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# Exchange

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A Simulation of the American Stock Market



#### **About the author**

Andrea Jane Richardson Taylor, the author of *Exchange*, received her B.S. from Longwood College and her M.Ed. from the University of Virginia. She has served as a consultant on simulation and gaming for middle and high school teacher in-service training sessions.

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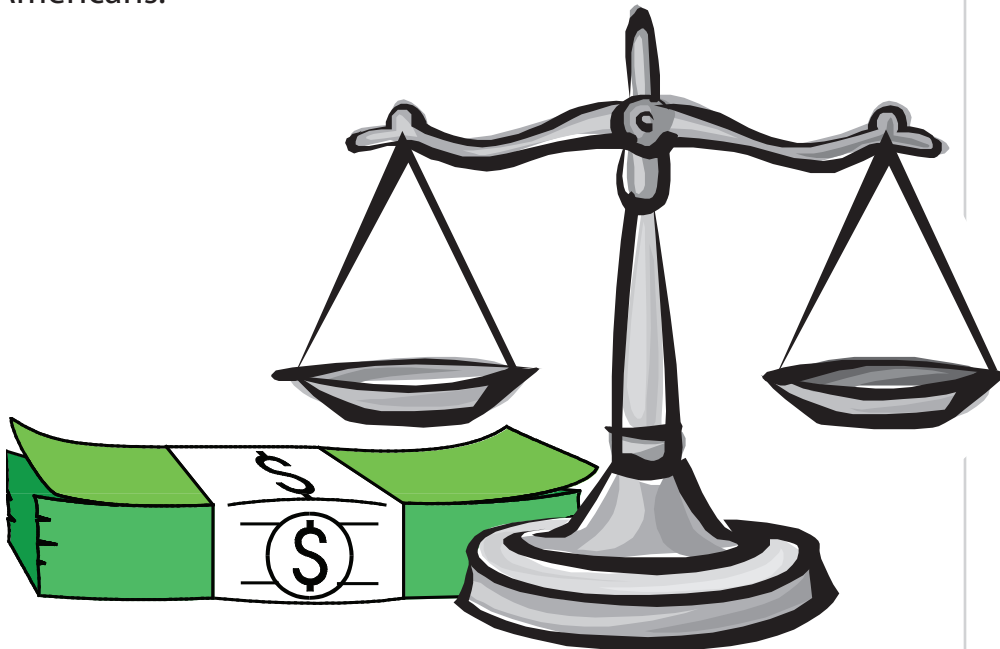
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**Student Guide**

## Purpose

As the United States enters the twenty first century, it faces a world that is increasingly complex and interdependent politically, socially, and economically. This increasing complexity and interdependence is particularly evident on the economic front, where a multitude of factors must be balanced so that a degree of stability and prosperity can be achieved. These factors include natural resources, energy, technology, capital, labor, and governmental action. A paradigm of this balancing process is found in the stock market where all of these factors, and more, converge to cause the ups and downs of stock prices. The dynamic process of action and interaction among these forces and the varied interests of particular investors is what *Exchange* is all about. While playing *Exchange*, students gain an understanding of stock market mechanics and an appreciation for that array of economic forces which, in addition to affecting stock prices, have so much to do with the economic well-being of all Americans.

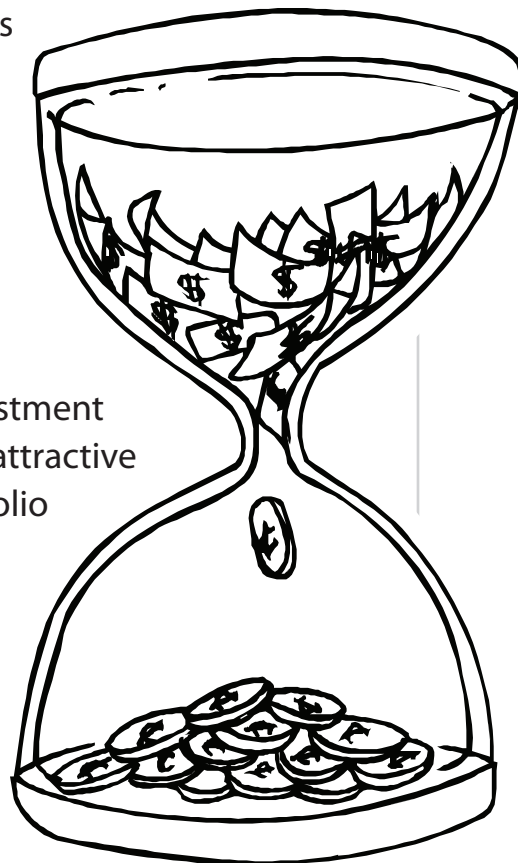


## Overview

This simulation is designed to last for approximately 5 to 6 class periods, but it may be easily extended if time permits. On Day 1, by way of introduction, the students are told that after several years of nationwide recession, encouraging economic recovery signs are appearing. The President is about to make a major economic speech which economists confidentially say will send stock and mutual fund prices soaring. Students then receive role identities as Individual Buyers, Foundation Directors, Mutual Fund Managers, Brokerage Firm Executives, and Exchange Accountants. They study their role descriptions and are asked to begin a portfolio with their first entry focusing on "What are my goals in this role?" To aid them in this answer, a detailed explanation of the Stock Exchange's operation is given in the STUDENT GUIDE.

Approximately 5–6 class periods

On Day 2, stock and mutual fund prices are posted while money and stock certificates are handed out to give each investor a beginning portfolio. Early trading starts while investors begin formulating their investment strategies. Brokerage Firm Executives decide on their investment counseling fees and note the margin requirement for the day. Mutual Fund Managers meet to discuss their own investment strategies and ways to make their Funds attractive to potential customers. The second portfolio entry is started and includes the record of daily stock and mutual fund prices, as well as personal reactions to the day's events.



On Day 3, new stock and mutual fund prices are posted along with the day's margin requirement. Trading is in full-swing. Brokers are competing with each other to sell their services to investors. Mutual Fund Managers are employing persuasive tactics to sell their shares while simultaneously making their own Fund's investments. Foundation Directors are faced with the necessity of making careful, conservative investments in order not to panic the Exchange. RUMOR/CRISIS CARDS are circulated and affect prices. The third portfolio entry concerns why investments were made and what strategies were employed.

On Day 4, the final trading session starts after a noticeable rise in the prices of stocks and mutual funds. As the President's speech nears and more information leaks out, the margin requirement is raised in anticipation of heavy buying. A RUMOR CARD of a possible Middle East war temporarily slows trading while a later CRISIS CARD on decrease in the prime lending rate increases it again.

On Day 5, students begin to calculate their role's performance points after the point system is carefully reviewed by the instructor. After students finish their point calculations, debriefing begins. (**NOTE:** This simulation is not designed to have winners or losers. The calculation of points is just to give students an idea of their investment performance. This is a learning activity where students learn by participating. *This should be stressed in class.*) During the debriefing students reflect on the various factors that influenced their role-playing and investing strategies. By the end of debriefing, they will be more aware of how various investment strategies are formulated and employed by all types of investors. Finally, all portfolios are turned in to the instructor at the end of the session.

