

INVESTMENT PROJECT INSTRUCTIONS

This project provides an introduction to financial assets and to transactions in financial markets. It is also an exercise in reading carefully and following instructions and in learning on your own some useful things about the real financial world.

Imagine that you have received an unexpected gift of \$100,000. You learn about the gift today, and you receive the money on the date indicated on the syllabus as the “initial portfolio valuation date.”

First Investment Project Report

The due date for the first report is shown on the syllabus.

1. Statement of Objectives

First think about your investment objectives for your windfall. What are your attitudes toward the trade off between risk and expected return? Your objectives may involve some long run features, but since this project extends only over this quarter, you should have some short-run objectives as well.

***Write a short statement that describes your attitude toward risk and your investment objectives for the project. Include this statement with your first investment report. ***

2. Your Investment Portfolio

Next create an imaginary portfolio of stocks (NYSE, AMEX, or NASDAQ), corporate, government, or agency bonds, T-bills, mutual funds, options, cash (i.e. money market accounts), or any other asset for which you can document the price and transaction costs. You must compute and pay commissions on all transactions, according to the commission schedule distributed in class. Alternatively you may use the commission schedule published by an online broker. Indicate on your report the commission schedule that you are using.

You may trade as often as you like, but you must maintain a record of transactions, and document prices paid or received, and commissions and fees paid. (*The Wall Street Journal* or *New York Times* will provide most of the price information that you need. For information about dividends paid during the quarter, you will consult *Barron's*, and for information on bond coupon payment dates you will consult Moody's bond manuals. These publications are available in the Business School library. You can also find most of this information from online sources. I will provide you with a sample of possible sources.)

Your portfolio should contain at least 10 and at most 20 different assets of *at least three types* (i.e. stocks, bonds, mutual funds, options, etc.) [Cash, savings accounts, and the money market account in which you hold cash do not count as one of the three types. Remember that stocks are ordinarily bought in lots of 100 shares, and there are conventional denominations for bonds (usually \$1000) and T bills (\$1,000) as well. Thus you will

ordinarily have some cash that should be held in a money market fund.] Your starting investment stake is \$100,000. Assume that you buy assets at the closing prices for the initial valuation date (see syllabus), using price data published in the *WSJ* for the following business day or from an online source.

Make a record of your portfolio and the costs of creating it using the format given in the Excel worksheet named InvestmentTemplate.XLS, which you can download from the course website. *Show that the total amount invested, including commissions, including cash in your money fund, equals \$100,000.* Be sure that you provide all of the requested information as shown in these instructions and in the Excel template.

3. Initial Market Index Values

Record from the *WSJ* or an online source the value of the Dow Jones Industrial Average and of the Standard and Poor's 500 index for the initial valuation date

4. Checklist

Attach a copy of the checklist that appears below to your report and use it to show that your report is complete.

Final Investment Project Report

The due date for the final report is shown on the syllabus.

You will be asked to evaluate your portfolio again based on the closing prices of the “final valuation date” shown in the syllabus and reported in *The WSJ* for the following day or from an online source.

1. Final Value of the Portfolio

For your final investment project report, due as indicated, use the same Excel template to describe the composition and the value of your portfolio assuming that you liquidated it (sold the assets) as of the “final valuation date.” The final value of your portfolio will be the value of the assets less the transaction costs of selling them.

2. Final Market Index Values

Record from the *WSJ* or an online source the value of the Dow Jones Industrial Average and of the Standard and Poor's 500 index for the final valuation date

3. Rates of Return for Your Portfolio and for the Market Indexes

Compute the holding period rate of return on your portfolio for the holding period of the project and compute the corresponding *annualized* compound rate of return for your portfolio.

Compute the annualized rate of return for the two market indexes?

Compare the performance of your portfolio with that for the market as a whole.

[In computing the annualized compound rate of return, be sure to use the standard formula. Don't use a simple interest formula!]

4. Checklist

Attach a copy of the checklist that appears below to your report and use it to show that your report is complete.

