equal 100 shares. Also not good for delivery are $60 + 30 = 90$ and $90 + 30 = 120$. A round lot of 100 shares cannot be created from these units.
15. The best answer is c. If a TPH (Trading Permit Holder) wishes to have a trade with an obvious error adjusted or nullified, it must notify a Trading Official within 15 minutes of execution.

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SECTION 5: PERSONNEL RULES

5a. REGISTRATION OF PERSONNEL

Registration is required for any person that is a(n):

- Officer of the broker-dealer (principal);
- Sales supervisor or branch manager;
- Sales employee (representative); or
- Securities trader.

Registered Representative

A representative is defined as any person who solicits or conducts business in securities for the member. Persons whose duties are solely clerical do not have to register. Foreign associates who deal exclusively outside the U.S. do not have to register.

Regarding representatives, the actions on the part of an individual that require registration are:

- Making a recommendation to a customer;
- Accepting an order from a customer, whether solicited or unsolicited; and
- Performing a suitability determination.

Series #7

Registered representatives that deal with all types of securities and take and pass the Series #7 General Securities exam.

The performance of clerical functions does not require registration. Such clerical functions include reporting completed trades to customers; taking client information and messages (but not orders); and responding to client inquiries, such as questions about account status and order execution status.

Series #55 For FINRA Regulated Traders

Regarding securities traders, the rules of the exchanges were inconsistent. It used to be that traders were not required to be registered because they did not deal with clients. After NASDAQ suffered a market making scandal in 1995, where market makers were colluding to widen spreads, the regulators realized that they did not even know who the traders were!. They required registration of OTC equity traders and required them to be licensed with the Series #7 General securities exam and the Series #55 OTC Equity trader exam. Even more importantly, part of the

licensing process is a fingerprint and background check requirement, so that “bad boys” could no longer be equity traders. Note that this licensing rule only covered OTC Equity traders, and did not cover the options markets.

In 2009, the SEC found that the options markets and regional exchanges were inconsistent in their rules on whether a trader needed to be licensed - some required it; others did not. The SEC felt that traders needed to know the regulatory framework and that a uniform licensing test was required. The existing Series #7 exam stressed the client-side, so it covered many areas not relevant to traders, hence the creation of the new Series #56 proprietary trader exam.

**Series #56 For
CBOE, ISX and NSX
Proprietary
Traders**

Note that the exam is required for proprietary traders only; and it is only required by the CBOE, the ISE (International Securities Exchange - an all electronic options market); and the NSX (National Securities Exchange - another electronic marketplace). It is not required by FINRA for its member firms, since FINRA already has the Series #55 license for its traders. Note, however, that FINRA administers the test for these exchanges and maintains all of the registration records for these individuals.

**TPH - Trading
Permit Holder
NOT Doing Public
Business Must Take
Series #56**

The CBOE has a category of registration called a “TPH” - Trading Permit Holder. Any TPH that was not registered and that does **NOT** conduct a public business is now required to register and pass the Series #56 exam (individuals that conduct public business already were required to pass the Series #7 exam).

**U-4 Form
Uniform Securities
Application**

To register as either representative or principal, a U-4 (Uniform Securities Application) must be completed and filed with FINRA. Registration continues with the firm unless that person leaves the firm. All of the registration information is maintained by FINRA in CRD - the Central Registration Depository. This is the electronic record of all registered persons in the U.S. This record is retained by FINRA for the other SROs (Self-Regulatory Organizations under SEC oversight as well, such as the CBOE and ISE).

**Wait Period
If Exam Is Failed**

Registration is not effective until the appropriate exam(s) are passed. If an individual fails an exam, 30 days must elapse before a new attempt is permitted. If an individual fails the same exam 3 successive times, a reattempt is not permitted until 180 days elapse. If the individual fails in any additional reattempt, another 180 days must elapse before each successive attempt is permitted.

**Exam Content
Is Confidential**

Also note that the SROs explicitly state that exam content is confidential. It is prohibited for any person who takes an exam to divulge the content of that exam to anyone else.



The SRO can (and will) take disciplinary action against any individual that divulges exam content; any individual that uses such information when taking an exam; and their supervisors.

**Information
On U-4 Form**

Information required on the U-4 Form includes:

Applicant's Name and Address;

Broker-Dealer Name and Address;

Name and Address of "Old" Broker-Dealer if the registrant is transferring from another firm;
5 Year Consecutive Residence History;

10 Year Consecutive Employment History;

Any Other Businesses In Which The Registrant Is Currently Engaged;

Any Other Names By Which The Registrant Is Known;

Disclosure By The Applicant Of Any Arrest, Conviction, Charge, involving investments, fraud, bribery, forgery, etc.

**Changes - Prompt
Amendment**

If any of this information changes, the U-4 filing must be amended promptly.

**Statutory
Disqualification**

An individual's registration to be denied under the "statutory disqualification" provisions of the Exchange Act of 1934 if that individual:

has been suspended or expelled from any other Self Regulatory Organization, either domestic or foreign;

is the subject of an SEC order suspending or revoking registration;

by his conduct while associated with a firm has caused that firm's suspension or expulsion;

willfully filed a false or misleading application or has omitted to state material facts in the application; has been convicted of any securities or "money" related offense (such as embezzlement) within the past 10 years. Therefore, if you are good for 10 years and 1 day after being convicted, you can become a member again!; or

has been temporarily or permanently enjoined from engaging in the securities business.

Note that the U-4 questionnaire asks about arrests, convictions, etc., to see if the applicant will be subject to "statutory disqualification." The questionnaire asks about convictions for "any felony," which would include such things as Driving Under the Influence (DUI), possession of a controlled substance, assault, or manslaughter.

**Individuals
Convicted Of
Non-Securities
Felonies Can Be
Registered**

The SEC permits the SRO to approve these individuals who have such "Other Felony" convictions on a case-by-case basis. Approval is based on the proposed supervision of the person applying for registration, any subsequent disciplinary actions after the event that caused statutory disqualification and the overall merits of the case. The basic question behind the review is this: "Is this person a risk to investors?"

**Continuing
Education**

The SROs impose continuing education requirements ("CE") for all registered persons. There are 2 parts:

Regulatory Element

**2nd Anniversary Of
Registration / Every
3 Years Thereafter**

Regulatory Element: Requires that a computerized training session that reviews various regulations and procedures be completed on the registrant's 2nd anniversary of registration; and every 3 years thereafter.

**If Regulatory Element
Is Not Completed,
License Goes "Inactive"
Without Pay**

If the Regulatory Element is not completed within the required time period (120 days of notice), that person's registration becomes "inactive" until it is completed. During the "inactive period," this person cannot perform any of the functions of a registered representative and this person cannot be paid (giving him or her a very good incentive to complete the training).

Firm Element

Firm Element: Requires that an annual training plan be prepared and implemented by member firms to cover relevant products, regulations, and compliance issues.

**If Called For
Military Duty Then
Registration
Becomes "Inactive"
But Can Be Paid**

If a registered representative is called-up or volunteers for active military duty, that person is classified as being "inactive" and their CE obligations (both Regulatory and Firm elements) are suspended. The employing broker-dealer must send a letter to CRD (the Central Registration Depository, which keeps all registration and disciplinary information on registered individuals) giving the registered representative's name and CRD number and the date the firm received notification of the call-up from the representative.

**Upon Return,
Registration
Status Resumes At
Same Point**

Once the representative is discharged from military service, a copy of the discharge notice must be sent to CRD so that the individual can resume active registered status, basically starting from the point where he left off. The



**Can Return To
Another
Broker-Dealer**

**Can Have Another
Broker At Same
Firm Service
Clients And Share
Commissions**

**Must Reassociate
Within 90 Days**

**U-5 Form
Termination Of
Registration
File In 30 Days**

**Amend The U-5
Filing Within 30
Days Of Discovery
For Subsequently
Discovered
Information**

**After 2 Years, Must
Requalify By Exam**

**"Hanging" Licenses
Is Prohibited**

**SRO Retains
Jurisdiction For 2
Years If Terminated**

**"Reportable
Events"**

SROs have stated that it makes no difference if the individual returns to his or her "old" broker-dealer or if they associate with another broker-dealer upon return to civilian life - the SRO will reactivate that person's registration status.

Also note that the firm can pay the individual while he or she is on military duty, including payments for commissions earned prior to being called-up for military service. While that individual is away in the military, he or she can arrange for another representative at the same firm to service his or her customers and can share commissions with that representative.

Finally, the SROs require that individual to reassociate with a member firm within 90 days of return to civilian life, otherwise registration is terminated.

If a person is terminated, a U-5 form must be filed with FINRA (remember that FINRA is responsible for CRD - the Central Registration Depository) within 30 days of termination. In addition, a copy of the U-5 must be made available to the terminated person. The person's registration is not reinstated until another firm registers that person through a new U-4.

If information becomes known about the individual that was not included on the U-5 filing (such as, the member firm discovers 8 months after an individual was terminated, that he or she was doing a little embezzling), the member must amend the U-5 filing within 30 days. This obligation to amend U-5 filings for subsequently discovered information is an ongoing obligation that has no cut-off date.

After 2 years without being associated with a firm, that person must requalify by taking the appropriate exam(s).

The SROs explicitly prohibit an individual from "hanging" his or her license with a broker-dealer to keep registration current (and therefore not having to retake exams) after leaving the business.

Once a person is terminated, if a customer complaint is filed, the SRO retains jurisdiction over that person for 2 years. Also, please note that each SRO does not permit termination of registration via a U-5 if there is any complaint or action being taken against that person. Only **after** the issue is resolved does the U-5 take effect, and the 2 year period start counting.

The SROs require that the member firm file a written report if it appears that the firm itself, or an associated person, has gotten into trouble. Note that these reports are

required as the event is happening - even if there is no proof or conviction. The SRO assesses the severity of the information in the report in order to decide whether it needs to take further action.

**Notify The SRO
Promptly But
No Later Than 30
Days After Event**

Each SRO requires that it be notified in writing promptly, but no later than 30 calendar days, after the member firm knows or should have known, if the firm itself or any registered employee is:

found to have violated any provision of any securities law;

subject of a written customer complaint alleging theft, misappropriation of funds, or forgery;

named as a defendant or respondent in any legal proceeding alleging violations of the Securities Acts brought by a regulatory authority;

denied registration or is expelled, suspended, or disciplined by any self regulatory organization;

indicted, convicted, or pleads guilty to any criminal offense (except traffic violations and DUIs);

associated with any broker-dealer, investment company, investment advisor, or insurance company which was suspended, expelled or had its registration denied; or which was convicted of, or pleaded no contest, to any felony or misdemeanor;

a defendant or respondent in any securities or commodities related civil litigation or arbitration settled for an amount exceeding \$15,000 (this limit is raised to \$25,000 if the settlement involved that member firm itself);

subject to statutory disqualification, as listed on page 3 of this section;

the subject of disciplinary actions by their firm involving suspension, termination, withholding of commissions, or imposition of fines in excess of \$2,500.

(Also note that while "all felonies" must be reported on a person's U-4 filing to become registered, the events that must be reported thereafter exclude reports of criminal traffic violations or DUIs. This is the case because these events are not viewed as indicating that the individual has the potential to harm investors.)



In addition, the rule requires that each member firm report to the SRO under the same time frame if the member firm has concluded that an associated person, or the firm itself, has violated any securities-, insurance-, commodities-, financial- or investment-related law - either domestic or foreign.

FINRA BrokerCheck Website

FINRA maintains a website called "BrokerCheck" where the general public can get information on a broker or member firm. The website uses the U-4 and U-5 information to give the broker's:

Broker's Employment History

10-year employment history, both in and outside the securities industry, taken from the U-4 Form;

Broker's Licenses

securities licenses and state registration(s);

Broker's Complaint And Disciplinary Record

disciplinary record, which includes both complaints and allegations that have not yet been resolved; as well as a record of any disciplinary or settlement actions taken.

BrokerCheck includes information on both representatives that are currently working in the securities industry and representatives that have left the business. It allows the public to get a profile of each member firm, with its disciplinary record. This file also excludes previously registered member firms that have shut their doors. Finally, if a customer does not have web access, the BrokerCheck information is available from a FINRA toll-free phone number.

5b. CONDUCT OF REGISTERED PERSONNEL

As a general rule, all of the SROs require that registered personnel act in an ethical fashion; and that they do not do anything that is detrimental to the public or to the exchange.

Cannot Guarantee Customer Against Loss

A registered representative is prohibited from guaranteeing a customer's account against loss. Note that repurchase agreements, where the underlying securities are exempt, are not considered to be a prohibited guarantee against loss. However, if a repurchase agreement uses non-exempt securities (such as common stock) as the underlying collateral, this is a violation.

Cannot Share In Gain/Loss Of Customer Account Unless "At Risk"

A registered representative is prohibited from sharing in the gain and loss of a customer account. However, registered representatives are allowed to open joint accounts with customers with written approval of the employer. Each SRO requires that, in such accounts, profit

and loss be shared in direct proportion to the capital contributed.

Must Share In Proportion EXCEPT For Immediate Family Member Account

An exception to the "sharing in direct proportion to capital invested" requirement is given to accounts of the immediate family of associated persons. Immediate family for this requirement is defined as parents, children, spouses, in-laws, or any person supported by the member.

"Hedge Fund Rule"

Another exception to the sharing in proportion requirement is given for an account that meets all of the following tests:

The account is opened with at least \$750,000 of customer funds, by a customer with a net worth of at least \$1,500,000.

The member enters into a prior written agreement with the customer, with the compensation arrangement approved by the firm.

The agreement covers both gains and losses for a period of at least 1 year.

The member has disclosed any potential conflicts of interest to the customer.

Basically, this rule allows hedge fund managers and representatives invested in the fund to share profits with their wealthy customers that are invested in the fund. (Hedge funds typically charge "2 and 20" - a 2% annual management fee plus 20% of profits.)

Cannot Lend To Or Borrow From A Customer Unless Immediate Family Member Or Lending Institution

A registered representative cannot borrow money from a customer; nor can he or she lend money to a customer. However, this rule does not apply if the customer is a member of the registered representative's immediate family (such as a husband working at a broker-dealer as a registered representative and his wife having her own individual account at that broker-dealer - the rep can borrow money from the wife or lend money to the wife at will). The prohibition also does not apply if the customer is a lending institution.

If Firm Approves, Can Lend To Or Borrow From "Significant Others"

The rule then goes on to permit, but **only** with prior approval of the member firm, lending or borrowing between:

2 representatives at the same member firm;

a representative at a member firm and a customer with whom the representative has a personal relationship (e.g., a representative and her "live-in" boyfriend); and



a representative at a member firm and a customer with whom the representative has a business relationship.

Gift Limit = \$100

Registered representatives are prohibited from giving or accepting gifts valued in excess of \$100 per person per year, where the gift is related to their activities as a broker.

Note that the gift limit does not preclude business entertainment as long as this is not too excessive or too frequent.

Business Entertainment Is Not Subject To The \$100 Gift Limit

For example you can take a customer to dinner and spend \$300 at a high-end restaurant; you cannot give a customer a \$300 gift certificate to his or her favorite high-end restaurant.

Firm Must Have Written Policies Covering Entertainment

Each SRO has implemented a rule requiring member firms to create written policies and procedures covering business entertainment. The member firm must train its employees about these procedures; and must audit employee expenses for compliance.

The gift limit also does not apply to gifts based upon a personal relationship rather than a business relationship. For example, if a registered representative is invited to the wedding of a friend who happens to be registered, he or she can give a wedding present valued at over \$100. Similarly, the limit does not apply to "logo" gifts such as a desk paperweight given by a mutual fund to a registered representative that is engraved with the logo of the mutual fund sponsor.

Paying For Work Is Permitted

The gift limit does not prohibit the member from paying someone to work as long as:

There is a written agreement spelling out the work to be performed and the compensation to be paid.

The agreement is approved in writing by the principal of the firm before it takes effect.

If such an agreement is made, the firm is obligated to keep a separate record of such agreement, with any payments made, for 3 years.

Outside Work - Registered Rep. Must Notify Firm

Each SRO prohibits registered persons from being employed by anyone other than the member firm, unless he or she provides prompt written notice to the member and follows any instructions of the employer.

**Member Employees
Cannot Take Other
Work Without
Employer Approval**

The SROs require that, if an employee of a member wishes to:

- be engaged in any other business;
- be employed or compensated by any other person;
- serve as an officer or director, partner or employee of another business organization;
- own stock in any **other** broker-dealer that is not publicly traded;
- take a control position in the stock of a broker-dealer that is publicly traded;

then, this person must give written notice to his employer, and must receive prior written consent of the employer.