## Setup Directions

- 1. Role Identifications:** For a class of 36, the 36 role IDs are divided into the following exchange groups: 18 Individual Buyers, 3 Foundation Directors, 6 Brokerage Firm Executives, 6 Mutual Fund Managers, and 3 Exchange Accountants. (If you have fewer than 36 students, delete some Individual Buyers.) The Individual Buyers, Mutual Fund Managers, and Foundation Directors are all investors concerned with increasing the total worth of their portfolios. The Mutual Fund Managers need to invest wisely to attract buyers to invest in their Funds. The Foundation Directors must invest conservatively so they won't panic the Exchange. The Brokers are concerned with brokerage fees, margin requirements, and smart investment counseling, all of which directly affect the number of clients they attract. The Exchange Accountants concentrate on accurately posting stock and mutual fund prices and the administration of all transactions. Note the role division given on the chart below.

Exchange Group & ID Color Code	% Exchange	Number in Simulation
Individual Buyers (Green)	50.0%	18
Foundation Directors (Red)	8.35%	3
Mutual Fund Managers (Blue)	16.7%	6
Brokerage Firm Directors (Yellow)	16.7%	6
Exchange Accountants (White)	8.35%	3



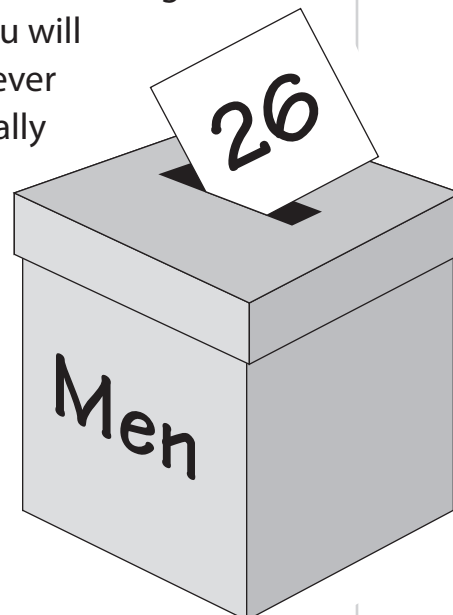
2. **Role Id Tags:** Obtain colored construction paper (green, red, blue, yellow, and white) and cut into approximately 4" x 6" rectangles. At the end of Day 1 you will give each student a tag corresponding to his/her color-coded exchange group to use while making an ID tag for homework.



3. **Assigning Roles:** Decide how you want the Role IDs distributed among your students. You have two alternatives: **Chance** or **Choice**.

**Chance:** If you want to leave the selection of roles up to chance, place ID numbers 1, 2, 4, 5, 9, 11, 12, 13, 14, 17, 19, 22, 23, 26, 28, 30, 34, and 35 on separate slips of paper and drop in a box marked *Men*; also place numbers 3, 6, 7, 8, 10, 15, 16, 18, 20, 21, 24, 25, 27, 29, 31, 32, 33, and 36 on separate slips and drop in a container marked *Women*. These numbers are keyed to identities listed in the STUDENT GUIDE.

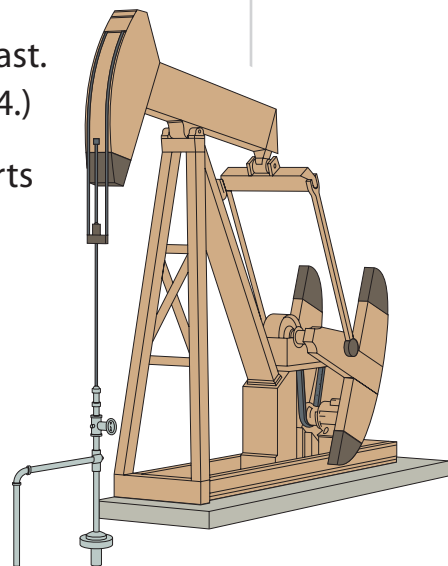
**Choice:** After students read the Role IDs, they write their first three choices of the role they would like to play on a piece of paper. While the students are reading the rest of their STUDENT GUIDE, you will match IDs to student choices whenever possible. Stronger students will usually choose the most demanding roles and this makes the simulation more stimulating.



4. **Duplication:** Make photocopies of the STOCK CERTIFICATE and MONEY SHEET pages of this Teacher Guide. Then run off at least 100 sheets of STOCKS, cut the sheets in half, and file for future use. Run off 200 sheets of MONEY, cut the denominations apart with a paper cutter, rubber band together, and file them for future use.
5. **RUMOR/CRISIS CARDS:** Below is a list of suggested “cards.” Depending on your class situation, choose the 5 or 6 you feel are the most appropriate. Type each on a separate 3" × 5" card. (You may change them or write new ones if you feel it is necessary.) Write *Rumor* or *Crisis* in bold letters on the back side of each typed card, depending on which it is. Circulate at least 2 or 3 of them during Days 3 and 4, including those specifically designated for Day 4. (An alternate method is to designate one of the Exchange Accountants as “Information Specialist” and have her/him write the RUMORS and/or CRISES on the chalkboard or on an overhead projector as “bulletins.”)

### **Rumors**

- OPEC Oil Ministers are said to be considering a one month oil embargo on oil imports into the U.S. (See first CRISIS below.)
- Rumors are spreading of war in the Middle East. Local skirmishes are increasing. (Use on Day 4.)
- Unidentified congressional spokesman reports that enough votes now exist to pass the proposed tax cut bill.
- Word of an impending telephone company workers strike has leaked out as contract negotiations are reaching an impasse. (See fourth CRISIS below.)



- The Harold Poll announces increased public confidence in national institutions for the first time in three years.

### **Crises**

- OPEC Oil Ministers announce a temporary, one month oil embargo on oil exports to the U.S. Allied Oil, down 4; Mack Frisbee Productions, down 2; Standard Utilities, down 3; Global Airlines, down 1; Tri-State, down 2; American Growth, down 1.
- New York First National Bank. one of the nation's 10 largest, has failed. Allied Oil, Eastern Chemical Company, General Mobiles, International Data Computers, down 3; Kenya Mining Company, Mack Frisbee Productions, National Telephone Company, Standard Utilities, Tri-State, down 2; AJO Electronics, Global Airlines, American Growth, down 1.
- The Prime Lending Rate falls one point. Allied Oil, Eastern Chemical, General Mobiles, International Data Computer, up 4; Kenya Mining, Mack Frisbee Productions, National Telephone Company, Standard Utilities, up 3; AJO Electronics, Global Airlines, Tri-State, American Growth, up 2. (Use on Day 4.)
- Telephone workers' contracts have been signed at the last minute. National Telephone Company, up 4; AJO Electronics, up 2; International Data Computers, Tri-State, up 3; American Growth, up 1.