ADDITIONAL HINTS AND GROUND RULES:

NOTE ON COLLABORATION: Students are encouraged to collaborate in learning about financial institutions and the various research materials, but each student must select his or her own portfolio (thus duplicate or cloned portfolios are not allowed) and write his or her own statement of objectives and reports.

1. Commissions for NYSE, AMEX, NASDAQ (frequently traded OTC stocks) will be based on the Fidelity Silver schedule. I will distribute a copy of this schedule in class, but you can also obtain it online at <http://personal.fidelity.com/accounts/services/content/brokeragecommission.shtml> For Treasury bonds and bills, corporate bonds, and options consult the Fidelity schedules shown at the website above. Choose the commissions based on having a \$100,000 portfolio. (Other brokerage companies charge different commission rates and provide different services. For this exercise you may use the Fidelity commissions or the published commission schedule of any online broker. In the latter case, indicate in your report the company whose schedule you are using.)

The standard unit in which stock is traded is a "round lot," i.e. 100 shares. When you buy or sell a stock, do so in multiples of 100 shares. Stock options are traded in contracts, and each contract is for 100 shares of stock. (Note that the listed price is the price for an option on a single share; these prices are to be multiplied by 100 to get the price of a contract. If the stock splits or if there is a stock dividend, the number of shares is adjusted.)

2. Less frequently traded OTCs, bonds, and T-bills have "asked" and "bid" prices. Buy at the "asked price, and sell at the "bid" price. In addition you pay the indicated commissions. You can buy newly issued Treasury securities directly from Federal Reserve Banks and branches without paying commissions.

3. Notes and bonds are traded in units of \$1,000 face value (principal), but bond prices are quoted as the price per \$100 worth. Thus for a bond whose price is quoted as \$99, you would pay \$990 for each \$1000 face value bond. You should use the Fidelity Corporate Bond Commission rates for all note or bond transactions. In addition to the stated bond price and commission, you will pay an amount representing the accrued interest. (See Sharpe and Alexander p.329 for an example.) T-bills generally are issued in denominations of \$1,000 or more (in \$1,000 increments) at maturity. They are sold at discount. You will need to compute the price from the information given as the "asked" discount (when you buy) or the "bid" discount (when you sell). (See Sharpe and Alexander, pp. 327- 328 for an example).

4. If you own a stock on the day before the ex-dividend date for a dividend disbursement, you should add the value of the dividend to your account on the payment date. The reason for asking you to predict the next dividend date in your first report is to tell you when to look for the dividend information. Watch *Barron's* (or *The Wall Street Journal* or your favorite online source each day) for dividend information. In *Barron's*, the tables in the "Weekly Statistics" Section under the New York Stock Exchange Composite List, the American Stock Exchange Composite List, and the NASDAQ National Market System include information on the firms' latest dividend, the record date, and the payment date. By checking on your stocks in these tables you can determine when dividends are paid and the amount. (Note: The *Barron's* "Speaking of Dividends" Section only has dividends paid during the current week; more complete information is given in the tables listed above. A few pages into the *Barron's* statistics section is a description of the symbols used. Do not confuse the latest dividend with the earnings per share.)

5. If you own a note or bond at the time a coupon payment is made, you should add the value of the coupon payment to your account. The first report asks you to determine and record the dates when coupon payments are made. *Moody's Bond Record* or the *Fitch Rating Register* give coupon payment dates for many bonds. (Both sources are in the Reference Section of the Business School Library. The same data is available online.) (*The Wall Street Journal's* tables listing Treasury bonds and notes and issues by other government agencies include the coupon rate and the month and year of maturity, but not the exact date.) Since these bonds make semiannual coupon payments you can use this information to determine when payments are made. Many, but not all, Treasury bonds have maturity dates that fall on the 15th day of the month.