**Disputes Handled
Through Binding
Arbitration**

Each SRO requires that any disputes between registered representatives and their firms be handled by binding arbitration (with the sole exception of employment discrimination claims, including sexual harassment), which cannot be appealed. Customer disputes may be handled through the arbitration process only if the customer consents. Consent is given when the customer signs a Predispute Arbitration Agreement upon opening the account.

5c. DISCIPLINARY PROCEEDINGS

Any person associated with a member or a TPH (Trading Permit Holder) who is alleged to have violated any rule under the Exchange Act of 1934 or any rule of the SRO is subject to the disciplinary jurisdiction of the SRO.

If a complaint is filed against a person associated with member or a TPH, that person must appear in front of the SRO and testify and must respond in writing to any questions asked and must furnish any documentation requested. For example, for a claim of customer "front running," the SRO might require all of the member's trading records for a specified time period and these must be produced.

The SRO can require that the person appear at a hearing or can use a "summary proceeding" if that person fails to respond to requests for information. If the SRO finds that a violation occurred, it must give a written report of its investigation to that person and that person has 15 days to



submit an answer and can make a written statement as to why no disciplinary action should be taken.

At any time during a disciplinary proceeding, the respondent can make an offer of settlement. In this case, the respondent admits guilt and agrees to specified sanctions and fines. The SRO does not have to accept the offer. It can also modify the terms of the offer and return it, explaining that it would accept the modified offer of settlement. If the respondent resubmits the modified offer, it must be accepted.

For violations, the SRO has the power to censure that individual, suspend or expel that individual; can fine the individual and can strip that individual's licenses. The SRO has no power to send an individual to prison, but it can refer a case to the federal authorities if it believes that criminal actions occurred.

If the respondent does not agree with the SRO's action, the respondent can appeal to the SEC. If the respondent does not agree with the SEC's action, an appeal can be made to Federal court.

Code of Arbitration

If there is a trade practice dispute, or a customer dispute where the customer has signed an arbitration agreement, then arbitration is mandatory. In this case, there is no rule violation. For example, arbitration is used to settle pay disputes between representatives and their employers; it is used to settle "gray area" claims by customers of unsuitable recommendations; it is used to settle monetary claims from one member firm to another over the price at which a trade occurred; etc.

Arbitration is mandatory to settle claims between:

Member firm vs. member firm;

Member firm vs. associated person;

Associated person vs. associated person;

Customer vs. associated person or member firm, if the customer previously signed an arbitration agreement.

Note that it is not used to settle complaints made by SROs against either member firms or associated persons for rule violations. This is handled under each SRO's disciplinary rules covered previously.

Decisions of arbitration panels are binding and non-appealable.

Code of Mediation

Instead of arbitration, both parties involved in a dispute can agree to mediation to attempt to resolve the issue. Mediation is completely voluntary and either side can terminate mediation at any time. Decisions of a mediator are not binding. If either side disagrees with the mediator's decision, then the case will be scheduled for an arbitration hearing.



PERSONNEL SECTION EXAMINATION

1.

A potential new hire candidate discloses to the branch manager that he was in a horrible car accident and that he was convicted of involuntary manslaughter. This individual:

- a. is not required to disclose the information on the U-4 application
- b. must disclose the information on the U-4 application and will be subject to statutory disqualification
- c. must disclose the information on the U-4 application and will be allowed to be registered
- d. cannot be hired as a registered representative

2.

A registered representative is called-up for active military duty. During the time period that the individual is on military leave, that person's registration is:

- a. terminated
- b. suspended
- c. inactive
- d. active

3.

Membership will be denied to which of the following?

- I A person who has been suspended by the Chicago Board Options Exchange
 - II A person who had been convicted of securities fraud 5 years ago
 - III A person who is enjoined from engaging in the securities business
 - IV A person who is convicted of a traffic misdemeanor in the last 3 years
- a. II only
 - b. I and III only
 - c. I, II, III
 - d. I, II, III, IV

4.

Under SRO rules, if an individual fails the appropriate licensing exam 3 successive times:

- a. no reattempt is permitted
- b. 30 days must elapse between each subsequent reattempt
- c. 90 days must elapse between each subsequent reattempt
- d. 180 days must elapse between each subsequent reattempt

5.

If a registered individual is terminated, FINRA must be notified with a U-5 Form within:

- a. 1 business day
- b. 5 business days
- c. 10 business days
- d. 30 calendar days

8.

If a registered person fails to complete the Regulatory Element of the Continuing Education requirement within the allotted time, that person:

- a. may request an extension from FINRA
- b. will have their license suspended, but can still be compensated by the member firm
- c. will have their license suspended and cannot be compensated by the member firm
- d. must be terminated within 30 days

6.

A registered representative is fined \$5,000 in withheld commissions by a member firm for violating firm policies and procedures. Which statement is true?

- a. This is not required to be reported to the SRO
- b. A report must be filed with the SRO within 10 business days
- c. A report must be filed with the SRO within 15 business days
- d. A report must be filed with the SRO promptly, but no later than 30 calendar days

9.

An individual that has been registered as a representative for 9 years:

- a. is exempt from the Regulatory Element of the Continuing Education requirement
- b. must complete the Regulatory Element of the Continuing Education requirement every 2 years
- c. must complete the Regulatory Element of the Continuing Education requirement every 3 years
- d. must complete the Regulatory Element of the Continuing Education requirement every 5 years

7.

If there is a customer complaint, the SRO retains jurisdiction over a resigned member for:

- a. 30 days
- b. 6 months
- c. 2 years
- d. 3 years

**10.**

A potential new hire candidate discloses to the branch manager that he was in a horrible car accident and that he was convicted of involuntary manslaughter. This individual:

- a. is not required to disclose the information on the U-4 application
- b. must disclose the information on the U-4 application and will be subject to statutory disqualification
- c. must disclose the information on the U-4 application and will be allowed to be registered
- d. cannot be hired as a registered representative

11.

A registered representative in your office has been called-up for active military duty in the Persian Gulf for 1 year, during which time his Regulatory Element CE was scheduled to be completed. The registered representative returns from active duty to resume his civilian career. Which statement is true?

- a. The registered representative's registration must be terminated by filing a U-5 with CRD within 30 days of the individual's return to civilian status because the CE obligation was not completed
- b. The registered representative's registration became "inactive" during the period of military service and the CE obligation was suspended until the individual returned to his civilian career
- c. The registered representative's registration would have been terminated when the CE obligation was not completed and that individual must complete an updated U-4 filing to re-register
- d. The registered representative's registration status and CE obligation were unaffected by his call-up for military service

12.

A Series 7 licensed registered representative has been called up for active duty in Afghanistan. The representative wants his Series 11 licensed registered sales assistant to service his clients while he is away, and agrees to pay the sales assistant a weekly salary for this, out of commissions earned. This arrangement is:

- a. permitted under SRO rules
- b. prohibited because a sales assistant is not Series 7 licensed
- c. prohibited because sales assistants cannot earn commissions
- d. is prohibited because representatives that are called up for active duty cannot be compensated while they are "out of the business"

13.

BrokerCheck information is available for:

- I currently registered representatives that are active in the securities industry
- II previously registered representatives no longer active in the securities industry
- III currently registered broker-dealer firms that are active in the securities industry
- IV previously registered broker-dealer firms that no longer active in the securities industry

- a. I and II only
- b. III and IV only
- c. I and III only
- d. I, II, III, IV

14.

Which of the following are violations of SRO rules?

- I Sharing in the profits and losses of a customer's account without contributing proportional capital
 - II Selling exempted securities to a customer with a written agreement to buy back the securities at a later date
 - III Orally guaranteeing to buy back customer securities at a preset price
- a. I only
 - b. I and III
 - c. II and III
 - d. I, II, III

16.

An account is opened by a registered representative where the customer and the representative agree to share in profits. All of the following statements are true **EXCEPT:**

- a. This arrangement is allowed for close family members with prior written approval of the firm
- b. This arrangement is permitted if sharing is in direct proportion to the capital contributed and the firm gives prior written approval
- c. The arrangement is permitted if the account is restricted to principal transactions that are approved jointly by both owners of the account
- d. The arrangement is permitted if the account is opened with at least \$750,000 of customer funds by a customer with a minimum net worth of \$1,500,000 and the firm gives prior written approval.

17.

Disputes between a registered representative and the member firm involving all of the following are subject to binding arbitration **EXCEPT:**

- a. work attendance
- b. bonus payments
- c. sexual harassment
- d. regulatory compliance

18.

Which gift valued at more than \$100 could be accepted by a registered representative?

- a. One gift of \$100 value per person per year
- b. Unlimited number of gifts of \$100 value per person per year
- c. One gift of \$200 value per person per year
- d. Unlimited number of gifts of \$200 value per person per year

- a. Dinner voucher received from a long standing client for the representative's excellent work
- b. Wedding present received from a family member that is a client
- c. Tickets to a ball game from a client seeking a large IPO allocation
- d. Transportation by limousine service to and from a conference held 70 miles away

**19.**

A suspended individual associated with a member is permitted to:

- a. effect securities trades for customers during the suspension period
- b. be compensated for effecting securities trades for customers during the suspension period
- c. be compensated for trades effected for customers prior to the suspension period
- d. perform clerical duties within a member firm

20.

Arbitration is mandatory for all of the following disputes **EXCEPT**:

- a. member against member
- b. member against clearing corporation
- c. member against customer who has not signed an arbitration agreement
- d. member against customer who has signed an arbitration agreement

PERSONNEL RULES SECTION EXAMINATION EXPLANATIONS

1. The best answer is c. Any felony conviction must be disclosed on the U-4 Form, as well as arrests, indictments, etc. However, if the offense does not involve securities, money, theft, etc., (where the individual would be a risk to investors), that person can be registered. The key is that the information is disclosed.
2. The best answer is c. If a registered individual is called-up for military duty, his or her registration becomes "inactive" and basically sits there in suspense until he or she returns to the securities business. Then it simply picks up where it was left off.
3. The best answer is c. Each SRO will deny membership to any person that has been suspended or expelled by another self-regulatory organization; to any person that has been convicted of a securities or money related offense within the past 10 years; or a person who has been enjoined from engaging in the securities business. Each SRO does not consider traffic misdemeanors to be offenses serious enough to deny membership.
4. The best answer is d. Each SRO requires that 30 days must elapse after a licensing exam is failed before a reattempt is permitted. However, after failing 3 successive times, 180 days must elapse between each subsequent reattempt.
5. The best answer is d. If an individual is terminated, FINRA must be notified by the firm within 30 days of termination on a U-5 form so that the registration can be terminated in CRD; and a copy of the form must be made available to the ex-employee.
6. The best answer is d. One of the "reportable events" that requires prompt filing with the SRO is if a registered representative has been fined more than \$2,500 by the member firm.
7. The best answer is c. A resignation from an SRO is not effective for 30 days. However, if there is a customer complaint, the SRO retains jurisdiction for 2 years.
8. The best answer is c. If a registered individual fails to complete the Regulatory Element of the Continuing Education requirement within the 120-day window that he or she is given, this person's registration is suspended and the member firm is prohibited from paying that individual. This is a very good incentive for each person to complete his or her Regulatory Element CE.
9. The best answer is c. Any registered individual must complete the Regulatory Element of the Continuing Education requirement on the 2nd anniversary of registration and every 3 years thereafter.
10. The best answer is c. Any felony conviction must be disclosed on the U-4 Form, as well as arrests, indictments, etc. However, if the offense does not involve securities, money, theft, etc., (where the individual would be a risk to investors), that person can be registered. The key is that the information is disclosed.
11. The best answer is b. If a registered representative is called-up for active military duty, FINRA classifies that person as being "inactive" and his or her CE obligations are suspended. The employing broker-dealer must send a letter to CRD giving the registered representative's name and CRD number and the date the firm received notification of the call-up from the representative. Once the representative is discharged from military



service, a copy of the discharge notice must be sent to CRD so that the individual can resume active registered status, basically starting from the point where he or she left off.

12. The best answer is a. A registered representative that has been called up for active duty in a foreign country can arrange for another representative at the same firm to service his or her customer account while away; and can share commissions with that representative. Notice that this sharing is only permitted with a representative at the same broker-dealer, not another broker-dealer. A sales assistant is registered, but cannot be compensated with commissions. The arrangement given in the question has the sales assistant earning a salary for servicing the representative's accounts, so this is permitted.

13. The best answer is d. BrokerCheck information is available from FINRA for representatives that are currently active in the securities industry and for representatives that have left the industry. BrokerCheck also allows the general public review the profile and disciplinary record of member firms, both those currently registered and those that have ceased operations.

14. The best answer is b. A registered representative cannot guarantee a customer's account against loss or share in the account unless he opens a joint account with the customer; contributes capital proportional to any sharing agreement; and obtains the approval of a principal for the account. Selling exempted securities with a written agreement to buy them back at a later date, which defines a "repurchase" agreement, is allowed.

15. The best answer is a. Each SRO limits gifts that are related to one's activities in the securities industry to a maximum of \$100 per person per year.

16. The best answer is c. There is no provision for sharing in a customer account if it is limited to principal transactions. This makes no sense! Sharing is permitted with prior written approval of the firm for accounts of close family members; accounts where the representative contributes capital; and for extremely large accounts opened by wealthy customers.

17. The best answer is c. When a registrant signs a U-4 Form, he or she signs away all rights to sue the employing member firm and must submit all disputes to binding arbitration - except for claims of sexual harassment and discrimination.

18. The best answer is b. Regarding the gift limit, the \$100 limit does not apply to gifts of a personal nature - such as a wedding gift or gift upon the birth of a child; and does not apply to promotional items that display the offerer's logo, such as golf balls, shirts, etc.

19. The best answer is c. A suspended SRO member cannot retain **any** position in a member firm and cannot perform transactions during the suspension period, nor be compensated for these transactions. There is no prohibition on paying a suspended individual monies owed on work performed prior to the suspension period.

20. The best answer is c. Arbitration is required to settle disputes between members, and between members and clearing corporations. A customer complaint will **only** be handled by arbitration if he signed an arbitration agreement. If this is the case, the customer must agree to submit to arbitration to handle the complaint.

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SECTION 6: RECORDKEEPING RULES

6a. SEC RULES 17a-3/4 - RECORDKEEPING

Rule 17a-3 states which records must be kept by a broker-dealer; while Rule 17a-4 details the retention periods for these records. In addition, requirements for keeping records "current" are set in these rules.

The easiest way to remember the recordkeeping rules is to categorize the records into those kept for:

The life of the firm;

6 years; and

3 years.

Once the life and 6 year records are memorized, everything else is a 3 year record.

Life Records

Articles of Incorporation or Partnership Agreement; Minutes of Board Meetings or Partnership Meetings.

These records must be kept for the life of the firm. The last 2 years' records must be kept readily accessible for audit.

Records To Be Kept For 6 Years

General Ledger	General Ledger.
P & S Blotter	Purchase and Sales Blotters ("P & S").
Cash Blotter	Cash Receipts and Disbursement Blotters.
Stock Blotter	Stock Received and Deliver Blotters.
Customer Statements	Customer Account Records (Customer Statements).
Stock Record	Stock Record.

The 3 blotters that must be kept are the "daily transaction records" of the firm. (The term blotter refers to the "good old days" when entries were made manually by quill pen and blotted dry.) Other blotters are prepared by brokerage firms, but need not be kept for 6 years. For example, a firm

is only required to keep subsidiary blotters of fails to deliver and fails to receive for 3 years.

These records must be kept for 6 years, with the last 2 years' records kept readily accessible for audit.

Records To Be Kept For 3 Years

Everything Else! For example:

Copies of order memoranda (order tickets);
Trial balances;
Customer confirmations;
Correspondence;
Bank account records;
E-Mails and IMs.

Subsidiary records such as:

Fail to receive blotters;
Fail to deliver blotters;
Interest and dividend blotters.

Other 3 year records are:

U-4 forms (employment questionnaires) for associated persons and fingerprint records must be kept for 3 years after employment is terminated.

There are numerous other 3 year records that are not listed. In all cases, the last 2 years' records must be kept readily accessible for audit.

Finally, also note that SEC Rule 17a-8 requires broker-dealers to keep records of currency and foreign transactions if the firm falls under the Currency and Foreign Transaction Reporting Act of 1970.

6b. SEC RULE 17a-5 - REQUIRED REPORTS FROM BROKER-DEALERS

Rule 17a-5 places a number of reporting requirements on broker-dealers. Only a few of these must be known for the exam.