## ● Daily Directions ●

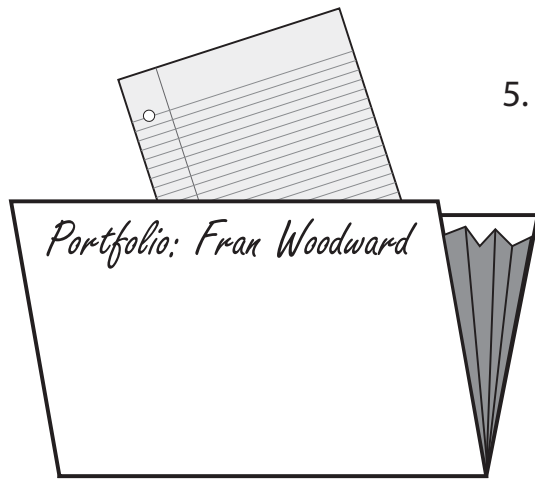
## Day 1



Whole class

1. Hand out STUDENT GUIDES and have students read them. Explain why you are having the class play EXCHANGE and what you hope they will gain from it.
2. Using **Choice** or **Chance**, distribute student role IDs. If you choose **Choice**, have students thoroughly read entire STUDENT GUIDE while you are matching roles with choices.
3. Ask students to reveal their roles to the rest of the class by telling their name, a little about their role, and how they envision playing it.
4. Hand out colored construction paper pieces to students and explain the color code for each Exchange group. Tell students they are to make their own role ID tags during overnight homework. Remind them of the 4 things they should have on their tag: Name, Exchange Role, Occupation, and Amount of Capital.

Name: Douglas OwenRole: Individual BuyerOccupation: FarmerAmount of Capital: \$10,000



5. Go over the "Keeping a Portfolio" section in the STUDENT GUIDE. Make sure that students understand the portfolio's purpose. Stress that portfolio entries should not simply tell what happens: they should reveal the imaginary ID's inner feelings.

(You can use portfolios for partial evaluation after the simulation.)

6. Give students their first portfolio assignment to complete as homework. Their first entry should deal with "fleshing out" their roles. Explain that they are to write a page or two from the viewpoint of their role: how they see their role, what their investment possibilities are, how interaction with other role IDs might benefit them, and whatever other facts they might want to include.
7. If time exists, show a DVD on the Stock Exchange, or give a short lecture on its main features.



## Daily Directions

## Day 2



Whole class



Groups

1. Hand out straight pins and tell students to pin on their ID tags.
2. Hand out MONEY and STOCK CERTIFICATES to each student, according to rote descriptions.
3. Have the Exchange Accountants, Foundation Directors, Brokerage Executives, and Mutual Fund Managers group in separate areas of the room to begin organizing. Tell them they are responsible for developing their own strategies for investing, attracting customers, setting up the Exchange, etc. Have them set up desks for their individual offices if they wish.
4. Tell the Exchange Accountants they must decide which one will list and change prices on the board while the other two members decide how they will handle transactions. Give them the blank STOCK CERTIFICATES and tell them to record all transactions on separate sheets of paper. They should group their desks at the front of the room or near a board.
5. Tell the Individual Buyers they may discuss their roles among themselves, formulate investment strategies, group together and discuss investment strategies, and start preliminary investing.



6. Give Exchange Accountants the opening stock and mutual fund prices and have them list them on the board. Tell them to write the names in a column on the board with three headings at the top: **Opening Price**, **Current Price**, and **Closing Price**. They are to change the current price when necessary during each trading session.

### Opening Prices—Day 2

Allied Oil	65
AJO Electronics	34
Eastern Chemical Company	59
General Mobiles	57
Global Airlines	31
International Data Computers	240
Kenya Mining Company	42
Mack Frisbee Productions	37
National Telephone Company	49
Standard Utilities	40
American Growth Fund	8
Tri-State Fund	12

7. Set the margin requirement for the day. A good starting requirement is 60%.
8. Tell all investors to study carefully the history of the stocks listed and to plan their buying and selling accordingly. Proceed slowly until “market mechanics” work smoothly.
9. During the final 10 minutes of the day, tell students they may work on their second portfolio entry. It should be a page on what has happened thus far and will eventually include a daily record of all stock and mutual fund prices for the next three days. (An option on this record would be to have students draw small individual graphs for each stock and mutual fund, using the high and low prices for the year listed in the STUDENT GUIDE. Then they could plot the stock’s movements over the three days of investing for each night’s homework.)

During the final 10 minutes



10. Explain that the small changes in price you instructed the Exchange Accountants to post represents the “haggling” that Stock Exchange members do on the Floor to establish a price both buyer and seller will accept. (Of course, explain that crises may also affect prices, usually in a more dramatic fashion.)
11. When only 5 minutes remain, tell Exchange Accountants to announce that all transactions must come to a halt and the Exchange is closed for business.
12. You may wish to start a “rumor” here, either by passing a card, or by listing it as a Bulletin on a projector. If you do this, explain that this rumor, if true, will affect opening prices tomorrow.
13. At the end of this period, remind students to continue working on their portfolio entry for homework with a paragraph or two on “my goal for tomorrow.”

When only 5 minutes remain





## ● Daily Directions ●

## Day 3



Whole class

1. If you issued a RUMOR yesterday, announce the CRISIS it predicted; then explain how it has affected prices. Tell Exchange Accountants to list the opening stock and mutual fund prices on the board and announce the Exchange is open for transactions.
2. Acting as the government, decide on whether you should raise or lower the prices just listed in relationship to the margin requirement. Raising the margin requirement another 10% will make buying harder, but it will lower the prices 2–4 points. Lowering it will raise the prices 2–4 points. The least expensive stock prices should go up or down 2 points; the moderate prices, 3 points; and the most expensive, 4 points.
3. Tell the Exchange Accountants your decision on the margin requirement. Have them announce it and change prices on the board. When students begin investing, begin circulating a RUMOR CARD. Hand it to a student to read and pass on. (Or write it as a bulletin.)
4. Tell students the rest of the session is for investing. Remind them that Individual Buyers may consult with each other on investment strategies if they wish to, but that they must buy and sell from either a broker or a mutual fund.
5. After 10 minutes have passed, give Exchange Personnel a CRISIS CARD to read or post. Have them change the prices according to the card's directions.