Annual Audit

It is required that all broker-dealers submit to an annual audit by a certified public accountant. The FOCUS report (Financial and Operational Combined Uniform Single report) serves as the financial statement to be audited. Unaudited FOCUS reports also are required to be submitted



periodically to the designated examining authority (DEA), such as FINRA.

**Customers Sent
Audited Balance
Sheet and Net
Capital Footnote
105 Days After
Year End**

Each clearing firm must then report its financial condition as disclosed in the audited FOCUS report to its customers. Customers must be sent an audited balance sheet and the audited computed amount of Net Capital no later than 105 days from the firm's fiscal year end. For a firm that has a December 31 year end, this translates into a customer mailing no later than April 15th of the next year.

**Unaudited Semi-
Annual Balance
Sheet and N/C To
Customers**

In addition, the firm must send a semi-annual unaudited balance sheet and unaudited computed amount of Net Capital to its customers no later than 65 days after its mid-year point.

**Definition of
Customer**

For purposes of required customer disclosure, a "customer" is defined as any person that has cash or securities in custody of the firm; and anyone who has effected a securities transaction through the firm in the month before or after the balance sheet is issued. The definition of "customer" does not include partners or subordinated lenders to the firm.

**6c. SEC RULE 17f-1 - REPORTING OF LOST
OR STOLEN SECURITIES**

Rule 17f-1 established a central computer file of lost or stolen securities. The rule requires that every broker-dealer check with the computer file to insure that every security that comes into its possession is not reported as lost or stolen. This would be an onerous requirement, but the exceptions to the rule make it more reasonable.

The central file is maintained by the Securities Information Center (SIC), located in Massachusetts. For purposes of the exam, the SIC is the "designee of the SEC" for reporting lost or stolen securities.

**Exceptions To
Required Reports**

The rule states that inquiry must be made of the SIC as to whether a security received by a broker-dealer or bank is reported as lost or stolen **EXCEPT**:

securities received directly from the issuer (new issues).

securities received from a Federal Reserve Bank or Branch.

securities received directly from another firm that is required to inquire (thus once the security enters

the "loop" from broker-dealer to broker-dealer, no inquiry is required).

securities received from a customer of the firm, where:

the securities are registered in the name of that customer or;

the securities were previously sold to the customer as verified by the internal records of the firm.

the amount of the transaction is \$10,000 or less.

Applies To All Deliveries Of Securities

Anyone Can Inquire For Any Reason

This rule applies to **all** securities deliveries, whether the securities are exempt or non-exempt. In essence, the rule only requires inquiry if securities are received from a customer in bearer form; or if securities are received from a customer who cannot produce records of the original purchase. Of course, any firm can make an inquiry at any time for any reason

The rule requires "reporting institutions" to report to the SIC if securities are suspected to be lost or stolen, or if securities received are counterfeit. The rules are:

Stolen/Counterfeit Securities:

Report To SIC; Transfer Agent;

Securities That Are Stolen or Counterfeit: The securities must be reported to the:

Securities Information Center;
Transfer Agent;

within 1 day of discovery.

Notify FBI Promptly

In addition, the Federal Bureau of Investigation (FBI) is to be notified promptly.

Missing Securities:

Securities That Are Missing: Where no criminal activity is suspected, the missing securities must be reported to the:

Report to SIC; Transfer Agent

Securities Information Center;
Transfer Agent;

The report is due within 1 day after the securities have been missing for 2 days.

Recovery Report

If securities that are reported as lost or stolen are found, everyone must be informed of the discovery within 1 day.



6d. SEC RULE 17f-2 - FINGERPRINTING

This rule requires that all partners, directors, officers, and employees of a broker-dealer, clearing agency, or transfer agent be fingerprinted **EXCEPT** persons who:

**Persons Who
Do Not Have To
Be Fingerprinted**

Are not engaged in the sale of securities;

Do not have access to the keeping, handling or processing of securities, monies, or the books or records relating to securities or monies;

Have direct supervisory responsibility for the above mentioned persons.

Basically, this boils down to all officers, directors, sales employees, accounting employees, securities processing employees and their supervisors must be fingerprinted. This rule dates to the early 1970's, and at that point in time, there was no licensing rule for securities traders, so there was no fingerprinting requirement!

When a U-4 Form is completed for registration, a copy of that person's fingerprints is required. Thus, while Rule 17f-2 originally excluded securities traders from the fingerprinting requirement, because these individuals must now be registered (Series #55 for FINRA firms enacted in 1997; Series #56 for non-FINRA firms enacted in 2011), they must be fingerprinted.

Clerical personnel need not be fingerprinted.

RECORDKEEPING RULES SECTION EXAMINATION

1.

Securities are suspected to be stolen.
All of the following will be informed
EXCEPT:

- a. SRO
- b. Transfer Agent
- c. Local Authorities (FBI)
- d. SIC

2.

Which of the following must be sent
to customers?

- I Annual audited balance sheet
- II Annual unaudited balance sheet
- III Semi-annual audited balance sheet
- IV Semi-annual unaudited balance sheet

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

3.

Which of the following employees
must be fingerprinted under SEC Rule
17f-2?

- I Registered representative
- II Cage clerk
- III Accounting supervisor
- IV Human resources supervisor

- a. I only
- b. II and III only
- c. I, II, III
- d. I, II, III, IV

4.

Fingerprint records of associated
persons must be retained for how
many years after that person leaves
the employ of a broker-dealer?

- a. 1 year
- b. 3 years
- c. 6 years
- d. indefinitely

5.

If securities are believed to be stolen,
the first agency to be called is the:

- a. Financial Industry Regulatory Authority
- b. Securities Information Center
- c. Federal Bureau of Investigation
- d. Transfer Agent



RECORDKEEPING RULES SECTION EXAMINATION EXPLANATIONS

1. The best answer is a. If securities are stolen, there is no requirement to report to the SRO (e.g., the CBOE or FINRA). The SIC (Securities Information Center), transfer agent, and local authorities (FBI) must all be notified.
2. The best answer is b. Clearing broker-dealers are obligated to send their customers an annual audited balance sheet and net capital footnote no later than 105 days after year end. In addition, the firm must send a semi-annual unaudited balance sheet and net capital footnote to its customers.
3. The best answer is c. SEC Rule 17f-2 requires that all officers, directors, sales employees, as well as all persons who handle cash, securities, and the books and records of original entry (and their supervisors) be fingerprinted. Thus, a human resources employee would not fall under this requirement.
4. The best answer is b. Fingerprint records must be retained for 3 years after an associated person leaves the employ of a broker-dealer.
5. The best answer is c. If securities are suspected to be stolen, the FBI must be called promptly; while the Securities Information Center and the Transfer Agent must be notified within 1 business day of discovery that the securities are missing.

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TRADING SYSTEMS TAB





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SECTION 1: NASDAQ TRADING

1a. NASDAQ MARKET MAKER REGISTRATION

**Market Makers In
NASDAQ Securities
Register With FINRA**

First, let us consider the general requirements. FINRA requires that any market maker in a NASDAQ security register with FINRA. To register, the firm must be a FINRA member in good standing and must meet minimum net capital standards.

**New Market Maker
Registers Upon
FINRA's Written
Approval**

If a firm has never registered as a market maker before, it must file with FINRA for the securities in which it wishes to make a market and await written approval. FINRA gives notice to NASDAQ upon approval, so that the member firm can begin making a market in that issue.

**Next Day
Market Maker
Registration**

If a firm is already a NASDAQ market maker, and wishes to register in additional issues, registration is generally effective on the business day following the request.

**Same Day
Market Maker
Registration**

However, if the firm is currently registered as a NASDAQ market maker, additional registration requests are effective the same day:

if a security in which the market maker is currently registered receives a merger or acquisition offer, then immediate registration is granted to make a market in the issuer making the offer; or

for a newly authorized issue when the issue starts trading on NASDAQ, as long as the request is made within 5 business days' of the issue's inclusion; or

for additional issue offerings (secondary offerings) where the market maker is the manager or co-manager of the underwriting syndicate.

**MPID - Market
Participant ID**

Each registered market maker is assigned a unique MPID (Market Participant Identifier), which is a 4-letter symbol. For example, the MPID for Knight Trading, one of the largest NASDAQ market makers, is "NITE."

Multiple MPIDs

The same firm can request "multiple" MPIDs from NASDAQ in stocks in which they are actively registered and quoting with a Primary MPID. This allows different trading desks at the same firm to be tracked uniquely.

For example, a firm may use separate MPIDs for its:

Proprietary trading desk;

	Index arbitrage trading desk; Prime brokerage trading desk.
Up To 10 MPIDs	NASDAQ allows a firm to have up to 10 supplemental displayable MPIDs, aside from its Primary MPID - called the "P-MPID."
Anonymous MPID = NSDQ	NASDAQ also allows a market maker to post quotes anonymously. In this case, a generic MPID called "NSDQ" is shown. By doing so, a market maker can keep its true trading interest hidden from other market participants.

1b. NASDAQ MARKET MAKER WITHDRAWAL

Excused Withdrawal For 5 Business Days	If a market maker wishes to withdraw a quote, FINRA can allow this for up to 5 business days for circumstances beyond the firm's control. This is termed an excused withdrawal and can be based on:
	<p>jury duty;</p> <p>equipment malfunction;</p> <p>scheduled vacations;</p> <p>religious and legal holidays;</p> <p>involuntary failure to maintain a clearing agreement; and</p> <p>requirements of Regulation M (covered in a previous chapter, if a member firm is part of an underwriting group in a secondary offering, it may not be able to act as a market maker in that issue during the 20-day cooling off period).</p>

Legal Requirements Can Give Excused Withdrawal For Up To 60 Days	In addition, legal requirements may force a market maker to seek an excluded withdrawal. For example, if a market maker comes into possession of material non-public information about an issuer in whose securities it makes a market, then trading on that information could be a violation of the insider trading rules. In a situation like this, FINRA can grant an excused withdrawal that is longer than the regular 5 business days - up to 60 calendar days.
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Excused withdrawal is not permitted due to pending news announcements, a sudden influx of orders, or because of competitive reasons.



**Voluntary
Termination - Out
For 20 Business Days**

A market maker can voluntarily terminate registration by withdrawing its quotes, but then is prohibited from re-registering in that security for 20 business days.

**Involuntary
Termination Of
Registration**

FINRA retains the right to suspend or terminate a market maker's registration for not meeting eligibility standards or for non-payment of NASDAQ fees. If a security is delisted from NASDAQ, the market maker can no longer post quotes on NASDAQ, but it can still make a market in the issue in the OTCBB - covered later in this section.

FINRA can also suspend, limit, prohibit, or terminate a market maker's registration for rule violations.

For example if a market maker fails to enter quotes within 5 business days after registration is effective, registration will be terminated by FINRA.

**Issuer Cannot
Pay Member To
Become Market
Maker In Its
Securities**

Member firms cannot accept payments or consideration of any kind from an issuer in connection with that firm registering as a market maker in that issuer's securities. This prohibition includes "affiliates" and "promoters" connected with the issuer.

For example, a "finder" that finds a company that wishes to go public and introduces it to an underwriter cannot pay other FINRA member firms to start making a market in the issue once the IPO is completed. Payment here includes not only cash, but also stock, options, or reimbursement of a member's expenses.

Note, however, that payments to members to reimburse them for expenses normally paid by issuers (as opposed to expenses paid by underwriters), are not prohibited. For example, if a market maker pays the NASDAQ listing fees for an issuer, and the issuer reimburses the market maker for this, there is no problem because the listing fees were the issuer's expense in the first place.

1c. QUOTATION RULES

**Must Maintain Firm
2-Sided Quote During
Regular Market
Center Hours**

As a NASDAQ market maker, a dealer must maintain firm 2-sided quotes continuously during the "regular" hours that the market is open (9:30 AM - 4:00 PM ET).

The NASDAQ Market Center maintains the following hours:

Premarket Hours:	7:00 AM - 9:30 AM ET
Regular Market Hours:	9:30 AM - 4:00 PM ET
Aftermarket Hours:	4:00 PM - 8:00 PM ET

A market maker may elect to stay open for either the "Premarket" or "Aftermarket" session, but is not required to do so. If the market maker chooses to stay open during these sessions, the firm quote rule still applies.

Quotes For 100 Shares

If there is no size indicated on a quote, it is only good for 100 shares. If a market maker is displaying a greater size than 100 shares, either for its own account or for a customer limit order, it must honor that quote size.

Quotes Reasonably Related To Market And Competitive

All NASDAQ quotes must be "firm," meaning that "backing away" (not honoring the quote) is prohibited and each quote must be:

reasonably related to the prevailing market and;
reasonably competitive.

If a market maker's quotes are not reasonably related to the prevailing market, NASDAQ/FINRA may require the firm to re-enter the quotes. If it fails to do so, NASDAQ/FINRA may suspend the market maker's quotes in one or all securities in which it is registered.

Bona-Fide Quotes

All published quotes must be "bona-fide" - meaning that the member actually intends to trade at those prices. Fictitious quotes or quotes pulled from "thin air" are prohibited. Similarly, FINRA requires that all published trades be bona-fide as well.

No Automated Quote Updating To Keep Quote Away From Inside Market

FINRA prohibits the use of computer generated quote updates that track changes in market prices and automatically generate quotes to keep the market maker's quote away from the best market.

Automatic Updating Exceptions

However, automated updating of quotes is permitted when:

the update is in response to an execution that partially fills the market maker quote size;

the update reflects the receipt, execution or cancellation, of a customer limit order; or
the update is to assure that the market maker maintains the same bid/ask quote as shown in another trading system.

NASDAQ AQR Permits Automated Quote Updating

Note that the NASDAQ automated trading platform, does have an "AQR" - Automatic Quote Refresh feature that does allow for automated quote updating in compliance with this exception. It is called the NASDAQ Market Center Execution System and also is known by the name "SingleBook."

Cannot Enter Quote That Will

Market makers are prohibited from entering quotes into the NASDAQ system that will "lock" or "cross" the market.



Lock Or Cross Market The inside market for each security must have a higher inside ask than the inside bid - with the inside market consisting of the highest bid and lowest ask for the issue.

Locked Market - Same Inside Bid/Ask

Crossed Market - Inside Bid Higher Than Inside Ask

A locked market is one where the "inside" bid and ask are the same. A "crossed" market is one where the inside ask is lower than the inside bid. In this case, any dealer could buy the stock at the inside ask and have an immediate profit by selling that stock at the higher inside bid.

To illustrate normal, locked and crossed markets, assume that NASDAQ shows the following for ABCD stock:

(Note: This illustration is the "old" NASDAQ system, where crossed and locked markets could occur. The current NASDAQ Single Book System, aka NASDAQ Market Center Execution System - will not allow crossed or locked markets. However, crossed and locked markets are tested on the exam.)

NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00

The current inside market for ABCD stock is the highest bid and lowest ask. Therefore, the inside market is:

NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00

Inside Market

The best price to buy the stock is at UBS Capital Market's ask price of \$10. The best price to sell the stock is at Raymond James' bid price of \$9.50. The inside market is \$9.50 - 10.

Assume that a new market maker wishes to enter quotes for ABCD stock in the NASDAQ system. Following is the first quote that this firm enters:

NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00
New Market Maker	9.15	9.90

After entering this quote, the new inside market becomes:



NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00
New Market Maker	9.15	9.90

Acceptable Quote

The best price to buy the stock is at the new market maker's ask price of \$9.90. The best price to sell is at Raymond James' bid of \$9.50. The inside market becomes \$9.50 - \$9.90. There is a normal bid/ask spread on the inside market, and so the entry of the new quote is acceptable.

Assume that the new market maker entered the following quote instead:

NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00
New Market Maker	9.15	9.50

The inside market now becomes:

NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00
New Market Maker	9.15	9.50

Locked Market

The inside bid and ask are the same - \$9.50 Bid / \$9.50 Ask. There is no spread between the quotes. This is a "locked market." Therefore, the quote of the new market maker **cannot** be entered into the system (with some very limited exceptions).

Finally, assume the new market maker enters this quote:

NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00
New Market Maker	10.25	10.50

The inside market becomes:



NASDAQ Level III Screen

	Bid	Ask
Raymond James	9.50	10.25
Morgan Stanley	9.25	10.15
UBS Cap. Mkts	9.40	10.00
New Market Maker	10.25	10.50

Crossed Market

In this case, the best price to buy is from UBS Capital Markets at \$10. Any firm that buys from UBS can realize an immediate profit by selling the stock to the new market maker at his bid of \$10.25. The new market maker is going to find that he will be buying a lot of stock at his bid! The market is "crossed." The inside ask is lower than the inside bid. Therefore, the new market maker cannot enter the quote that crossed the market - again with limited exceptions.

Before Entering A Quote That Locks/Crosses - Execute Against All Such Quotes

There is a way that a quote can be entered that might lock or cross the market. Before entering a quote that would lock or cross the market, a market maker must make a reasonable effort to avoid doing such by executing transactions with all market makers whose quotes would be locked or crossed if that firm entered its desired quote.

For example, if a market maker has an "ask" price of \$10; before a bid can be placed at \$10; the firm should take all of the shares being offered by that market maker at \$10. This will force the market maker to raise its ask - and now, a bid placed at \$10 by this firm, will not lock the market.

Basically, the FINRA rule here is an attempt to force the ask price up; or the bid price down; when a market maker wishes to enter a quote that would serve to cross or lock the market. Also note that this is only permitted under exceptional circumstances.

1d. NASDAQ ORDER ENTRY PARAMETERS

Market Or Limit Orders On NASDAQ

NASDAQ orders can either be Market or Limit orders. Market makers must accept market orders. They can choose to accept limit orders, but are not obligated to do so.

NASDAQ Limit orders can be placed as:

Day

Day: Canceled at end of day if not filled.

GTC

GTC: Good-Til Cancel - Canceled at end of 1 year if not filled.

IOC

IOC: Immediate or Cancel - Fill in part or full immediately and cancel the balance of the order.

MQ

MQ: Minimum Quantity Order - Fill order for entire amount or immediately cancel order - thus, this must be an IOC order.

Primary Peg

Pegged: Order that tracks the same side of the "inside market," also called a "Primary Peg."

A primary pegged buy order is placed at the inside bid and dynamically tracks the inside bid as the market moves.

A primary pegged sell order is placed at the inside ask and dynamically tracks the inside ask as the market moves.

(Note that as most of the trading on NASDAQ is automated, the use of pegged orders that "track" market movements based on computer algorithms is increasing greatly.)

Market Peg

Reverse: Order that tracks the opposite side of the "inside market," also called a "Market Peg."

A reverse pegged order to buy order tracks the inside ask minus \$.01.

A reverse pegged order to sell order tracks the inside bid plus \$.01.

As the "inside" prices move, these order prices are dynamically adjusted to match.

Pegged Capped

Pegged: The same as a pegged order but there is a limit on Capped the dynamic price adjustment as the inside market moves. Once the "cap" is reached, the order becomes a limit order at the cap price.

**Discretionary**

Discret: A discretionary order is displayed on the book at one price, but also includes a more aggressive “discretionary price” that is not displayed. The undisplayed discretionary price can only be a maximum of \$.99 higher than the displayed bid; and \$.99 lower than the displayed ask.

The “passive” discretionary price is not displayed and only becomes active as an IOC order when shares are available within the discretionary range.

An incoming market order will execute against the display price. An incoming limit order that is not executable at the display price, but is within the discretionary range, executes at the limit price.

Auto-Ex: Automated execution against all quotes/orders that do not charge access fees (many ECNs charge access fees).

No All Or None Orders

NASDAQ prohibits “All or None” orders (an order that if not filled in one shot, then subsequent attempts are permitted). Note, in contrast, that the CBOE will accept an AON order. This is covered in the next section.

No Minimum Acceptable Quantity (MAQ) Orders

NASDAQ prohibits “Minimum Acceptable Quantity” orders, which, when routed to a market maker, would give that market maker discretion as to whether to fill for the entire quantity or to reject the order. (Note, in contrast, that “MQ” - Minimum Quantity - orders are permitted. As long as the market maker’s displayed size is sufficient to fill the entire order, it would be filled. Otherwise, it is canceled. The market maker has no discretion over this.)

Limit Orders - May Be Partially Filled

NASDAQ limit orders can be partially filled - e.g., an order for 500 shares at a limit price might get 300 shares filled; the balance remains as an unfilled limit order for 200 shares.

Previously, NASDAQ Market Center hours were shown as:

Premarket Hours: 7:00 AM - 9:30 AM ET

Regular Market Hours: 9:30 AM - 4:00 PM ET

Aftermarket Hours: 4:00 PM - 8:00 PM ET

Orders can be entered as either:

Market Hours Order

Market Hours: An order entered for execution between 9:30 AM and 4:00 PM - Regular Market hours. This order

		would be entered as either "Market Day" or Market GTC."
System Hours Order	System Hours:	An order entered for execution between 7:00 AM and 8:00 PM - the hours that the NASDAQ Market Center is open. This order would either be entered as "System Day" or "System GTC."
Time In Force (TIF)	NASDAQ uses the term "Time In Force" to describe these order qualifiers. For example, an order entered as "System Hours Day - IOC" can be filled, in part or in full, anytime between 7:00 AM and 8:00 PM that day. Any unfilled portion of the order is canceled.	
Pegged And Discretionary Orders Must Be "Market Day"	Note that most trading is concentrated in the Regular Market Hours trading session. Trading in both the Premarket Hours and Aftermarket Hours trading sessions is thinner and price movements are more volatile. Because of this, pegged and reverse pegged orders that track the inside market's movements can only be entered for execution during the regular trading session with a "TIF" of Market Day. The same is true for discretionary orders.	
	When orders are entered into Single Book, there is a choice of order routing algorithms. With the implementation of Regulation NMS - Rule 611, commonly known as the trade-through rule, NASDAQ had to create order routing methods that were "Rule 611 compliant."	
	Rule 611 requires that marketable orders for NMS securities (either NYSE, AMEX or NASDAQ listed issues) must be executed in 1-second by the market that receives them; or they must be routed to any other market that is posting the same (or better) price. This means that all markets for NMS securities must be electronically linked. It also means that the market that receives an order has an inherent advantage, because it simply has to match the best price of any market to fill the order itself.	
	The main order algorithms offered by NASDAQ are:	
SCAN Routing	SCAN: First attempts to execute the order against the NASDAQ Single Book at a price equal to, or better than NBBO. If the order cannot be filled at the best price, it is routed to the better priced market (e.g., an ECN, third market maker or another exchange). If the order is not completely filled in the better priced market, the unexecuted portion posts to Single Book. If the order is subsequently locked or crossed by another market, it will not route to that market.	



STGY Routing

STGY: Behaves the same as SCAN, except if the order is subsequently locked or crossed by another market, it will route to that market.

Because exchanges now pay for orders, the more orders that are executed on a single market, the greater the payment that the order entry firm will get. With SCAN routing, orders posted to Single Book after attempting a fill in another market are “passive” - they wait there for another market to access that order in Single Book under the rule. This means the order will be filled on NASDAQ, maximizing the order entry firm’s payments for order flow received from NASDAQ. With STGY, the unfilled order on NASDAQ’s book will be routed to the other market, so an order entry firm that does not have sufficient order flow to receive payments for order flow might choose this option.

NASDAQ competes with the NYSE (and AMEX), trading NYSE and AMEX listed issues primarily via its captive ECN (INET). Variations on SCAN and STGY routing are available for orders for NYSE-listed issues, called DOT (as in SuperDOT - the old NYSE automated trading system) routing.

DOTA Routing

DOTA: After 9:30 AM (NYSE opening), the routing behaves as SCAN. Before 9:30, the order is sent to the NYSE for the opening.

DOTM Routing

DOTM: After 9:30 AM (NYSE opening), the routing behaves as STGY. Before 9:30, the order is sent to the NYSE for the opening.

1e. ORDER ENTRY SYSTEM (OATS) AND TRADE REPORTING SYSTEM (ACT)

OATS - Order Audit Trail System

OATS, FINRA’s Order Audit Trail System, provides for the electronic capture of order information for NASDAQ equity securities. Each Reporting Member must, immediately following receipt or origination of an order, record the details of the order in OATS. Also required to be recorded are the details of any order modification, cancellation and execution.

OATS Reports For NASDAQ, OTCBB And Pink Sheet Issues

The details of both electronic orders and manual orders must be captured and reported via OATS. NASDAQ market Makers, NASDAQ Order Entry Firms and ECNs are subject to OATS rules. Non-members of FINRA are not subject to the rule. OATS reports are required not only for orders for NASDAQ issues, but also for orders for OTCBB and Pink Sheet issues.

This information is used to match the order details to the trade execution that results via the ACT - Automated Confirmation of Trade System (covered next).

ACT System

The Automated Confirmation of Transactions Service (“ACT”) is a NASDAQ system that provides reporting and dissemination of last sale information on equity securities traded “over-the-counter.” The market venues that must report trades to ACT are:

NASDAQ (both Global Market and Capital Market);

OTCBB and Pink Sheets;

Third Market (OTC trades of listed equities);

Fourth Market (ECNs).

Unlinked ECNs that are not NASDAQ participants that effect trades through the ADF (Alternate Display Facility) report their trades through another system called TRACS (Trade Reporting and Comparison Service). TRACS is covered later in this section.

The ACT system:

is open from 8:00 AM - 8:00 PM ET. Also note that this is different than NASDAQ System Hours of 7:00 AM - 8:00 PM ET);

compares trade information entered by ACT participants and submits “locked-in” trades to the National Securities Clearing Corporation (NSCC - a division of DTCC - Depository Trust and Clearing Corp.) for clearance and settlement;

provides participants with the ability to enter pre-negotiated priced trades (for example, a trade used to establish the price of a security for purposes of making a gift);

sends transaction reports to the National Trade Reporting System;

provides participants with the ability to monitor and review their trades in the System; and

provides clearing firms with the ability to monitor and manage risk.

NASDAQ officially became a registered stock exchange in the last quarter of 2006, and one of the requirements to achieve “exchange” status was to completely separate its trade execution services from its trade reporting facilities.



Trade Reporting Facility (TRF)

The ACT system, because it both compared trade information as well as reported completed trades, had to be legally "broken apart." To do this, NASDAQ created the "TRF" - Trade Reporting Facility, which operates as part of the ACT platform.

Over The Counter Reporting Facility (ORF)

The "TRF" reports completed trades for NASDAQ stocks and for exchange listed stocks traded OTC (Third Market trades). These are the securities for which the NASDAQ Stock Market has registered to trade as an exchange with the SEC.

The NASDAQ Stock Market no longer has any responsibility for OTCBB or Pink Sheet trades - this oversight is given over to FINRA. Trades of OTCBB and Pink Sheet issues, as well as foreign issues that are not listed and reported over another exchange, are reported to the "ORF" - Over The Counter Reporting Facility that is also run by ACT.

The operation of the TRF and ORF is embedded within the existing ACT architecture and is transparent to ACT users. Essentially, the TRF is broken down into 4-feeds with similar rule sets. These are the:

NASDAQ TRF: Reports of trades of NASDAQ listed issues

NYSE TRF: Reports of trades of NYSE-listed issues that occur OTC between 2-Third Market makers (this was covered in the previous section)

ORF: Reports of trades of OTCBB and Pink Sheet issues

ADF/TRACS: Reports of trades of NASDAQ and NYSE listed issues that occur on ECNs and ATSs (Alternative Trading Systems)

Trades Reported Within 30 Seconds

As a general rule, ACT participants must report trades within 30 seconds of execution. Transactions not reported within this time frame are designated as "late." If FINRA finds a pattern of unexcused late trade reporting, the member firm may be found in violation of FINRA rules.

Reports of trades into ACT can be made either by:

ACT Market Makers; or

ACT Order Entry firms.

Executing Member Reports Trade

Only the "executing member" side of the trade is required to report to ACT. ACT sends this report to the contra-party to the trade to either be accepted or declined. All trade

reports are priced excluding mark-ups, mark-downs, commissions, and any other related charges.

**ACT Display Of
Trade Detail -
Confirmed Within
20 Minutes**

The reporting party enters its record of the trade into ACT; and the contra-party is obligated to review the trade report on-line; and accept or decline; within 20 minutes. Thus, unmatched trades, that are time-consuming and costly to resolve, are minimized.

ACT displays modifiers next to each trade for trades reported outside of the Regular Market session:

“.T” - designates that the trade took place outside of Regular Market hours but was reported that day.

“as/of” - designates that the trade took place outside of Regular Market hours but was reported the next day.

The following schedule shows the reporting rules for both regular and “after-hours” trading:

Time of Trade	Reporting	Designation
12 Mid. - 8:00 AM	8:00 AM - 8:15 AM (That Day)	“T”
8:00 AM - 9:30 AM	30 seconds	“T”
9:30 AM - 4:00 PM	30 seconds	None
4:00 PM - 8:00 PM	30 seconds	“T”
8:00 PM - 12 Mid.	8:00 AM - 8:15 AM (Next Day)	“as/of”

All transactions in NASDAQ listed issues must be reported within 30 seconds of execution during the regular operating hours of NASDAQ - 9:30 AM-4:00 PM ET.

In addition, the 30 second reporting rule is applied to NASDAQ trades occurring during ACT’s operating hours, which are 8:00 AM - 8:00 PM ET.

When trades are reported within the required 30 second limit, there is no time of execution required in the report. However, trades that are not reported within the required time frames must be noted as such.

**Z - Late Trade Report
Occurring Between
9:30 AM - 4:00 PM**

If a trade that took place during regular market hours (9:30 AM - 4:00 PM) is reported after the 30 second limit, it is designated as a “late” trade report with the modifier .Z

**.U - Late Trade Report
Occurring Outside Of
Regular Market Hours**

.U for late reports of trades occurring outside of normal market hours. The actual time of the trade must be included in the report.

(Note: NASDAQ changed its opening to 7:00 AM from the previous 8:00 AM for the Premarket trading session, yet



ACT has not changed its opening to match. Also note that the CBOE trade reporting rules, covered in the next section, are completely different.

1f. REPORTS OF TRADES OCCURRING ON THE ADF VIA TRACS

The NASD (now FINRA) created the ADF because the ECNs were concerned that SuperMontage (the NASD's first fully automated order book and execution system) was being created (circa 2003) to "kill" the ECNs - which had gobbled up about 60% of NASDAQ trading volume at that point. Most ECNs chose not to participate in SuperMontage, and by complaining loudly to the SEC, the SEC forced the NASD to establish the ADF - Alternate Display Facility - to show quotes from ECNs that were not linked (that is, not posting quotes) in SuperMontage.

ADF

TRACS

**Trades Reported
Within 30 Seconds
Between 8:00 AM -
6:30 PM**

Some of these unlinked ECNs had captive broker-dealer subsidiaries, and they would post their quotes in the ADF (but not in NASDAQ Single Book, the 2007 successor to SuperMontage). If a trade resulted, the trade must still be reported, but this is done through an "ADF-only" system called TRACS - Trade Reporting and Comparison Service.

TRACS operates from 8:00 AM - 6:30 PM, during which trades must be reported within 30 seconds of execution. For trades that occur after 6:30 PM, reporting occurs within 15 minutes of TRACS opening the next day.

Note that if a market maker in the ADF is also a NASDAQ market maker, it has the option of reporting the trade either through TRF or TRACS, unless the trade was effected through a NASDAQ system that "locks-in" the trade such as Single Book (which would automatically report the trade to the TRF anyway).

1g. NASDAQ CROSSES

**Trade Or Move
Message Replaced
By "Opening Cross"**

Determining the opening price of a NASDAQ stock has always been a messy affair. NASDAQ used to have a procedure where market makers, in the 10 minute window prior to market opening, could post quotes that would cross or lock the market. NASDAQ obligated the market maker to send a message to the other market makers whose quotes might be locked or crossed to "Trade or Move."

The market maker receiving the message either had to trade at the locked or crossed price - which would tend to move the market back to a normal bid-ask spread - or move his quote so that it would no longer result in a lock or

cross. This mechanism for “discovering” the appropriate opening price has been replaced by an automated process called the “Opening Cross.”

Opening Cross

The Opening Cross Procedure is as follows:

Starting at 7:00 AM, NASDAQ accepts quotes from market makers. These include:

MOO Order

“MOO” orders - Market On Open Orders - that can only be filled at the opening price;

LOO Order

“LOO” orders - Limit On Open Orders - that specify a limit on the price and can only be filled during the opening cross at that limit price or better;

OIO Order

“OIO” orders - Opening Imbalance Only Orders - that specify a limit on the price and that can only be executed against MOO and LOO orders (and early regular hours orders) during the opening cross. These are liquidity improving orders that will execute only to the extent that there is offsetting liquidity.

(Note: Sometimes these orders are abbreviated “MO,” “LO,” and “IO” instead of “MOO,” “LOO,” and “OIO.”)

MOO, LOO, and OIO orders can be entered, canceled and corrected between 7:00 AM and 9:28 AM without restriction.