**Begin  
circulating a  
RUMOR CARD,  
or write it as a  
bulletin.**

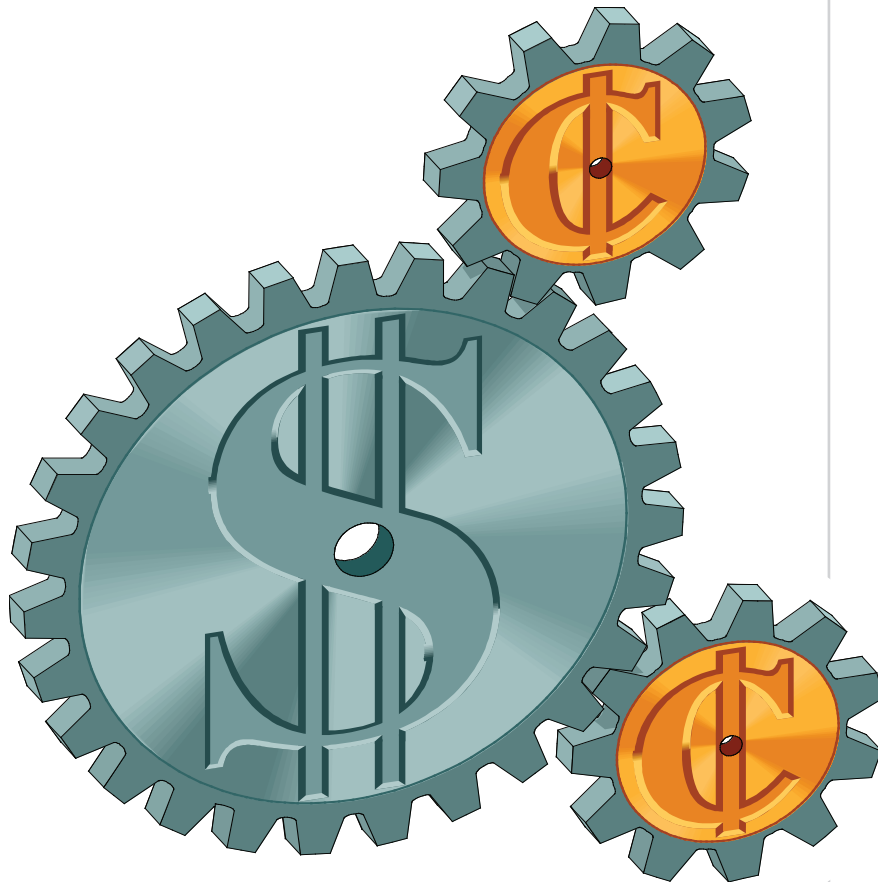
After 10 minutes have passed



6. When 10 minutes remain, circulate one more RUMOR CARD.
7. When only 5 minutes remain, tell Exchange Accountants to announce all transactions must come to a halt and that the Exchange is closed.
8. At the end of this day remind students to write their third portfolio entry for homework. This should be a page or two with their reactions to today's RUMOR/CRISIS CARDS, observations and strategies according to individual roles, and continuation of the daily record of stock and mutual fund prices.

When 10 minutes remain

When only 5 minutes remain





Whole class

## ● Daily Directions ●

## Day 4

1. Remind students this is the final day of trading.
2. Tell Exchange Accountants to list prices. Give them the margin requirement you have decided on for today and the resulting increase or decrease in prices. Also, show price fluctuations if yesterday's last rumor has become a crisis. Have them open the Exchange for trading.
3. Start two more RUMOR CARDS around the room (including the one designated for Day 4) at 5 minute intervals.
4. After 10 minutes of investing, hand Exchange Accountants one CRISIS CARD to announce; then change prices as it indicates. Five minutes later, hand the CRISIS CARD designated for Day 4 to exchange Accountants to announce.
5. When 15 minutes remain, remind students they have 10 minutes of final trading before the Exchange closes.
6. When 5 minutes are left, have the Exchange Accountants close the Exchange.
7. Remind students to write their final portfolio entry for homework. It should deal with a summary of the three days of trading, additional reactions to today's RUMOR/CRISIS CARDS, successes/failures in achieving three day goals, and the final entry on their daily price record.

**This is the  
final day  
of trading.**

At 5 minute intervals

After 10 minutes have passed

When 15 minutes remain

When only 5 minutes remain

## ● Daily Directions ●

## Day 5

1. Announce that the role-playing part of this simulation is over and tell students to read the section titled "Trading Performance Points" in their STUDENT GUIDES.
2. After they have read it, make sure that each role understands his/her specific way of calculating points. Answer any questions and review the entire process on the board, using examples if necessary.
3. Have students calculate their points on the final page of their portfolios.
4. Give students 10–15 minutes to write brief answers to the Debriefing Questions in their STUDENT GUIDES.
5. Number the students off by fives or sixes to form small groups; that is, have all 1s sit in a circle, all 2s, and so on. Then quickly appoint a chairperson for each group and have that person appoint a recorder. Allow the remaining time for the groups to discuss the DEBRIEFING QUESTIONS and A FINAL QUESTION...? Explain that the recorder should take notes of the discussion as it goes on and give a summary of the discussion at the end.
6. If time permits, have each chairperson or recorder report to the whole class on his/her small group's views.
7. Collect the written answers to the questions and the portfolios for evaluation.



Individual

**Teaching tip**

You may want to allow more time for the Debriefing and use two class periods for this final "day."

Allow 10–15 minutes



Small group



Whole class

## STOCK CERTIFICATE



This certifies that \_\_\_\_\_  
OWNER

purchased 100 shares of \_\_\_\_\_  
STOCK OR FUND

on \_\_\_\_\_, 20\_\_\_\_, paying \$\_\_\_\_\_ per share.

❧ **100 SHARES** ❧

## STOCK CERTIFICATE



This certifies that \_\_\_\_\_  
OWNER

purchased 100 shares of \_\_\_\_\_  
STOCK OR FUND

on \_\_\_\_\_, 20\_\_\_\_, paying \$\_\_\_\_\_ per share.

❧ **100 SHARES** ❧

<div>① EXCHANGE ①</div> <div><b>1</b></div> <div><b>ONE DOLLAR</b></div> <div>① EXCHANGE ①</div>	<div>⑩ EXCHANGE ⑩</div> <div><b>10</b></div> <div><b>TEN DOLLARS</b></div> <div>⑩ EXCHANGE ⑩</div>
<div>②① EXCHANGE ②①</div> <div><b>20</b></div> <div><b>TWENTY DOLLARS</b></div> <div>②① EXCHANGE ②①</div>	<div>①①① EXCHANGE ①①①</div> <div><b>100</b></div> <div><b>ONE HUNDRED DOLLARS</b></div> <div>①①① EXCHANGE ①①①</div>
<div>⑤①① EXCHANGE ⑤①①</div> <div><b>500</b></div> <div><b>FIVE HUNDRED DOLLARS</b></div> <div>⑤①① EXCHANGE ⑤①①</div>	<div>①,①①① EXCHANGE ①,①①①</div> <div><b>1,000</b></div> <div><b>ONE THOUSAND DOLLARS</b></div> <div>①,①①① EXCHANGE ①,①①①</div>
<div>①①,①①① EXCHANGE ①①,①①①</div> <div><b>10,000</b></div> <div><b>TEN THOUSAND DOLLARS</b></div> <div>①①,①①① EXCHANGE ①①,①①①</div>	<div>①①①,①①① EXCHANGE ①①①,①①①</div> <div><b>100,000</b></div> <div><b>ONE HUNDRED THOUSAND DOLLARS</b></div> <div>①①①,①①① EXCHANGE ①①①,①①①</div>



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Age of Student: \_\_\_\_\_ (print)

Parent or Guardian: \_\_\_\_\_ (print)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Address:

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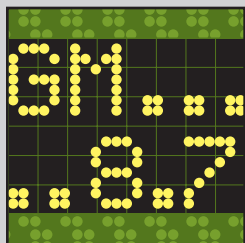
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# STUDENT GUIDE

Student Name: \_\_\_\_\_

# EXCHANGE

A simulation of the American stock market

## Background

**Exchange:** In this simulation the United Central Stock Exchange is a national marketplace listing major American stocks and mutual funds. The Exchange is open for trading daily Monday through Friday. Exchange investors include foundations, mutual funds, and individual buyers. The Exchange is owned by its 1,366 members, who are the only people allowed to trade in person there. (In this simulation, your teacher will act as these members.) Trading is accomplished by investors who hire a brokerage firm that has direct access to the Exchange and charges a fee for its services. Investors may also buy stocks directly from a mutual fund, which, in turn, hires a broker to buy stocks for it. Prices on the Exchange change as the demand and supply changes. The number of shares offered and bought is, of course, affected by the overall state of the economy and other external factors.