No New MOO Orders After 9:28 AM

After 9:28 AM, new MOO orders cannot be entered, nor can existing MOO orders be canceled.

No New LOO Orders After 9:28 AM

After 9:28 AM, new LOO orders cannot be entered and existing orders cannot be canceled and can only be changed to improve the price or increase the order size.

New OIO Orders Accepted Until 9:30 AM

After 9:28 AM, existing OIO orders cannot be canceled and can only be changed to improve the price or increase the order size. However, new OIO orders are still accepted between 9:28 AM and the 9:30 AM open.

Also note that any “regular” market orders entered prior to 9:28 AM are eligible to participate in the cross - these are termed “early regular hours orders.” After 9:28 AM, orders that are entered will not participate in the cross (with the exception of new OIO orders).



**At 9:25 AM, Locking
Or Crossing Quotes
Are Filled At Best
Bid Or Offer**

The quotes “go live” at 9:25 AM (5 minutes prior to market open at 9:30 AM) and are shown in time priority. To prevent locked or crossed markets, any such quotes are held in a separate queue. Prior to the opening cross, the “in queue” orders are executed against the best bid or best offer.

Starting at 9:28 AM until market open, NASDAQ displays an Order Imbalance Indicator that is updated every 5 seconds that indicates the current “Match Price,” number of shares paired at the “Match Price” based on accumulated MOO, LOO, OIO, and early regular hours orders entered, and the size of the imbalance. This is done to attract more buyers if there are too many sellers; and vice-versa.

Note that starting at 9:28 AM until the 9:30 AM open, only new OIO orders can be accepted; no more MOO or LOO orders are permitted, nor are early regular hours orders permitted.

Based on the accumulated orders on the buy side and sell side, an opening price is set to maximize the number of MOO, LOO, OIO, and early regular hours orders filled (this is the “Clearing Price”).

Reported As “.T” Trades

These orders are cleared in one sweep at 9:30 AM - the Opening Cross. This is an automated process and the resulting trades are reported to the NASDAQ tape with the modifier “.T,” which indicates that this is not a “current trade price.” - at which point regular trading commences.

A simplified summary of the Opening Cross Timeline follows:

7:00:00 AM: MOO, LOO, OIO, and early regular hours market orders accepted.

9:25:00 AM: Quotes go “live” and any locking or crossing quotes are matched against the highest bid or lowest offer and filled (this prevents locked or crossed markets)

9:28:00 AM: Order Imbalance Indicator is displayed every 5 seconds to attract offsetting trades.

MOO orders no longer accepted; Early regular hours market orders no longer accepted; new LOO orders no longer accepted and existing orders can only be modified if size

or price is improved; New OIO orders still accepted; existing OIO orders can only be modified to improve size or price.

9:30:00 AM: Clearing Price is set to fill the maximum number of MOO, LOO, OIO, and early regular hours market orders and the orders are crossed. The market now opens.

Closing Cross

NASDAQ has also implemented a similar "Closing Cross" to create an automated orderly process for determining the closing price each day at 4:00 PM. One difference is that "OC" orders - On Close orders are accepted 10 minutes prior to market close (instead of 2 minutes prior to market opening for the acceptance of new "OO" On Open orders for the Opening Cross).

To effect the closing cross, NASDAQ accepts;

Market On Close (MOC);
Limit On Close (LOC); and
Imbalance Only (IO) orders.

Closing Cross Starts At 3:50 PM ET

The Closing Cross starts at 3:50 PM ET and is finished at the market close of 4:00 PM. During this time window, NASDAQ reports the following every 5 seconds:

the near and far clearing prices;
current reference price; and
imbalance quantity.

Post-Closing Cross

The "Crosses" have been so successful that NASDAQ has also implemented a Post-Closing Cross at 4:30 PM 3 Intraday Crosses for institutional orders, so that they can execute large orders without moving the market. These crosses are anonymous and cover stocks in the NASDAQ 100 and S & P 500 Indexes.

IntraDay Crosses

Trading Halt Procedure For Important Corporate News Announcements

1h. TRADING HALTS

NASDAQ has the power to halt trading in any NASDAQ issue if it believes that it is necessary to protect investors and it is in the public interest. NASDAQ companies must promptly notify the public through the press of any material information that may affect prices of the issuer's securities. Prior to the release of the information, the company is obligated to notify NASDAQ MarketWatch with the news.



**No Trading In
ANY Market If A
Halt Is Imposed**

After consulting with the company and evaluating the impact of the news, NASDAQ can halt trading prior to release of the announcement. NASDAQ usually maintains the halt for 1/2 hour until the news is digested. During this period, the NASDAQ screen is "blacked out" for that stock with the word "HALT" and the letter "T" (as in Trading Halted) with the following modifiers:

**Trading Halt
Indicators -
T.1; T.2; T.3**

- T.1: Trading is halted, news pending
- T.2: Trading is halted, news is released
- T.3: Trading is halted, news has been released; and 2 times are shown - the time when quotes will start being displayed; and the time when trading will resume (5 minutes later, known as the "5 minute window").

Furthermore, if a trading halt is in place, FINRA members cannot trade this security in any market, including overseas markets.

Also note that FINRA has the power to halt trading of securities in any market that it oversees - e.g., OTCBB trades, Pink Sheet trades or Third Market trades.

**1i. FINRA CONDUCT RULES RELATING TO
TRADING AND MARKET MAKING**

**Requirement To
Find Best
Available
Market**

When executing an order for a customer, the member must obtain the best available price in the market (the "inside" market). Among the factors to be considered in finding the best market are:

The character of the market for that security (price; volatility; liquidity).

The size and type of transaction.

The number of markets checked.

Location and accessibility of customer's broker-dealer to primary markets and quotations sources.

**For Non-NASDAQ
Or Thinly Traded
OTCBB Issues -
Must Get 3 Quotes**

Regarding the requirement to check a number of markets, if:

an order is for a security not included on NASDAQ or the OTCBB with at least 2 firm quotes displayed (basically either a "Pink Sheet" issue, or a very thinly traded OTCBB issue), quotes must be obtained from at least 3 dealers to find the best market.

Interpositioning Prohibited

FINRA prohibits a practice known as interpositioning. When your firm gets an order to buy or sell, the firm cannot go through a middleman firm who in turn goes to the market maker. Therefore, your firm cannot interposition another firm (who would earn a commission on top of your firm's commission) between itself and the market maker. Interpositioning is prohibited unless it can be demonstrated that the use of a middle firm allows for a better execution.

Correspondent Relationships Are Allowed

The prohibition on interpositioning does not prohibit "correspondent" relationships that are common to the industry. For example, a small broker-dealer dealing primarily in Pink Sheet issues may not have NASDAQ terminals, and may use another larger FINRA firm to handle NASDAQ trades, as part of a written trade and clearing agreement. Under these agreements, the clearing firm is paid out of the commission charged to the customer. There are no extra charges to the customer - nor are extra charges permitted under FINRA rules, since that would be an "interpositioning" violation.

Bona Fide Quotes

Any quotes published by market makers must be "bona-fide." Reports of trades must represent actual trades. Fictitious or deceptive quotes are fraudulent. Any nominal quotes must be identified as such.

No Backing Away

Market makers are expected to trade normal trading units (100 shares) at their quotes unless a larger size is specified or required. Backing away from quotes is a prohibited practice with the following exceptions if the market maker:

Backing Away Exceptions

has entered a revised quote into NASDAQ that, due to system slowness, does not yet show, the market maker does not have to fill orders at the non-updated display price; or

is effecting a trade at the display price at the time that a new order is received and intended to update its quote before filling any subsequent orders.

Liability Order

An execution error is not a permitted reason for "backing away." For example, assume that a customer enters an executable order to be filled within 3 minutes; and due to a sudden influx of orders, this order expires prior to execution. The market maker is obligated to fill this order. This known as a "liability order" - that is, the market maker is obligated (liable) for the proper execution of the order.

No Front Running

Market makers, upon receipt of a customer order that is likely to have a market impact (a "so-called" block order, generally for 10,000 shares or more) are prohibited from



"front running" that order - either in the firm's trading account or in an employee-related account.

**No Trading Ahead
Of Research**

If a firm's research department is going to issue a report on that company that is likely to affect the market price of the issue, the firm's market making desk cannot alter its pre-existing inventory position in that issue based on advance knowledge of the recommendation. Once the recommendation is disseminated, the firm is not bound by this restriction.

1j. MARKETWATCH

**NASDAQ
MarketWatch**

**Automated
Detection Of
Unusual Trading**

**Receives Material
Corporate News
Announcements And
Can Halt Trading**

**Clearly Erroneous
Trade Resolution**

The NASDAQ MarketWatch Department analyzes the trading patterns of every security listed on NASDAQ. NASDAQ's SWAT (StockWatch Automated Tracking) system creates an individual "profile" for every security, based on its historical price and volume information, industry-wide trends, and the publicly disseminated news on that company. When SWAT discovers abnormal activity or deviations from that "profile," market analysts are notified and, if appropriate, an investigation may begin to determine the reasons behind the abnormal market movement.

In addition, MarketWatch is responsible for receiving material corporate news announcements from NASDAQ-listed issuers to determine whether a trading halt should be imposed; and is the department that receives reports of clearly erroneous trades for review and resolution.

Should a member want to have a trade cleared through ACT (Automated Confirmation of Trade system) nullified or adjusted based on an obvious error in number of shares or price, the member must notify NASDAQ MarketWatch and provide the relevant details within 30 minutes of execution.

The member filing the complaint must provide NASDAQ MarketWatch with the relevant details of the trade, including the name of the contra-broker and the executing NASDAQ system.

In turn, NASDAQ will notify the contra-broker, giving it 30 minutes to provide details on its record of the trade. After review of all information, NASDAQ makes a written determination and communicates its decision to both parties - either nullifying the trade, adjusting the trade, or declining to act - that is, confirming 1 side's view of the trade.

Appeal to “MORC”

Either side can appeal NASDAQ's written determination within 30 minutes of receipt. The appeal is made to the Market Operations Review Committee (“MORC”). Their decision is final and binding.



NASDAQ MARKET MAKING SECTION EXAMINATION

1.

Same day registration is permitted if a market maker wants to register in a newly authorized NASDAQ issue, as long as the request is made within:

- a. 2 business days of the issue's inclusion
- b. 5 business days of the issue's inclusion
- c. 7 business days of the issue's inclusion
- d. 10 business days of the issue's inclusion

2.

All of the following are legitimate reasons for seeking an excused withdrawal as a NASDAQ market maker **EXCEPT:**

- a. sudden illness
- b. scheduled vacations
- c. sudden price changes
- d. religious holidays

3.

In order to voluntarily terminate its registration as a NASDAQ market maker, a member firm:

- a. makes a written request of NASDAQ
- b. withdraws its quotes from NASDAQ
- c. files Form MMV with NASDAQ
- d. moves its quotes away from the prevailing market

4.

A member firm is permitted to accept which of the following from an issuer in order to make a market in the issuer's stock?

- a. Cash
- b. Stock
- c. Loans
- d. None of the above

5.

Except when displaying a customer limit order, the minimum quotation display size of a Capital Market stock is:

- a. 1 x 1
- b. 2 x 2
- c. 5 x 5
- d. 10 x 10

6.

A member receives an order to buy a non-NASDAQ stock quotes in the Pink Sheets. Under FINRA rules, in order to determine the prevailing market, the member must contact a minimum of:

- a. 2 dealers
- b. 3 dealers
- c. 4 dealers
- d. 5 dealers

7.

Any quotes for NASDAQ securities entered prior to market open that would lock or cross the market are filled at the best bid or offer starting at:

- a. 9:20 AM ET
- b. 9:25 AM ET
- c. 9:28 AM ET
- d. 9:30 AM ET

8.

An excused withdrawal may be granted to a NASDAQ market maker for which of the following reasons?

- I The market maker comes into possession of material non-public information on the issuer
 - II The market maker involuntarily fails to maintain a clearing agreement
 - III There is a pending news announcement about the issuer
 - IV The market maker experiences an equipment malfunction
- a. II and III only
 - b. III and IV only
 - c. I, II, III
 - d. I, II, IV

9.

A market maker MPID in the NASDAQ Market Center shows as "NSDQ." this means that:

- a. the market maker's quote is not firm
- b. the market maker's identity is not being shown
- c. the market maker is only registered in NASDAQ stocks
- d. the market maker is posting a reserve quote

10.

A limit order entered into the NASDAQ Market Center as "Market Day" is to be filled at the:

- a. market price between the hours of 7:00 AM and 8:00 PM ET
- b. market price between the hours of 9:30 AM and 4:00 PM ET
- c. limit price or better between the hours of 7:00 AM and 8:00 PM ET
- d. limit price or better between the hours of 9:30 AM and 4:00 PM

11.

An order entered into the NASDAQ Market Center execution system as "system hours" is to be executed between:

- I 7:00 AM
- II 9:30 AM
- III 4:00 PM
- IV 8:00 PM

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

12.

A primary peg order to buy tracks the:

- a. national best bid
- b. national best offer
- c. opening bid
- d. opening offer

13.

Pegged orders can be entered into NASDAQ with a "TIF" of:

- a. 7:00 AM - 4:00 PM
- b. 7:00 AM - 8:00 PM
- c. 9:30 AM - 4:00 PM
- d. 9:30 AM - 8:00 PM

14.

All of the following orders can be entered into NASDAQ EXCEPT:

- a. Day
- b. IOC
- c. GTC
- d. MAQ

**15.**

If a market maker's quotes are not reasonably related to the prevailing market, FINRA may:

- a. immediately terminate the market maker's registration
- b. immediately suspend the market maker
- c. require the market maker to re-enter its quotes
- d. require the market maker to seek an excused withdrawal

16.

The inside market for ABCD is 10.25 - 10.50. The entry of which of the following quotes would result in a locked market?

- I 10.10 - 10.25
- II 10.35 - 10.63
- III 10.50 - 10.75
- IV 10.25 - 10.63

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

17.

Failing to honor a stated quote is a rule violation known as:

- a. interpositioning
- b. backing away
- c. front running
- d. trading behind

18.

A crossed market is one where the:

- a. inside bid is lower than the inside offer
- b. inside bid is the same as the inside offer
- c. inside bid is the same or higher than the inside offer
- d. inside bid is higher than the inside offer

19.

Under SEC Rule 11Ac1-1 (Regulation NMS Rule 602), backing away would **NOT** apply if:

- a. prior to the time an order is received, the market maker has entered a revised quote into NASDAQ
- b. at the time an order is received, the market maker was effecting a trade, and on completion, immediately enters a revised quote in to NASDAQ
- c. Both of the above
- d. Neither of the above

20.

NASDAQ Single Book fills orders based on:

- a. Price/Time priority
- b. Price/Size/Time priority
- c. Price/Time With Access Fee Consideration priority
- d. Time/Price priority

21.

A **T.1** modifier appearing next to a security symbol over NASDAQ Workstation indicates that trading:

- a. has been halted pending receipt of information requested by the NASDAQ
- b. has been halted pending a news announcement
- c. has been halted and the news announcement has already been disseminated to the public
- d. will resume in 5 minutes

22.

An inter-dealer trade in a Global Market stock effected between 4:00 PM and 8:00 PM ET must be reported to the Trade Reporting Facility for NASDAQ:

- a. within 30 seconds of execution as a "t" trade
- b. between 8:00 AM - 8:15 AM ET the next business day
- c. between 8:00 AM - 8:00 PM ET the next business day
- d. as an "as/of" trade prior to 4:00 PM ET on the next business day

23.

Inter-dealer transactions in which of the following securities are reported through the FINRA NASDAQ TRF (Trade Reporting Facility)?

- I NASDAQ Global Market stocks
 - II NASDAQ Capital Market stocks
 - III NYSE-listed stock trades effected over-the-counter
 - IV OTC Bulletin Board Stocks
- a. I and II only
 - b. III and IV only
 - c. I, II, III
 - d. I, II, III, IV

24.

Under ACT/TRF rules, all trades occurring between 8:00 AM - 8:00 PM ET must be reported within:

- a. 30 seconds of execution
- b. 60 seconds of execution
- c. 90 seconds of execution
- d. 120 seconds of execution

25.

Which of the following trade reports to the Trade Reporting Facility (TRF) must be designated as an "as/of" transaction?

A trade executed between:

- a. 8:00 AM - 9:30 AM ET
- b. 4:00 PM - 8:00 PM ET
- c. 8:00 PM - 12:00 Midnight ET
- d. 12:00 Midnight - 8:00 AM ET

26.

In an interdealer trade of a NASDAQ listed issue, responsibility for reporting to the Trade Reporting Facility (TRF) rests with the:

- a. buying party
- b. selling party
- c. executing party
- d. initiating party

27.

A report to the Trade Reporting Facility (TRF) which includes a **Z** modifier indicates that the report:

- I has been made within the required 30 seconds
 - II has been made after the required 30 seconds
 - III is for a trade occurring during Regular Market Hours
 - IV is for a trade occurring outside of Regular Market Hours
- a. I and III
 - b. I and IV
 - c. II and III
 - d. II and IV



28.

BD1 receives a customer order to sell 500 shares of ABCD at \$42.50. The order is routed through ACES to BD2 who places the order in SingleBook. The order is executed when BD3 enters a market order to buy 1000 shares of ABCD into SingleBook. Who reports to the TRF?

- a. BD1
- b. BD2
- c. BD3
- d. SingleBook

29.

A member firm, wishing to have a clearly erroneous trade nullified, must make the request to NASDAQ MarketWatch:

- a. within 30 minutes of the transaction
- b. within 1 hour of the transaction
- c. no later than 4:00 PM ET on the day of the transaction
- d. no later than 8:00 PM ET on the day of the transaction

30.

The Trade Reporting Facility for NASDAQ:

I requires reports of trades of NASDAQ listed issues within 30 seconds during ACT operating hours

II immediately disseminates reported last sale information to the NASDAQ ticker

III provides on-line access to real-time trade reporting information

- a. I only
- b. I and II only
- c. II and III only
- d. I, II, III

NASDAQ MARKET MAKING EXAMINATION EXPLANATIONS

1. The best answer is b. If a firm is currently registered as a NASDAQ market maker, additional registration requests are effective the same day for newly authorized issues when the issue starts trading on NASDAQ, as long as the request is made within 5 business days of the issue's inclusion.
2. The best answer is c. Excused withdrawal status may be granted for the following reasons: religious holidays, sudden illness, scheduled vacations, jury duty, equipment malfunction, the requirements of Rule 103 under Regulation M, and failure to maintain a clearing agreement. Seeking an excused withdrawal due to an impending news announcement or sudden price change is not permitted.
3. The best answer is b. To voluntarily terminate its registration in a NASDAQ stock, the market maker simply has to withdraw its quotes from NASDAQ. Prior permission is not required. Note, however, that the market maker will not be permitted to re-register in that stock until 20 business days elapse.
4. The best answer is d. Member firms cannot accept any form of consideration from an issuer in return for making a market in that issuer's stock.
5. The best answer is a. If no size is stated for any NASDAQ quote, that quote is only good for 100 shares.
6. The best answer is b. When receiving a customer order to buy a "non-NASDAQ" Pink Sheet stock for a customer, FINRA requires that at least 3 dealers be contacted (or as many dealers as there are, if there are fewer than 3) to determine the prevailing market price. Note that this rule also applies to OTCBB issues for which an "inside market" does not exist. An inside market is deemed to exist if there are at least 2 market makers posting firm 2-sided quotes.
7. The best answer is b. As part of the Opening Cross Process, any orders that have been entered prior to market opening that would lock or cross the market are placed "in queue" and, starting at 9:25 AM, these orders are automatically executed against the best bid or offer. Thus, when the market opens at 9:30 AM, no locking or crossing quotes will be present since all of them will have been executed.
8. The best answer is d. Excused withdrawal is not permitted for a pending news announcement, a sudden influx of orders, or a sudden price change. Receipt of material non-public information about an issuer, which makes that firm an "insider" is a reason for seeking an excused withdrawal; as are failure to maintain a clearing agreement and equipment malfunction.
9. The best answer is b. NASDAQ permits a market maker to enter quotes anonymously by using the "NSDQ" MPID (Market Participant ID).
10. The best answer is d. Orders must be entered into the NASDAQ Market Center with a "TIF" indicator. The "Time In Force" for a "Market Day" order is the regular NASDAQ trading session hours of 9:30 AM - 4:00 PM ET. Do not confuse this with a market order! The question states that this is a limit order, so it is to be filled at the limit price or better, between the hours of 9:30 AM and 4:00 PM ET.



11. The best answer is **b.** Orders must be entered into the NASDAQ Market Center with a "TIF" indicator. The "Time In Force" for a "System Day" order encompasses the 3 NASDAQ trading sessions for which the "system" is open - the Premarket (7:00 AM - 9:30 AM), Market (9:30 AM - 4:00 PM) and Aftermarket (4:00 PM - 8:00 PM) trading sessions.
12. The best answer is **a.** A "primary peg" order is tied to the same side of the NBBO - National Best Bid and Offer (inside market). Thus, a primary peg order to buy is tied to the inside bid. A primary peg order to sell is tied to the inside ask. In contrast, a market peg order (a reverse peg order) is tied to the opposite side of the NBBO. Thus, a market peg order to buy is tied to the inside ask. A market peg order to sell is tied to the inside bid.
13. The best answer is **c.** Pegged orders are tied to the NBBO (inside market) and track the movements of the NBBO. These can only be entered with a "TIF" (Time In Force) of 9:30 AM - 4:00 PM (the Regular Market Hours trading session). Pegged orders are not permitted in the Premarket and Aftermarket sessions, since trading is thin and market price movements are more volatile.
14. The best answer is **d.** Orders can be entered into NASDAQ as Day orders, GTC orders (good for 1 year if not canceled), IOC orders (fill the order immediately in full or in part and cancel any unfilled portion), and MQ orders (minimum quantity - either fill the order for the entire minimum quantity specified, or cancel the order). MAQ order (minimum acceptable quantity), which allow the market maker that receives the order to decide whether to accept or reject the order, are not accepted.
15. The best answer is **c.** If a market maker's quotes are not reasonably related to the prevailing market, FINRA may require that the firm re-enter its quotes. If it fails to do so, FINRA may then suspend the market maker's quotes in one or all securities.
16. The best answer is **a.** A locked market is one where the bid and the ask on the "inside" are the same. The entry of Choice I results in an inside market (high bid, low ask) of 10.25 - 10.25, which is a locked market. Choice II results in an inside market of 10.35 - 10.50. Choice III results in an inside market of 10.50 - 10.50. Choice IV results in an inside market of 10.25 - 10.50.
17. The best answer is **b.** Failure to honor a firm quote is a rule violation known as "backing away." Interpositioning is another rule violation covered in a later chapter, where a member interposes another firm between itself and a market maker. Front running a customer order is another violation - customer orders must be filled before an equivalent proprietary order can be filled. Trading behind is meaningless.
18. The best answer is **d.** A crossed market is one where the inside bid is higher than the inside ask. A locked market is one where the inside bid is the same as the inside ask.
19. The best answer is **c.** Under SEC Rule 11Ac1-1 (now renamed Rule 602 of Regulation NMS), quotes must be firm and must be honored. There are 2 exceptions to this rules, however. First, if prior to the time an order is received, the market maker has entered a revised quote; and Second, if at the time an order is received, the market maker is effecting a trade, and immediately upon completion, enters a revised quote.
20. The best answer is **a.** NASDAQ Single Book fills orders using "Price/Time" priority.

21. The best answer is **b.** The trading halt modifiers on NASDAQ that are used for news announcements are:

T.1: Trading is halted, news pending;

T.2: Trading is halted, news is released;

T.3: Trading is halted, news has been released; and 2 times are shown. These are the time when quotes will start being displayed and the time when trading will resume (5 minutes later).

22. The best answer is **a.** The following schedule summarizes the reporting rules to the Trade Reporting Facility of ACT for both regular and "after-hours" trading:

Time of Trade	Reporting	Designation
12 Midnight - 8:00 AM	8:00 AM - 8:15 AM that day	"T"
8:00 AM - 9:30 AM	30 seconds that day	"T"
9:30 AM - 4:00 PM	30 seconds that day	None
4:00 PM - 8:00 PM	30 seconds that day	"T"
8:00 PM - 12 Midnight	8:00 AM - 8:15 AM next day	"as/of"

A "T" trade is one that is executed outside of the regular Market trading session hours of 9:30 AM to 4:00 PM, but which is reported that day. This trade occurred between 4:00 PM and 8:00 PM ET, so the trade must be reported within 30 seconds with the designation "T" and the time of the trade.

23. The best answer is **a.** Trades of all NASDAQ stocks (both Global Market and Capital Market) are reported through the NASDAQ "TRF" (Trade Reporting Facility). Trades of NYSE listed issues are reported through the NYSE TRF. OTCBB and Pink Sheet trades are reported through the ORF (Over The Counter Reporting Facility).

24. The best answer is **a.** The following schedule summarizes the rules for reporting to the TRF (Trade Reporting Facility) during both regular and "after-hours" trading:

Time of Trade	Reporting	Designation
12 Midnight - 8:00 AM	8:00 AM - 8:15 AM that day	"T"
8:00 AM - 9:30 AM	30 seconds that day	"T"
9:30 AM - 4:00 PM	30 seconds that day	None
4:00 PM - 8:00 PM	30 seconds that day	"T"
8:00 PM - 12 Midnight	8:00 AM - 8:15 AM next day	"as/of"

Since ACT/TRF is open from 8:00 AM - 8:00 PM ET, all trades occurring during this time window must be reported within 30 seconds of execution.

25. The best answer is **c.** The following schedule summarizes the rules for reporting to the TRF (Trade Reporting Facility) during both regular and "after-hours" trading:

Time of Trade	Reporting	Designation
12 Midnight - 8:00 AM	8:00 AM - 8:15 AM that day	"T"
8:00 AM - 9:30 AM	30 seconds that day	"T"
9:30 AM - 4:00 PM	30 seconds that day	None
4:00 PM - 8:00 PM	30 seconds that day	"T"
8:00 PM - 12 Midnight	8:00 AM - 8:15 AM next day	"as/of"



The “as/of” designation means that the trade occurred after ACT’s closing time of 8:00 PM and is being reported on “T + 1.” In contrast, a “T” trade is one executed outside of normal trading hours, but the trade is being reported that day.

26. The best answer is c. As a general rule, TRF rules require that in a transaction between 2 members, the executing party report the transaction. If a transaction is between a member and a customer, then the member reports. Finally, if the transaction is done over the telephone (OTCBB issue) with extensive haggling so that there is no clear “executing party,” then the sell side reports.

27. The best answer is c. The .Z modifier next to a trade reports means that the report has been made “late” (after the required 30 seconds) for a trade that took place during Regular Market Hours (9:30 AM - 4:00 PM ET). If the trade took place outside of Regular Market Hours and is reported late while ACT is still open (ACT is open from 8:00 AM - 8:00 PM ET), then it is reported as late with the modified .U.

28. The best answer is b. Trades are reported by the executing party, which is BD2, since it maintained the order in SingleBook that was filled. BD2 must file a tape report showing the trade with BD3; and it also must file a non-tape report identifying BD1 as the seller in the transaction.

29. The best answer is a. Under FINRA rules, a member firm must contact NASDAQ MarketWatch within 30 minutes of an execution that it believes to be erroneous. NASDAQ will give a written determination and can nullify the trade, adjust the terms of the trade or do nothing. Either side can appeal the written determination within 30 minutes of receipt to MORC - the Market Operations Review Committee. All decisions made upon appeal are binding and final.

30. The best answer is d. The NASDAQ TRF (Trade Reporting Facility) is operated on the ACT platform. It requires that trades that occur in NASDAQ issues be reported within 30 seconds of execution during ACT operating hours (8:00 AM - 8:00 PM). Trade reports received by the TRF are immediately disseminated to the NASDAQ ticker and the news media through NASDAQ’s “TDDS” - Trade Data Dissemination Service. Members have on-line access to real-time trade reporting information though the TRF’s “Time and Sales” feature.

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SECTION 2: CBOE TRADING

(Note: Some of the information in this section was covered previously, however this section adds more detail.)

2a. ORDERS ACCEPTED

The CBOE defines a broad range of orders that will be accepted. These are:

Market Order:

An order to buy or sell a stated number of option contracts at the best price obtainable. Market orders do not specify a price and are filled before all other orders.

Not Held Order:

An order that gives discretion over price and time of execution, also called a market-not held order or a "take time" order. Such an order must be filled that trading day.

Limit Order:

An order to buy or sell a stated number of option contracts at a stated price or better.

A limit order to buy is to be filled at the limit price or lower and is placed on the display book at a price that is lower than the current market.

A limit order to sell is to be filled at the limit price or higher and is placed on the display book at a price that is higher than the current market.

Contingency Order:

A market or limit order that is contingent on a condition being satisfied. There are 4 defined types of contingency orders - a Market-If-Touched order, a Stop order, a Stop Limit order and a Market On Close order.

Market-If-Touched (MIT) Order: If the market price for an option moves to a specified price, this order becomes a market order.

An MIT order to buy is placed below the current market. If the market moves to

that price, the order becomes a market order to buy. Unlike a buy limit order (also placed below the current market), there is no maximum execution price - the order will be filled at the market.

An MIT order to sell is placed above the current market. If the market moves to that price, the order becomes a market order to sell. Unlike a sell limit order (also placed above the current market), there is no minimum execution price - the order will be filled at the market.

Stop (Stop-Loss) Order: If the market price for an option moves to a specified price, this order becomes a market order.

A stop order to buy is placed above the current market. If the market moves to that price, the order becomes a market order to buy. The order is used to stop an ever-increasing loss on a short position in a rising market, since once the order is triggered, the position will be bought in at the market. Note that a buy stop order is placed above the current market, while a buy MIT order is placed below the current market.

A stop order to sell is placed below the current market. If the market moves to that price, the order becomes a market order to sell. The order is used to stop an ever-increasing loss on a long position in a falling market, since once the order is triggered, the position will be sold at the market. Note that a sell stop order is placed below the current market, while a sell MIT order is placed above the current market.

A variation on a stop loss order is a “stop limit” order. This order is placed the same way as a stop order, but once triggered, becomes a limit order to either buy or sell. This means that, once triggered, if the market moves away from the limit price (above the limit price for a buy order; below the limit price for a sell order), then the order will not be executed.

Market-On-Close (MOC) Order: An order to be filled as close to the closing price as possible or it is canceled. Note that if trading is halted due to the imposition of circuit breakers, then this



order will be canceled because there was no “close.” On the other hand, if the market is “fast” (meaning that trading is extremely rapid and unruly) at the close, this does not affect the order’s status and it will be filled.

Spread Order: An order that creates an options spread. To create a spread, the same number of options contracts are bought and sold on the same class of option, either with different strike prices (vertical spread); different expirations (horizontal spread); or both are different (diagonal spread).

Vertical spread example:

Buy 1 ABC Jan 50 Call
Sell 1 ABC Jan 60 Call

Horizontal spread example:

Buy 1 ABC Jan 50 Call
Sell 1 ABC Dec 50 Call

Diagonal spread example:

Buy 1 ABC Jan 50 Call
Sell 1 ABC Dec 60 Call

Straddle Order: An order that creates an options straddle. A long straddle consists of the purchase of a call and the purchase of a put on the same underlying asset with the **same strike price and expiration**. A short straddle consists of the sale of a call and the sale of a put on the same underlying asset with the **same strike price and expiration**.

Long straddle example:

Buy 1 ABC Jan 50 Call
Buy 1 ABC Jan 50 Put

Short straddle example:

Sell 1 ABC Jan 50 Call
Sell 1 ABC Jan 50 Put

Combination Order: An order that creates an options combination, also commonly called a “strangle.” A long combination consists of the purchase of a call and the purchase of a put on the same underlying asset with either **different strike prices or different expirations**. A short combination consists of the sale of a call and the sale

of a put on the same underlying asset with either different **strike prices or different expirations.**

Long combination (strangle) example:

Buy 1 ABC Jan 50 Call
Buy 1 ABC Jan 45 Put

Short combination (strangle) example:

Sell 1 ABC Jan 50 Call
Sell 1 ABC Jan 45 Put

Ratio Order: A spread, straddle or combination order that is not “1 for 1.” On the CBOE, the maximum order ratio that will be taken is 3:1 (or vice-versa).

Ratio Spread Order Example

Buy 5 ABC Jan 50 Calls
Sell 10 ABC Jan 60 Calls

(Note that is spread order is at a 1:2 ratio, and thus is permitted).

One Cancels the Other (OCO) Order: Two or more orders treated as a unit. The execution of any one of the orders causes the other(s) to be canceled.

All Or None (AON) Order: An order to be filled in its entirety; a partial fill is not permitted. Furthermore, if the order cannot be filled, subsequent reattempts are permitted.