**Investors:** Four groups have purchasing power in Exchange: Foundations, Mutual Funds, Individual Buyers, and Brokerage Firms. The Foundation Directors, Mutual Fund Managers, and Individual Buyers are all concerned with the net value of their portfolios; that is, the net value of the shares they own. Their goal is to increase their portfolios' worth through good investments. The Brokerage Firms make their profits by charging fees to buyers for buying and selling directly with the Exchange. Their value is being able to instantly buy and sell for investors who would otherwise have to deal directly with one another and experience much slower transactions. At the start of trading, the Foundations and Mutual Funds already have stock portfolios and money for additional purchases. The Individual Buyers only have funds for new purchases to start their portfolios. The Brokerage Firms also have company funds to provide a "buying on the margin" service to their customers. (Buying on margin is explained in a later section.)

## Current Investors On the Exchange

You will represent a particular segment of people actively involved in daily trading sessions on the Exchange. You will become either a Foundation Director, a Mutual Fund Manager, a Brokerage Firm Executive, an Individual Buyer, or an Exchange Accountant. Your assets are currently allocated as detailed in the double column chart on the next page:

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Name	Trading Portfolio Stocks' Value	Available Funds	Total Assets	%
M.J. Reynolds Foundation	\$10,000,000	\$5,000,000	\$15,000,000	45.5%
Tri-State Mutual Fund	\$7,000,000	\$2,000,000	\$9,000,000	27.1%
American Growth Mutual Fund	\$3,000,000	\$1,000,000	\$4,000,000	12.1%
Andrews and France Brokerage		\$1,000,000	\$1,000,000	3.3%
Brantley, Stevens, and Woodward Brokerage		\$700,000	\$700,000	2.1%
Individual Buyers		\$3,300,000	\$3,300,000	10.0%

**Listings:** On the United Central Stock Exchange 1,500 stocks and 300 mutual funds are listed. (In this simulation, only 10 stocks and 2 mutual funds will be listed.) Each stock listing represents a single business or corporation. A mutual fund is a company which uses its capital to buy a variety of other companies' stocks. Thus, a mutual fund acts in a management capacity, relying on its managers' expertise and knowledge to make good investments in stocks which will benefit the fund and thus its clients. As the overall value of a mutual fund's investments increases or decreases, so does the price of its shares. Both corporations and mutual funds issue shares of stock at a set price when they first organize. After this initial offer, their shares' price varies daily, according to the market conditions affecting the supply and demand of the shares.

**Exchange Price Index:** Prices on the exchange may go up or down at any time. A variety of factors may affect the prices of stocks and mutual funds. These factors include government actions on matters of both domestic and international concern; economic conditions; heavy buying and/or selling of shares; and, possibly, rumors of impending crises. Individual stocks and mutual fund prices are posted at the beginning of each day's trading session and may or may not change during the day. The posted prices of shares *at the time of the purchase* must be paid no matter how much the price fluctuates later in the trading session, even if it is only 30 seconds later. (Your teacher will act as all these forces and instruct Exchange personnel to change prices accordingly.)

## Investment Conditions

**Economy:** When the simulation opens, the country's economy has been on the downswing for the past several years. At one point economists had been forecasting a possible depression. However, the current recession seems to have "bottomed-out." Encouraging signs are everywhere: interest rates are slowly declining, the high rate of unemployment has sharply decreased in recent months, and consumers are beginning to spend more money. According to pollsters, the morale of the country has significantly improved and once again confidence has been re-stored. On the whole, the country appears to be on the brink of a positive economic recovery.

**Investing:** All indicators point to the fact that this is a good time to invest in stocks and mutual funds. Their prices are slowly beginning to rise in anticipation of a full economic recovery. The White House has announced that a major speech on the economy will be televised nationally in four days. Word has leaked out among investors that the speech will trigger a frenzy of investing as both large and small investors try to "jump on the bandwagon" caused by the economic upswing. If this confidential information is correct, only three days remain to buy at the current low prices. Time is crucial and investing strategy is of the utmost importance. Wise investing now could prove to be a bonanza in a very short time.

## Stocks And Mutual Funds

All stocks listed on the Exchange are defined as being “high risk,” “growth,” or “conservative” stocks for investment purposes. *High risk stocks* may sharply fluctuate up or down at the hint of a rumor. *Growth stocks* can be either short or long term growth and should be considered on the basis of their five year performance reports. *Conservative stocks* tend to be the safest since their prices will not decline rapidly; however, investors also realize that they will not surge upward for a quick profit. Here is a history of each stock and mutual fund listing containing its high and low selling prices for the past five years plus a short performance summary:

1. **Allied Oil (AO):** *Growth* (High 75–Low 60) Prices fluctuated sharply due to the oil embargo and rising costs of oil exploration. With the prices of oil and gasoline stabilizing at a high figure, the short-term growth possibilities at this point are excellent.
2. **AJO Electronics (AJOE):** *High Risk* (High 40–Low 20) This company is only three years old and appears to be on the brink of discovering a much needed miniature electronic circuit which will revolutionize the industry. Most of the company’s resources are tied up in this risky project.
3. **Eastern Chemical Company (ECC):** *Growth* (High 65–Low 53) Eastern appeals to long term growth investors. Its price has steadily increased over the past five years; it has yielded good dividends.
4. **General Mobiles (GNM):** *Growth* (High 62–Low 51) Sales tend to fluctuate with economic conditions as confident people buy more new cars. This stock has performed well over the long run.
5. **Global Airlines (GAL):** *Growth* (High 40–Low 23) Transportation stocks have been down for years; however, a possible FAA ruling would allow special fares and encourage air travel. Prognosis is questionable for the future.
6. **International Data Computers (IDC):** *Growth* (High 253–Low 208) IDC has a history of steady growth since it cornered the computer market. Though prices are down, this steady growth trend should continue unless the government files an anti-trust action.
7. **Kenya Mining Company (KMC):** *High Risk* (High 62–Low 33) Rumors of a new gold vein in Kenya’s major mine make this a hot prospect. The price could soar at any minute.
8. **Mack Frisbee Productions (MFP):** *Growth* (High 50–Low 34) MFP hit an all time low due to gasoline shortages and tight consumer spending. However, better days ahead should boost the entertainment industry again with MFP leading the way.
9. **National Telephone Company (NTC):** *Conservative* (High 55–Low 22) The outlook for NTC has not changed in years. Predictions continue to call for a slow, continual increase in prices as rates rise. Thus, NTC is a safe buy with little risk factor.
10. **Standard Utilities (STU):** *Conservative* (High 48–Low 36) The utilities market remains the same in terms of needs; however, consumers have begun to demand lower rates. Although once a good buy, a major ruling on rate hikes could cut profits to a minimum.
11. **Tri-State Mutual Fund (TSF):** (High 15–Low 9) One of the oldest, most well-established funds. TSF is known for its conservative portfolio and wise investments. Currently, there is little opportunity here for anything but long term growth, but this has proven to be a good buy.
12. **American Growth Mutual Fund (AGF):** (High 10–Low 6) While relatively new on the investment scene, this fund has attracted numerous small investors with promises of substantial short term growth. No long term evaluation of the company’s efforts is available at this time, but its prices have seesawed over the past few years.