Fill Or Kill (FOK) Order: An order to be filled in its entirety; a partial fill is not permitted. If the order cannot be filled, subsequent reattempts are not permitted, so the order is “killed.”

Immediate Or Cancel (IOC) Order: An order to be filled in part or in full immediately; any portion not filled is canceled. It is like a FOK order, but it permits a partial execution whereas an FOK order does not.

Attributable Order: A market or limit order which displays the user firm ID. The use of attributable orders is voluntary on the CBOE.

Intermarket Sweep Order (ISO) Order: An order that will electronically “sweep” the exchange’s limit order book. An ISO is a limit order sent to a particular exchange when another market center is posting better quotes. The



recipient exchange (the CBOE in this case) is alerted by the “ISO” that the trader will also be sending the ISO to the other options exchanges in an attempt to access their better-priced orders. That way, the first exchange (the CBOE) does not have to re-route the order to the “better priced” market as would be required under the best execution rules and can attempt a fill, subject to “best execution” requirements.

CBOE-Only Order: An order to be filled in whole or in part on the CBOE without routing the order to another market center. If routing would be required (which would occur if the other market center is posting a better price), the order is canceled. Thus, the firm that entered the order is responsible for routing the order to the best priced market.

Reserve Order: A limit order that has both a displayed size and an additional non-displayed size. Both sizes are available for execution against incoming orders. As fills occur against the displayed size, once the displayed size becomes “0,” the system replenishes the display size to the original amount from the reserve. This allows market makers to show a smaller size than their true trading interest. Also note that the reduction of displayed quote size that occurs after each automated fill is called “decrementation.”

Complex Order Book

Aside from these order types, the CBOE runs a separate automated “Complex Order Book.” The Complex Order Book (COB) will accept:

- Spread Orders;
- Straddle Orders;
- Combination / Strangle Orders;
- Ratio Orders;
- Butterfly Spread Orders;
- Box Spread Orders;
- Collar Orders.

Such orders are exposed to an automated auction process for filling.

2b. CBOE MARKET MAKING

The CBOE operates a “hybrid” system that allows for both manual trade executions and automated trade executions. The automated system has a maximum permitted order entry and execution size for each option class.

Cannot Split Orders

An order that is too large for automated execution may not be split up (called “unbundling”) so that it meets system

size limits. Thus, orders that are too large for the system are handled manually.

To stop the automated system from being overloaded, Trading Permit Holders cannot enter multiple orders on the same side of the market for an options class within any 15 second period for the same account or accounts with the same beneficial owner.

All bids and offers accepted are expressed in dollars per unit of the underlying security. For example, a bid of 7 means a bid of \$700 for a 100 share option contract.

Minimum Bid Increments

Minimum bid increments accepted are as follows:

Options priced under \$3:	\$.05
Options priced over \$3:	\$.10

For options contracts that are part of the "penny pilot program" that is testing trading of options in \$.01 increments, the minimum bid increments accepted are:

Options priced under \$3:	\$.01
Options priced over \$3:	\$.05

Also note that for the most active index options included in the penny pilot program, such as the QQQQ and SPY, the \$.01 increment is applied to all contracts.

Firm Quote Rule

As required by the firm quote rule, all bids and offers on the CBOE floor must be firm for the displayed size. The minimum quote size for each option contract is set by the CBOE and is generally 10 contracts. If a dealer receives an order that is greater than its displayed size, it must either:

execute the entire order; or

execute that portion of the order equal to its display size and immediately revise its bid or offer.

Firm Quote Exceptions

This firm quote rule does not apply:

if 2 Floor Officials determine that the market is "fast" - meaning that the level of trading activity is unusually high and the exchange is incapable of collecting, processing and making available quotations vendors' bids, offers and quotation sizes in a manner that accurately reflects the state of the market on the floor; or

during a trading rotation.

When quotes are not firm (as in the above 2 cases), each dealer or broker must report its bids or offers on a "best



efforts" basis and the Exchange will disseminate a message stating that the displayed quotes are not firm.

Quote Updating Exception

Finally, remember that if a broker or dealer has revised its quote, but the exchange system does not yet reflect the change; or if a broker or dealer has effected a trade at its published quote and is in the process of updating its quote; then the "old" quote is no longer valid.

Market Maker Obligations

Market makers are obligated to:

maintain a fair and orderly market in listed options;

compete with other options market makers to improve markets (remember that the CBOE uses a system of competing market makers);

maintain a bid-ask quote that will be honored in accordance with the firm quote rule; and

update market quotes in response to changed market conditions and assure that any market quote disseminated is accurate.

Market makers are not permitted to:

congregate in a particular class of options;

dominate the market in options of a particular class; or

effect options trades in an unreasonable or disorderly manner.

Quote Risk Monitor

Any market maker that is quoting electronically may use a CBOE system to limit risk. Under the Quote Risk Monitor Mechanism (QRM), the market maker may specify a maximum number of contracts that can be traded within a specified time period. If this limit is exceeded, the QRM mechanism will cancel all electronic quotes for that market maker until the quotes are refreshed.

An individual or firm that is a DPM - Designated Primary Market Maker - takes on functions similar to a stock exchange specialist - acting both as a market maker and handling the book of public options orders.

DPM Obligations

The DPM:

must provide continuous accurate electronic quotes in 100% of each assigned options series that is singly-listed; and 90% of each assigned options series that is multiply-listed;

must honor quotes for the displayed price and size, as required by the firm quote rule (generally 10 contracts);

must comply with maximum bid/ask spread differentials set by the CBOE. These are:

Premium	Amount	Maximum Spread
\$0	-	\$2
\$2	-	\$5
\$5	-	\$10
\$10	-	\$20
	Over \$20	\$1.00

must trade in all securities assigned to the DPM only in the capacity of DPM and not in any other capacity;

must ensure that the trading rotation is initiated promptly following the opening of the underlying security;

must not initiate transactions for the DPM's own account that would elect a stop or stop-limit order on the DPM's book (these must be elected through the filling of customer orders against the orders on the book);

cannot execute orders as agent or Floor Broker in its assigned options classes.

Trade Through Rule Applies To Options Exchanges

All market makers and DPMs must comply with the "trade through rule." Even though the rule was originally written to apply only to NMS securities (NYSE, AMEX and NASDAQ stocks), the options exchanges have adopted the same rule. Remember that this rule requires each market center to fill marketable orders at the best price shown in all markets within 1 second, otherwise the order must be routed to the better priced market for a fill.

Trade Through Rule Exceptions

The CBOE adds that this rule does not apply:

if an order that was routed to a better priced market is not responded to within 1 second (as required by the rule), then the CBOE will notify the non-responding market immediately and can fill the order itself;

during a trading rotation;

if the transaction that constituted the Trade-Through occurred when there was a crossed market;



if the transaction that constituted the Trade-Through was an ISO (remember that, in this case, it is the responsibility of the firm entering the order to comply with the Trade-Through rule);

if the transaction that constituted the Trade-Through was a stopped order (an order filled at a previously guaranteed price).

Cannot Lock Or Cross Market

Just like NASDAQ rules, CBOE rules prohibit market makers or DPMs from entering quotes that will lock or cross a market.

Liquidity Rebates

CBOE rules encourage market makers to add liquidity to the market. Market making firms (MMs, LMMs and DPMs) can earn so-called "liquidity rebates" based on the depth and quality of markets made. These take of the form of fee reductions offered up by the CBOE to these market makers. This reduces the profitability of the CBOE itself, but increases the profitability of the market making firms that earn the rebates.

Payment For Order Flow

Also remember that all markets, including the CBOE, permit payments for order flow. Market making firms are allowed to "pay" order entry firms for routing their orders to that market maker. This puts profit pressure on the market making firms that make such payments; and these reduced profits can be offset by liquidity rebates paid by the exchanges. (The disclosure rules surrounding payment for order flow were covered in the first chapter of this text.)

2c. ORDER BOOK OFFICIALS (OBOs)

The OBO is an exchange employee that manages an electronic order book of public orders. The OBO does not have a market making function. Orders placed on the book can be traded against by Registered Options Traders, Market Makers and Designated Primary Market Makers. Note that the orders on the book are public customer orders - market maker quotes are not found here.

The orders accepted on the electronic book are market orders that will participate in an opening rotation and limit orders. Once the opening rotation has been completed, market orders can no longer be accepted by the OBO - they will be filled immediately based on best execution rules.

The OBO must display the orders constituting the high bid with aggregate size and the orders constituting the lowest ask price with aggregate size from the limit order book throughout the trading day. This is the options equivalent

of the NBBO (National Best Bid and Offer) shown on NASDAQ. During unusual market conditions, the OBO can make these quotes available orally rather than displaying them.

The OBO is not obligated to disclose the complete depth of the book to market participants. However, the CBOE does state that any TPH (Trading Permit Holder) can request the price and number of contracts bid below or offered above the displayed book information, and as long as the request does not interfere with the operation of the book, the OBO may disclose this information. Translated, this means that only the best bid and offer is displayed routinely by the OBO - the additional depth of orders on the book is available only on request.

2d. TRADING ROTATIONS

The purpose of the opening rotation is to insure that all opening trades in each options series occurs at the same price. The OBO, LMM or DPM starts trading each options series in order. It begins when the underlying security opens for trading in its primary market. The options with the nearest expiration and lowest strike prices are opened first and then the OBO, LMM or DPM "rotates" through each options series, ending with those with the highest strike prices and longest expirations.

While calls and puts are being opened in order during the rotation, no other options orders can be filled - even orders for options already opened. General trading does not start until the opening rotation is completed for all options series.

The advantage of the opening rotation is that all options orders present for a given options series in the rotation are filled at a single price. If, for example, at the opening rotation, a customer places an order to sell 10 calls at a premium of \$5.50 and the only opening sell order received for this series is for 30 calls at \$5.50, then the DPM will buy the remaining 20 contracts at \$5.50, establishing the opening price of \$5.50. The disadvantage is that any order that misses the opening rotation deadline must wait until all contracts have been rotated through and general trading starts - and this can take 15 minutes or so, during which time prices can move sharply.

Daily Opening Rotation

While an opening rotation is done every day, a closing rotation is only done routinely on the last trading day prior to expiration, when trading can be especially heavy. This helps to insure an orderly close.



**Closing Rotation
On Friday Prior
To Expiration**

The closing rotation is conducted right after the market close on the third Friday of the month (3:00 PM CT; 4:00 PM ET for equity options; 3:15 PM CT; 4:15 PM ET for index options). Remember that listed options for that month expire on the Saturday following the third Friday of the month.

**Trading Rotation
Can Also Be Used
In A Fast Market Or
After A Trading
Halt**

In addition, if a "fast" market is declared, then an intra-day rotation may be used to re-establish an orderly market. Finally, if trading options has been halted, typically due to a trading halt in the underlying security, then to insure an orderly re-opening, a rotation is completed before all options series reopen for trading.

**HOSS - Hybrid
Opening System**

The CBOE has adopted an automated opening rotation system called "HOSS" - the Hybrid Opening System. Based on the standing orders placed for the opening rotation, the system publishes an Expected Opening Price (EOP) at which each series is likely to open. As more orders are received prior to the opening rotation, the system updates the EOP. Based on the balance of buy and sell orders, the system establishes a clearing price that matches the majority of the orders at a single price. Once this is completed, the options series opens for general trading. Note that this procedure is very similar to the NASDAQ Opening Cross.

As the opening price is determined for each series, the system disseminates the opening quote and opening trade price via OPRA (if any, because there may be no orders for a particular options series to match at the opening).

**OPRA - Options Price
Reporting Authority**

OPRA stands for the Options Trade Reporting Authority. It is a "securities information processor" that publishes a Consolidated Tape of options trades that are effected in all options markets in the U.S. The exchanges that participate include the CBOE, AMEX, ARCA, NASDAQ, PHLX, ISE, BATS and the BSE (Boston Stock Exchange). In addition to publishing last sale reports, OPRA publishes options quotes, number of contracts traded, open interest, and end-of-day summaries.

2e. TRADING HALTS / FAST MARKETS

The CBOE permits trading to be halted in any listed options contract based on the agreement of 2 Floor Officials for not more than 2 business days. To extend the trading halt beyond 2 consecutive business days, a senior executive of the exchange must also agree to the halt. The factors considered in determining whether to halt trading include:

for stock options, whether trading in the underlying security has been halted in the primary market;

for stock options, if the opening of the underlying security in the primary market has been delayed because of unusual circumstances;

for index options, the current calculation of the index value is not available;

for all options, the extent to which the rotation has been completed or other factors regarding the status of the rotation; or

for all options, other unusual factors are present.

Trading resumes when 2 Floor Officials agree.

Rule 80B Circuit Breakers

Trading will also be halted if the NYSE stops trading under its "circuit breaker" rule (Rule 80B) which shuts the market due to excessive volatility. The rule shuts the market for time periods ranging from 1/2 to 1 hour if the Dow Jones Industrial Average drops by 10%. When the market reopens, if the DJIA drops by another 10%, the circuit breaker kicks in again and the market is shut. When the market is reopened, if the DJIA drops by another 10% (30% cumulative drop), the market is closed until the next business day.

Note that if the market is shut for the balance of the day, any open "market at the close" orders can not be executed and must be canceled.

If NYSE Closes Market - All Other U.S. Markets Close As Well

Finally, all of the exchanges have agreed that if the NYSE shuts its market because the circuit breaker is tripped in a market decline, all of the other securities exchanges, such as AMEX, NASDAQ, CBOE will shut as well.

CBOE Reopens With Rotation

The CBOE states that upon reopening, a rotation will be held in each class of option unless 2 Floor Officials conclude that a different method of reopening should be used.

Corporate News Announcements - Automatic RAES Suspension

Similar to NASDAQ MarketWatch, which receives important corporate news announcements from listed issuers and evaluates them to see if a trading halt should be implemented, the CBOE has an automatic system that receives corporate news announcements. If the news announcement is significant, the system automatically suspends RAES (the Retail Automatic Execution System). Thus, orders for these options classes will be executed manually. 2 Floor Officials are promptly notified of this suspension and must use their judgment to determine the



significance of the announcement and whether to resume RAES operation in the affected classes of options.

Fast Market Procedures

If trading on the floor becomes disorderly, 2 Floor Officials can declare a "fast market" in that options class. During a "fast" market" any 2 Floor Officials can:

- assign one or more classes or series of options to Order Book Officials at other trading posts;
- authorize OBO clerks to execute transactions;
- direct that one or more trading rotations be employed;
- suspend the firm quote rule;
- turn off RAES (the Retail Automatic Execution System) so that all trades must be done manually, slowing the market;
- take any other necessary actions to restore a fair and orderly market.

During a "fast market," the CBOE can restrict the entry of contingency orders - stop orders, stop limit orders and market-if-touched orders, since these orders can be "piled up" at specific price points on the book of open orders and, once elected, can unleash a flood of orders to buy or sell that will further disrupt the market.

If Fast Market Is Not Cured, Trading Is Halted

Regular trading is resumed when 2 Floor Officials determine that the conditions causing the market disruption no longer exist. If the procedures listed above used to "cure" the fast market conditions do not work, then the 2 Floor Officials must halt trading in that options class or series.

2f. TRADE REPORTING / MATCHING

During CBOE market hours (8:30 - 3:00 PM CT for equity options), any trade must be reported within 90 seconds for:

- clearance purposes, by both the buyer and seller; and
- trade reporting purposes, by the seller only.

If an error is made in reporting a trade price, the actual price of the trade prevails. A correcting price report must be made for both clearance and trade reporting purposes. The trade information submitted for clearance purposes is matched on that day by the exchange. At the end of the

day, the exchange issues an Unmatched Trade Report to each Clearing TPH (Trading Permit Holder), which contains a list of trades that did not receive a matching trade report from another Clearing TPH. Promptly upon receipt of the Unmatched Trade Notification or Report, the TPH must reconcile all unmatched trades and report all reconciliations and corrections to the CBOE.

Trading Permit Holders must resolve all unmatched trades on trade date. If an unmatched trade cannot be resolved by mutual agreement, it must be promptly closed out. If a trade remains unresolved 15 minutes prior to opening of trading the next business day because one side failed to respond to the report, then the executing member who responded reports the trade on its terms to the OCC.

Each business day, the CBOE reports all matched trades to the OCC for each Clearing TPH. Based on this report, the OCC reflects each member's options position changes on its books and computes the member's required margin deposit.



CBOE OPTIONS TRADING SECTION EXAMINATION

1.