## Contents of Trading Portfolios

Name	Shares		
	M.J. Reynolds Foundation	American Growth Fund	Tri-State Fund
1. Allied Oil	10,000	5,000	4,000
2. AJO Electronics	10,000	5,000	5,000
3. Eastern Chemical Company	10,000	5,000	5,000
4. General Mobiles	20,000	5,000	10,000
5. Global Airlines	10,000	6,000	8,000
6. International Data Computers	10,000	2,000	10,000
7. Kenya Mining Company	10,000	3,000	5,000
8. Mack Frisbee Productions	10,000	1,000	10,000
9. National Telephone Company	400,000	100,000	200,000
10. Standard Utilities	300,000	150,000	350,000
11. Tri-State Fund	20,000	-----	-----
12. American Growth Fund	40,000	-----	-----
<b>Total Cash Value</b>	<b>\$10,000,000</b>	<b>\$3,000,000</b>	<b>\$7,000,000</b>

### Foundation and Brokerages

**M. J. Reynolds Foundation:** The Reynolds Foundation is one of the nation's largest non-profit philanthropic organizations. It provides grants for education, research, medicine, and various other public services. The Foundation has immense assets, including \$10,000,000 in stocks and mutual funds plus \$5,000,000 for investments. The huge amount of capital must be carefully manipulated by the Foundation Directors so that prices will not rise or fall dramatically due to buying or selling large blocks of shares.

**Andrews And France, Inc.:** This old firm counts many corporations, foundations, universities, and "VIP's" among its clients. Individually, it caters to professional—doctors, lawyers, businessmen, etc. Past investment counseling has proven somewhat conservative, yet it has been profitable for clients who are willing to pay for such advice. Andrews and France is highly regarded by both its clients and competitors.

**Brantley, Stevens, and Woodward, Inc.:** This firm has a very diversified clientele—its broad appeal is general in scope as it attempts to attract business from many kinds of investors. It especially appeals to the small investor who seeks to invest in the Exchange with advice at a minimal cost. The firm's brokers tend to advise on the spot investments in growth stocks based on immediate knowledge from the Exchange.

### Exchange Identities

1. **Michael Reynolds:** Foundation Director; M. J. Reynolds; Chairman of the Board; has final say on all investment decisions; extremely conservative and hard-line.
2. **John Parker:** Foundation Director; M. J. Reynolds; chief investment advisor; very intelligent but meek; will agree with everything Reynolds wants.
3. **Courtney Franklin:** Foundation Director; M. J. Reynolds; newest Director; family is large contributor to Foundation; eager to increase Foundation's assets to provide additional grants, etc.
4. **Walter Hoffman:** Mutual Fund Manager; Tri-State; quiet, conservative senior partner; gets along well with investors; concerned with continuing safe investments.
5. **James Daugherty:** Mutual Fund Manager; Tri-State; young, egotistic son of a former partner; conscious of firm's image and VIP customer reputation; turns people off.
6. **Victoria Hughes:** Mutual Fund Manager; Tri-State; been with Fund for 20 years; sound investment counselor; in charge of new accounts.
7. **Sandra Richards:** Mutual Fund Manager; American Growth; energetic and forceful; in charge of public relations for Fund; concentrates on male customers.

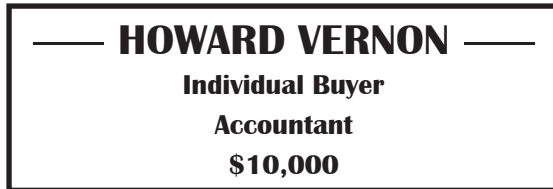


8. **Emily Williams:** Mutual Fund Manager; American Growth; willing to take investment risks to attract new clients; intelligent, but a daredevil; witty.
9. **Jacob Levy:** Mutual Fund Manager; American Growth; oldest manager; controls largest accounts; encourages occasional high risk stocks to attract new clients.
10. **Mary France:** Brokerage Executive; Andrews and France; wife of former senior partner; new to brokerage; agrees with Andrews' decisions.
11. **Joseph Andrews:** Brokerage Executive; Andrews and France; respected businessman; calm, quiet, self-assured; controlling influence in firm.
12. **William Harris:** Brokerage Executive; Andrews and France; youngest broker; wants to attract new, younger clients; loud and aggressive.
13. **John Brantley:** Brokerage Executive; Brantley, Stevens, and Woodward; former professional basketball player; public relations man; smooth talker.
14. **William Stevens:** Brokerage Executive; Brantley, Stevens, and Woodward; bright, young broker; chief investment counselor; "brains" of the brokerage.
15. **Fran Woodward:** Brokerage Executive; Brantley, Stevens, and Woodward; steadfast personality; trusted by clients; recommends solid investment possibilities.
16. **Ann Stringer:** Exchange Accountant; U.C.S. Exchange; head of Exchange Personnel; conscientious worker; somber in transactions.
17. **Nathan Lewis:** Exchange Accountant; U.C.S. Exchange; 25 years of experience; tends to be forgetful; quiet and shy.
18. **Angela Henry:** Exchange Accountant; U.C.S. Exchange; well-liked by investors; friendly, willing to help; excellent mathematician.
19. **Howard Vernon:** Individual Buyer; Accountant; \$10,000 to invest; flamboyant; long-time investor; always looking for a good buy.
20. **Nancy Rose:** Individual Buyer; Rehabilitative Counselor; \$7,000 to invest; new to investing; interested in making a fast dollar; needs investment advice.
21. **Valerie Smith:** Individual Buyer; Dentist; \$30,000 to invest; serious investor; interested in long term growth; tends to be conservative.
22. **Gerald Duggan:** Individual Buyer; unemployed heir; \$425,000 to invest; loud-mouth; wild investor; money means little since he has a "there's a lot more where that came from" attitude.
23. **Albert Miser:** Individual Buyer; Surgeon; \$65,000 to invest; distinguished doctor; conservative investment strategy; long time client of Andrews and France.
24. **Lynne Barrow:** Individual Buyer; Psychiatrist; \$75,000 to invest; independent and self-reliant; wants to make own decisions and won't take advice.
25. **Diane Snider:** Individual Buyer; Teacher; \$8,000 to invest; novice to the Exchange; investing total savings; will seek out good investment counseling.
26. **Richard Perry:** Individual Buyer; Bank President; \$250,000 to invest; extremely cautious; buys a little at a time, may or may not invest entire amount.
27. **Cheryl Hicks:** Individual Buyer; Chemist; \$20,000 to invest; just inherited the money; anxious to make a good investment; can't decide which brokerage to use.
28. **Douglas Owen:** Individual Buyer; Farmer; \$10,000 to invest; trying to recover from last year's crop failure; hoping to use farm's mortgage to make a quick profit on the Exchange; a loss would mean financial ruin.
29. **Ann Murphy:** Individual Buyer; Mayor; \$150,000 to invest; does all buying on the advice of a broker; deals with Andrews; tends to be a worrier.
30. **Ward Helms:** Individual Buyer; Corporation President; \$400,000 to invest; long-time investor; realizes prices will jump and wants to invest all available cash; interested in growth for retirement.
31. **Brenda Randolph:** Individual Buyer; Oil Company heiress; \$500,000 to invest; shrewd investor who buys and sells continually; favors a balance of high risk and conservative stocks.
32. **Patricia Hutchinson:** Individual Buyer; Newspaper Editor; \$50,000 to invest; persuaded by Brantley to invest immediately; considering mutual funds, but waiting to see what other investors do.
33. **Leslie Hamilton:** Individual Buyer; Lawyer; \$100,000 to invest; former broker; well versed on Exchange policies; interested in growth for the future.
34. **Fredrick Newcomb:** Individual Buyer; Retired Industrialist; \$1,000,000 to invest; wealthy Texan; big mutual fund investor in the past.
35. **Bob Garrett:** Individual Buyer; Pilot; \$75,000 to invest; aggressive investor; willing to take risks; hasn't been a loser yet.
36. **Missy Goodwin:** Individual Actress; \$300,000 to invest; wealthy jet-setter; invests on a whim; needs a broker for sound advice.



## Play Procedure

**Receiving IDs:** You will either draw a slip of paper with the number of your role ID on it or you will be asked to list your first three choices of the roles you would like to play. After receiving your role, you will be asked to make an ID tag such as the following. Notice that it contains your name, your EXCHANGE role, your occupation or organization, and your amount of trading capital.



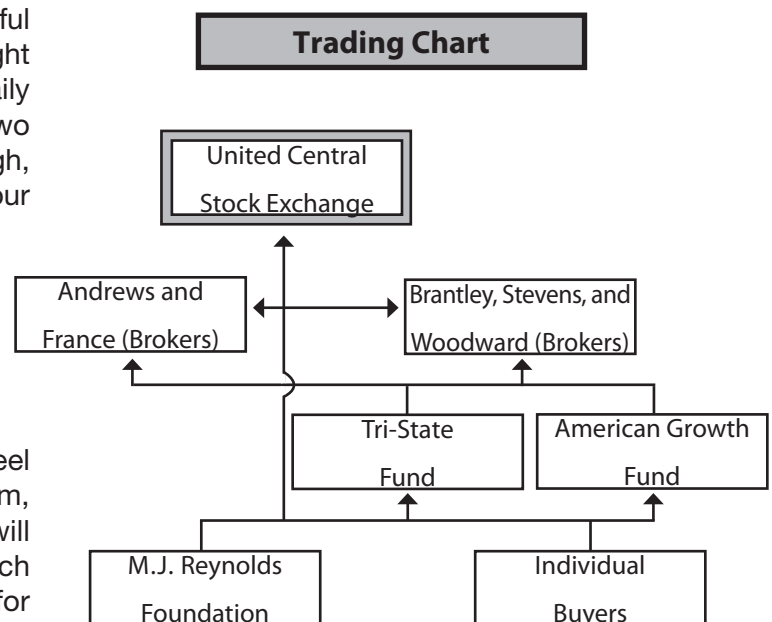
**Keeping a Portfolio:** You will keep a portfolio during the entire simulation. For each day's homework you will write one entry, usually a page or longer. Specific instructions for each group are as follows:

- **Investors:** Your first entry will deal with how you feel about your role, your investment possibilities, and your investment goals. Your second and third entries will explain what stocks and mutual funds you have bought and sold each day, your reasons for doing so, and your plan for the next day's trading session. Your fourth entry will deal with your three days of trading, including your reactions to the RUMORS/CRISES and your successes/failures in achieving your investment goals. Your second, third, and fourth entries should also include a careful record of all stocks and mutual funds you bought and sold plus their prices. You will also keep a daily performance record of all 10 stocks and the two mutual funds. This should include their daily high, low and closing prices. Enter this record in your portfolio in this way:
 

1. Allied Oil	High	Low	Close
Day 2	60	57	59
Day 3	59	58	58
Day 4	61	58	61
- **Broker:** Your first entry will deal with how you feel about your role, how you plan to organize your firm, and your goals. Your second and third entries will discuss how many clients you have attracted each day, any strategies you used, and your plans for the next day's trading session. Your fourth entry

will deal with the three days' trading, including how RUMORS/CRISES affected your firm, and your successes/failures in achieving your goals. You will also keep the same stock and mutual fund records as the investors and a list of your clients and their purchases on a daily basis.

- **Exchange Accountants:** Your first entry will deal with how you feel about your role, how you plan to organize the Exchange, and your goals. Your second and third entries will discuss your observations of the investors and their transactions, and how you feel about your co-workers. Your fourth entry will summarize the three days' trading, including reactions on the Exchange to RUMORS/CRISES and your successes/failures in achieving your goals. You will also keep the same stock and mutual fund records as the investors.
- **Summary note for everyone:** Your portfolio should reflect how you think your role identity would react and invest under certain conditions. At the end of the simulation your portfolio will mirror your thoughts and actions and provide a performance record of the stocks and mutual funds for a three-day period. *A final suggestion:* an effective portfolio will tell what happened to your identity's investments and/or actions while showing your skill in trading on the basis of careful consideration of relevant factors. On the last day of the simulation, your teacher will collect your portfolio for evaluation.



## Trading Procedures

**Individual Buyers** have two options: **Option 1:** You may buy or sell through a Brokerage Firm which has direct and immediate access to the Exchange, but you must pay the Broker's fee. **NOTE:** One advantage here is that you may buy "on margin" and not have to pay the entire price in cash at the time of purchase. **Option 2:** You may buy or sell directly from a Mutual Fund, its shares only: in such a case you profit or lose as the Fund does. Here you have the advantage of trained investment counsel and your risk is spread throughout many stocks. However, the Fund managers may charge you a fee (called a "load") which may, or may not, equal a broker's fee.

**Foundation Directors** have the same two trading options as individual Buyers. However, you must be careful not to "panic" the Exchange and thus cause all prices to fall. Hence, you are chiefly concerned with increasing your portfolio's net worth on a stable basis.