Closing rotations in options are employed by the Chicago Board Options Exchange:

- I On the business day prior to expiration for those options contracts that are about to expire
 - II For the 3 business days prior to expiration for those options contracts that are in the money by \$.01 or more
 - III From 4:00 PM Eastern Standard Time until 4:15 Eastern Standard Time
 - IV From 4:15 PM Eastern Standard Time until 4:45 Eastern Standard Time
- a. I and III
 - b. I and IV
 - c. II and III
 - d. II and IV

2.

Order Book Officials on the CBOE may accept which of the following orders?

- I Market
 - II Limit
 - III Spread
 - IV Straddle
- a. I only
 - b. I and II
 - c. III and IV
 - d. I, II, III, IV

3.

Equivalent orders to buy are simultaneously placed by the Order Book Official, Market Maker, and Floor Broker. The priority of executing the orders would be:

- I Order Book Official
- II Market Maker
- III Floor Broker

- a. I, II, III
- b. III, II, I
- c. I, III, II
- d. II, III, I

4.

Trading in a stock is suspended. Which statement is true regarding the trading of listed options on that stock?

- a. Only opening transactions are permitted
- b. Only closing transactions are permitted
- c. Both opening and closing transactions are permitted until the contracts expire
- d. Trading will be halted in options contracts on the suspended stock

5.

Which of the following is **NOT** a reason why the CBOE would halt trading in an options series?

- a. There is a pending news material news announcement about the company
- b. The CBOE trading system is experiencing technical problems
- c. The underlying stock has halted trading in its primary market
- d. The open interest in the contract has exceeded pre-set levels

6.
A customer enters an order to "Buy 100 ABC Jan 50 Calls @ \$5, IOC" The floor broker is able to buy 40 contracts at the specified premium. Which statement is true?

- a. The floor broker will buy the 40 contracts and will reattempt execution of the remaining balance of 60 contracts later that day
- b. The floor broker will buy the 40 contracts and will cancel the other 60 contracts that cannot be filled
- c. The floor broker will not attempt a partial execution and will cancel the entire order
- d. The floor broker will buy 40 contracts and will place an order to buy an additional 60 contracts at the \$5 premium with the Board Broker

7.
If an options market is "FAST," which of the following are true?

- I The Exchange may shift trading in that class of contracts to alternate posts
 - II The Exchange may allow other Order Book Officials and their clerks to execute transactions in that class of contracts
 - III The Exchange may restrict the entry of stop, stop-limit, and market-if-touched orders
 - IV The Exchange may impose a trading "HALT" until conditions have settled
- a. I and II only
 - b. III and IV only
 - c. I, II and IV
 - d. I, II, III, IV

8.
All of the following orders may be executed during the opening rotation **EXCEPT:**

- a. market orders
- b. market - not held orders
- c. limit orders
- d. stop orders

9.
Which of the following are true statements?

- I Buy limit orders are placed below the prevailing market
 - II Buy stop orders are placed above the prevailing market
 - III Buy stop limit orders are placed below the prevailing market
 - IV Buy MIT orders are placed above the prevailing market
- a. I and II only
 - b. III and IV only
 - c. I, II, and IV
 - d. I, II, III, IV

10.
Which of the following are true statements?

- I Buy stop orders are placed above the current market
 - II Buy MIT orders are placed below the current market
 - III Sell stop orders are placed below the current market
 - IV Sell MIT orders are placed above the current market
- a. I and III only
 - b. II and IV only
 - c. III and IV only
 - d. I, II, III, IV

**11.**

All of the following are true regarding the treatment of bids made on the floor of the CBOE **EXCEPT:**

- a. At the opening, public market orders held by the Order Book Official have priority over equivalent limit orders held by the Order Book Official
- b. The bid representing the highest price has priority over lower bids
- c. If two or more orders represent the highest price, and a bid by the Order Book Official is not involved, priority is afforded the orders based upon the sequence of the bids
- d. If two or more bids represent the highest price, and one of the bids is displayed by the Order Book Official, the other bid has priority

12.

All of the following quotes by a market maker are permitted under CBOE rules **EXCEPT:**

- a. 5.00 - 5.05
- b. 5.00 - 5.10
- c. 5.00 - 5.50
- d. 5.00 - 6.50

13.

Which of the following statements are true about Order Book Officials on the CBOE?

- I Order Book Officials may accept market orders
- II Order Book Officials may accept limit orders
- III Order Book Officials may accept public orders
- IV Order Book Officials may accept member orders

- a. I and IV only
- b. II and IV only
- c. I, II, III
- d. I, II, III, IV

14.

Which statements are true regarding the limitations placed on market makers on the CBOE?

- I A member may, on the same business day, act as a Market Maker and a Floor Broker in option contracts on the same underlying securities
- II A member may, on the same business day, act as a Market Maker in the option contracts on one security; and may act as a Floor Broker in the option contracts of another security
- III A member may, on the same business day, act as a Market Maker in the option contracts on one security, and may act as a Order Book Official in the options contracts of another security

- a. I only
- b. II only
- c. II and III only
- d. I, II, III

15.

The smallest fractional change allowed in price quotes for equity options contracts is:

- a. \$.02
- b. \$.05
- c. \$.0625
- d. \$.10

16.

Which of the following is the proper description of the following order:

"Sell 10 ABC Jan 100 Calls @ 8.50 MIT"

- a. The order becomes a market order to sell if a trade occurs at 8.50 or higher
- b. The order becomes a limit order to sell at 8.50 if a trade occurs at 8.50 or higher
- c. The order becomes a market order to sell if a trade occurs at 8.50 or lower
- d. The order becomes a limit order to sell at 8.50 if a trade occurs at 8.50 or lower

17.

If the NYSE halts trading in all securities due to imposition of the "circuit breaker" rule that is initiated in response to extraordinary market conditions, the CBOE will:

- a. halt trading in stock options on NYSE listed issues, but not in stock options on AMEX or NASDAQ listed issues
- b. halt trading in all stock options, but not in index options
- c. halt trading in all stock options and index options
- d. continue to trade all options contracts

18.

If 2 Floor Officials agree, trading in a specific options contract can be halted for a maximum of:

- a. 1 business day
- b. 2 business days
- c. 3 business days
- d. 5 business days

19.

All of the following are contingency orders **EXCEPT:**

- a. MIT
- b. Stop
- c. Not held
- d. MOC

20.

The agency responsible for disseminating reports of options trades is:

- a. OCC
- b. CBOE
- c. OPRA
- d. SEC



CBOE OPTIONS TRADING EXPLANATIONS

1. The best answer is a. Aside from daily opening rotations, the CBOE conducts a closing rotation for those contracts that are about to expire. The closing rotation for stock options is conducted on the Friday prior to expiration, from 4:00 PM Eastern Time (3:00 Central Time) until 4:15 Eastern Time (3:15 Central Time). The use of a closing rotation helps provide for an orderly close in those contracts about to expire, and aids in letting customers offset outstanding positions that would be automatically exercised (those that are in the money by \$.01 or more for equity options).
2. The best answer is b. While Order Book Officials may take limit orders on the book at all times, they are only allowed to take market orders prior to the opening. Once the opening occurs and the OBO has filled those market orders, no more market orders may be taken during the trading day. The OBO can never take spread or straddle orders, since they require both legs to be executed at once. These are handled only by Floor Brokers.
3. The best answer is c. Since Order Book Officials only handle public orders, they always have priority. Since Market Makers only trade for their own account, they are always last in line. The priority for a Floor Broker's order depends on whether it is an order for a retail customer or for a member firm's proprietary account. In any event, we know that OBOs come first, and Market Makers come last, making Choice c the only available answer.
4. The best answer is d. If trading in a stock is suspended, say on the New York Stock Exchange, the exchange where the option trades will also stop trading in the option contracts. This must occur because there is no longer any way to price the option contracts if there is no current market for the underlying stock. Any holders of outstanding options can still exercise their contracts during a trading halt, since this is performed through the Options Clearing Corporation and does not occur on the exchange floor.
5. The best answer is d. An options trading halt will occur if trading of the stock is halted in its primary market; if the exchange is experiencing technical problems; or if there is a material pending news announcement about the issuer (which would also cause the stock's primary market to halt trading). A high open interest level (the number of options contracts created that have yet to be closed by trading or exercise), has nothing to do with a trading halt.
6. The best answer is b. "IOC" on an order means "Immediate or Cancel." The definition of an IOC order is one to be filled in whole or in part as soon as the order is represented in the trading crowd, with any portion not so executed being treated as canceled. Thus, if the trader can only execute 40 contracts of the 100 contract order, the unfilled balance of 60 contracts is canceled.
7. The best answer is d. If an options market is "FAST," meaning that trading is exceptionally heavy, CBOE rules provide for the following measures to help execute all of those orders. The exchange may shift trading in that class of contracts to alternate posts, increasing the number of locations at which trading may occur. The exchange may allow other Order Book Officials and their clerks to execute transactions in that class of contracts, increasing the number of personnel trading that class of contracts. If trading becomes disorderly, the Exchange may impose trading rotations in that class of contracts. To control the order flow and stabilize the market, the Exchange may restrict

the entry of stop orders, stop-limit orders, and market-if-touched orders and may also shut the Retail Automated Execution System (RAES). If these measures do not stabilize the market, then a trading HALT will be declared.

8. The best answer is d. During the opening and closing rotations, only market and limit orders may be executed at the bids and offers made. It makes no difference if a market order is marked "not held" - this simply gives the trader discretion over price and time of execution, and if the trader feels that the rotation will offer the best price and time, he may execute the order at this point. No stop orders, spread orders, or straddle orders are executed during the rotations. Rotations are used daily to insure orderly openings; and are used at the close on the business day prior to expiration to insure an orderly close.

9. The best answer is a. Buy limit orders specify a maximum price that the customer wishes to pay. For example, if the market is trading at \$50 per share, and the customer wishes to pay no more than \$40 for the stock, the order placed would be "Buy 100 ABC @ \$40 GTC." This is a buy limit order and is placed lower than the current market price. If the stock trades down to \$40 or lower, the order is executed at the limit price or better (lower) if a seller at that price is found. If a trade occurred at \$40 (not this order) and the stock then moved above \$40 and stayed there, this order could not be executed.

A buy MIT (market if touched) order is similar to a buy limit in that it is also placed lower than the prevailing market. Using the above scenario, assume that the market is trading at \$50 and a customer places the following order: "Buy 100 ABC @ \$40 MIT GTC." This is a buy "Market If Touched" order and is placed lower than the current market price. If the stock trades down to \$40 or lower, the order **becomes a market order to buy**. If a trade occurred at \$40 (not this order) and the stock then moved above \$40, this order would still be filled because it became a market order to buy - there is no limit on the price.

A buy stop order (or buy stop limit) is used to limit a loss on a short stock position. These orders are placed above the current market price. Assume that the market is currently trading at \$50. A customer who shorted the stock at this price would like to limit any upside loss to, say, 10 points. He places the following order: "Buy 100 ABC @ \$60 Stop." If the market trades up to \$60, the order is activated, and becomes a market order to buy.

To summarize, buy limit and buy MIT orders are placed below the current market and are activated as the market falls. Buy stop and buy stop-limit orders are placed above the current market and are activated as the market rises.

10. The best answer is d. See explanation #67 for a discussion of buy stop and buy limit orders. Below is a discussion of sell limit, sell stop and sell MIT orders.

Sell limit orders specify a minimum price at which the customer wishes to sell. For example, if the market is trading at \$50 per share, and the customer wishes to sell the stock for at least \$60, the order placed would be "Sell 100 ABC @ \$60 GTC." This is a sell limit order and is placed higher than the current market price. If the stock trades up to \$60 or higher, the order is executed at the limit price or better (higher) if a buyer at that price is found. If a trade occurred at \$60 (not this order) and the stock then moved below \$60 and stayed there, this order could not be executed.

A sell MIT (market if touched) order is similar to a sell limit in that it is also placed higher than the prevailing market. Using the above scenario, assume that the market is



trading at \$50 and a customer places the following order: "Sell 100 ABC @ \$60 MIT GTC." This is a sell "Market If Touched" order and is placed higher than the current market price. If the stock trades up to \$60 or higher, the order **becomes a market order to sell**. If a trade occurred at \$60 (not this order) and the stock then moved below \$60, this order would still be filled because it became a market order to sell - there is no limit on the price.

A sell stop order (or sell stop limit) is used to limit a loss on a long stock position. These orders are placed below the current market price. Assume that the market is currently trading at \$50. A customer who is long the stock at this price would like to limit any downside loss to, let us say, 10 points. He places the following order: "Sell 100 ABC @ \$40 Stop." If the market trades down to \$40, the order is activated, and becomes a market order to sell.

To summarize, sell limit and sell MIT orders are placed above the current market and are activated as the market rises. Sell stop and sell stop-limit orders are placed below the current market and are activated as the market falls.

11. The best answer is **d**. Since orders held by the Order Book Official are those from the **public**, these orders always have priority over equivalent orders from other sources (e.g., market makers or floor brokers). Therefore, Choice **d** is false. The other statements are true. At the opening, public market orders held by the Order Book Official have priority over equivalent limit orders held by the Order Book Official, since market orders always have priority over limit or stop orders at the same price. The bid representing the highest price has priority over lower bids, and the ask representing the lowest price has priority over higher asking prices. Finally, if two or more orders represent the highest price, and a bid by the Order Book Official is not involved, priority is afforded the orders based upon the sequence of the bids (first come, first served!).

12. The best answer is **d**. The CBOE sets maximum allowable spreads (between bid and ask quotes) at which market makers may quote contracts. These are:

Premium Amount	Maximum Spread
\$0 - \$2	\$.25
\$2 - \$5	\$.40
\$5 - \$10	\$.50
\$10 - \$20	\$.80
Over \$20	\$1.00

This rule serves to stop market makers from charging excessive spreads in their transactions.

13. The best answer is **c**. Order Book Officials may only accept orders from the public - they cannot hold and execute orders for other members' proprietary accounts. Prior to the opening, the OBO can accept market orders to be filled at the opening. Once the market has opened, they no longer accept market orders. At any time, limit orders for public customers may be placed with the OBO. The OBO will execute these orders for a commission if the market moves in that direction. The OBO cannot accept contingency orders such as stop, stop-limit, and market-if-touched orders. Also, the OBO cannot accept straddle and spread (2 legged) orders. These can only be executed by floor brokers.

14. The best answer is b. This is a particularly tricky question. As a rule, market makers are prohibited from acting as a floor broker **in the same security**. However, there is no prohibition against a market maker, in, let us say, IBM calls and puts, from walking over to the trading pit for GE calls and puts and acting as a floor broker trading for other members in those contracts. The only requirement is that the individual must be registered with the Exchange as a market maker in IBM contracts **and** as a floor broker in GE contracts. Market makers and floor brokers are Trading Permit Holders - they actually are small businessmen who have purchased the right to trade for profit. These individuals cannot be Order Book Officials. OBOs are Exchange employees (not members) who handle the book of public orders on the trading floor.

15. The best answer is b. Equity options contracts are quoted in minimum premium increments of \$.05 (a "nickel"). Note that the CBOE and other options exchanges are rolling out a "penny pilot" program, where more actively traded contracts are quoted in increments of \$.01, but this is not yet fully implemented.

16. The best answer is a. A sell MIT (market if touched) order is similar to a sell limit in that it is also placed higher than the prevailing market. Assume that the market is trading at \$50 and a customer places the following order: "Sell 100 ABC @ \$60 MIT GTC." This is a sell "Market If Touched" order and is placed higher than the current market price. If the stock trades up to \$60 or higher, the order **becomes a market order to sell**. If a trade occurred at \$60 (not this order) and the stock then moved below \$60, this order would still be filled because it became a market order to sell - there is no limit on the price.

17. The best answer is c. If the NYSE closes its market, which will occur if the DJIA drops by 10% intra-day, the CBOE will close its market as well. The time length of the shut down due to the imposition of the "circuit breaker" is either 1/2 hour or 1 hour, depending on the time of day that the halt occurs.

18. The best answer is b. The CBOE will halt trading in a specific option contract if two Floor Officials agree that trading should be halted. The length of the halt can be no more than 2 business days.

19. The best answer is c. Contingency orders include MIT order (Market-If-Touched - where the market must hit a price for the order to be elected); Stop orders (where the stop price must be hit in order for the order to be elected); and MOC (Market On Close) orders. A "Not Held" order gives a trader discretion over price and time of execution of a market order - this is no contingency to this order.

20. The best answer is c. OPRA stands for the Options Price Reporting Authority. It receives reports of options trades from all options market venues and consolidates them into a single trade report.