**Mutual Fund Managers** must invest wisely to attract customers who will put money into the Funds. You are concerned with two things: selling more shares to customers and increasing your portfolio's net worth. **NOTE:** since you are not a member of the Exchange, you must also trade through a broker. Note also that you may charge up to a 10% "load" fee for servicing your customers.

**Brokerage Firm Executives** are in competition with each other to sell their services to buyers. You may set your own fees everyday, but they must remain the same after the start of every trading session. You are concerned with the money earned from your brokerage fees and the interest you earn when extending credit on margin accounts.

**Exchange Accountants** are chiefly concerned with providing efficient management of all Exchange activities, which include making trade transactions, issuing stock certificates, and maintaining correct stock listings and prices.

**Buying on the margin:** This term describes the purchase of stocks through a Brokerage Firm without paying for the entire amount of the transaction in cash. The margin requirement will be set at the beginning of each trading session. If the margin requirement is 60%, then a buyer must pay the Brokerage a minimum of 60% of the purchase price of the stock when buying it. By using this service, a buyer can then actually purchase 40% more stock than he has paid for. However, the Brokerage may charge up to 10% interest on the amount unpaid, and the unpaid amount plus the 10% interest fee must be paid at the beginning of the next day's trading session.

(Even so, if the stock price goes up and the stock is immediately sold, a buyer can realize a nice profit.) Failure to pay will, of course, result in the buyer losing his credit standing with the Brokerage. Buying on the margin allows good profit possibilities and increased purchasing power, but it may be risky if not wisely used.

**RUMORS and CRISES:** At various times during the simulation RUMOR CARDS and CRISIS CARDS will be circulated. Both of these cards can affect trading on the Exchange. RUMORS may hint at coming CRISES and may or may not in fact be true. A CRISIS is an actual event which will cause all the listings or selected stocks to advance or decline. RUMOR CARDS will circulate among investors while CRISIS CARDS will be either read out loud or written on the chalkboard or overhead projector by Exchange Accountants.

**Trading sessions:** Trading sessions will last the entire class period except for five minutes at the beginning and end of the session. At the beginning of each day's session, Exchange Accountants will post the opening prices of all stocks and mutual funds. During this time buyers must repay Brokerages for any margin buying done the day before if they still own the stocks. At the end of the five minutes, the Exchange Accountants will announce that the Exchange is open for transactions. Trading will then be conducted until the final five minutes of the session. (Actual prices are determined by the buying and selling done by Exchange Members. Your teacher will simulate this "haggling" by simply telling Exchange Accountants to change the Board Prices from time to time.) All participants must adhere strictly to the trading rules as described, although if they desire to do so, individual investors may consult with each other and even form partnerships. When only five minutes remain, the Exchange Accountants will announce that all trading is over for the day and the Exchange is closed. During this time, final high, low, and closing prices will be posted.

**Stock certificates:** During each trading session Exchange Accountants will issue stock certificates for all purchases. Each stock certificate lists the stock's name, number of share purchased, day, and buyer's name. Mutual Fund Managers will issue similar certificates for their Funds. All transactions must include the issuance of appropriate certificates which must be surrendered if the shares are later sold. Shares can be bought only directly from the Exchange or Mutual Fund; they can never be traded between investors. Shares also must be purchased in lots of 100. (No "odd lot" buying is allowed because it complicates mathematical computations.)

**Trading performance points:** The calculation of performance points will be held during the last day of simulation. You will calculate your points as follows:

## Student Guide

- **Individual Buyers and Foundation Directors:** Add 3 points for each day your portfolio's worth increased from the start of that day; add 1 point if it stayed the same; and subtract 2 points if it decreased. Add 5 points if the portfolio's worth increased after all three days from its original value; add 2 points if it stayed the same; and subtract 3 points if it decreased.
- **Mutual Fund Managers:** Add and subtract the same points as Individual Buyers and Foundation Directors for daily and three day totals. Also add 2 points for each 1,000 shares sold daily, and subtract 2 points for each 1,000 shares sold back to the Fund daily by investors.
- **Brokers:** Add 3 points for every 5 new customers attracted daily; add 2 points for every 5 old customers who use the Brokerage for additional purchases in a day; and subtract 1 point if less than 3 new customers are added daily. Also add 1 point for every \$5,000 collected in fees and margin account interest at the end of the three trading sessions.
- **Exchange Accountants:** Add 3 points for every day that transactions are carried out without any errors and subtract 1 point for every day that errors are made. Also add 5 points if no errors are made at the end of the three days of trading; 3 points if there are 2 error-free days; and subtract 2 points if errors are made on all three days.

## Time Sequence

(Your teacher may alter this to fit your course's objectives.)

Each trading session lasts one class period. The simulation proceeds as follows:

**Day 1:** Read this STUDENT GUIDE, get your role ID, and begin first portfolio entry. *HOMEWORK:* Make ID tag and finish portfolio entry.

**Day 2:** Note the stocks, funds, and prices that are written on the chalkboard. Your teacher will give you your role ID's money and stock certificates. Some trading begins while investors formulate plans, and Brokerage Executives and Mutual Fund Managers meet to confer on strategies, fees, etc. *HOMEWORK:* Write second portfolio entry and start your daily record of stock and mutual fund prices.

**Day 3:** Begin second trading session and explore all possible trading options. RUMOR and CRISIS CARDS circulate and affect prices. Trading partnerships may form. *HOMEWORK:* Write third portfolio entry and list today's high, low, and closing prices for all stocks and mutual funds.

**Day 4:** Start trading session and be aware of rising prices as White House speech nears. Government intervention may raise margin requirements. *HOMEWORK:*

Write fourth portfolio entry and complete three-day record of stock prices.

**Day 5:** Calculate trading performance points, give your opinions during the debriefing session, and hand in your portfolios.

## Debriefing Questions

Depending upon your teacher's directions, prepare either written or oral answers to questions such as the following:

1. Did you feel the roles were realistic? Why or why not?
2. Did your feelings towards your role ID change as the simulation progressed? If so, how and why? If not, why not?
3. Describe some of the emotions or feelings you experienced in your role.
4. What were your investment strategies? Did they change from day to day? Why or why not?
5. Explain what method of investing you relied on the most and why? Was buying on the margin an effective tool?
6. How did RUMOR/CRISIS CARDS affect your role? Your investments? The Exchange?
7. Did you form any investment partnerships? What were the outcomes?
8. Discuss some of the reasons the Exchange fluctuated the way it did.
9. Would you like to play this simulation again in another role ID? If so, which one and why?
10. Did you enjoy the simulation? Do you think it gave you any insight into how the stock market operates? How would you change the simulation to improve it or make it more realistic?

## A Final Question ...?

After playing this simulation you better understand the factors which affect the stock market's prices. On the basis of what you have learned, if available, would you invest your own funds in the stock market? Discuss some of the considerations involved in such an investment. If you did invest, what steps would you take? Why? Describe the type of portfolio you envision yourself acquiring and explain why.