6. There are two types of Mutual Funds, load and no-load. No-load funds are bought and sold at "NAV." (net asset value). Load funds are bought at "offer price," which includes a sales fee and then sold at "NAV". I strongly urge you to choose no-load funds because of the short horizon of this project. The Mutual fund listings in *The Wall Street Journal* give NAV daily. The Friday WSJ gives additional details for mutual funds, including load charges, if any. You may want to check a recent Friday WSJ in the Business School Library for choosing funds, then use the current WSJ for the prices. There are no additional commissions for no-load fund transactions. (Managers take their cut before NAV is calculated.) Mutual funds may pay dividends. These are reported in the *Barron's* Mutual Fund table in "Weekly Statistics." If you own the fund on the record date, add the dividends to your account.

7. Money Market funds work like savings-accounts at banks. On Thursday of each week, the third section of *The Wall Street Journal* has a report on Money Market Funds where the interest rate paid for the previous week is listed. RATES LISTED ARE ANNUAL RATES. Use daily compounding, changing the rates from week to week. e.g.

$$B_T = B_0 \left(1 + \frac{r_1}{365}\right)^{d_1} \dots \left(1 + \frac{r_T}{365}\right)^{d_T}$$
, where B is the account balance, r is the weekly yield or interest rate, and d is the number of days for which the particular weekly rate applies.

There are no commissions charged on money market fund transactions.

8. Assume that the margin requirement on stock is 50%. For margin purchases, you must borrow at an interest rate 1% higher than the broker pays. The rate for brokers can be found periodically in *The Wall Street Journal* table called "Money Rates." The relevant rate is the highest rate listed under "Call Money." You must pay the appropriate interest for the period of the loan. You must also pay regular commissions when you buy and sell.

9. If you sell stocks short, you must deposit securities equal to the value of the securities sold in an escrow account as collateral. Assume that you do not collect interest on the proceeds of the short sale. If the value of the (borrowed) stock increases, you must deposit additional cash in the escrow account. You do not receive dividends on stock sold short; the dividends go to the person from whom the stock was borrowed.

10. For the final evaluation use the closing prices for the final evaluation date, compute the net value of the portfolio assuming that it was sold on that day,. Compute commissions that would be due on the liquidating sales. What has happened to your wealth? What does your performance look like in relation to your objectives and in relation to the market's performance? Go back and look at the objectives you wrote at the beginning of the course. Do they make sense? Would you change them in any way? (You may now understand some things you didn't at the start of the exercise.)

Compute the holding period rate of return on your portfolio for the duration of the assignment. Restate the rate of return as an annualized compound rate.

If you have made transactions between the evaluation dates, provide the relevant documentation.

11. To compute the portfolio shares, add up the value column, i.e. ignoring commissions, but including accrued interest. You should get a number that is less than \$100,000 by the aggregate amount of the commissions. Then divide each value by that total. The resulting share is the fraction of your portfolio that you hold in that asset. Portfolio shares will be used later in the course.

Where to get more information about assets, transactions, and market institutions:

1. WSJ footnotes and the Educational edition of the WSJ
2. Ross, Westerfield, and Jaffe text. Use the index to find discussions of various assets.
3. Sharpe and Alexander, Chapters 2, 12, and 15.

CHECKLISTS

A copy of the relevant checklist must accompany your reports.

Check each item that you have covered.

Provide a full explanation for any listed item that you have not included.

Checklist for the first report: (Due as indicated in the syllabus)

- ___1. Statement of Objectives
- ___2. Portfolio listed in format shown. Show that the expenditures add to \$100,000. Include all requested information.
 - ___2a. Record the dates of next dividend for stocks, next interest payment for bonds.
 - ___2b. Indicate what commission schedule you have used.
 - ___2c. Have you bought stocks in blocks of 100, bonds and T-Bills in units of \$1,000 face value?
 - ___2d. With Treasury, corporate, or agency bonds, have you included both the quoted price and the accrued interest in the amount that you paid for the bond? Remember the conventions for bond pricing.
- ___3. Record the values of a. Dow Jones Industrial index and b. S&P 500 index as indicated.

Checklist for final report: (Due as indicated in the syllabus)

- ___1. Portfolio listed in format shown. Show the ending value net of commissions.
 - ___1a. With Treasury, corporate, or agency bonds, have you included both the published price and the accrued interest on the bond in the price that you received?
 - ___1b. Identify the commission schedule that you have used.
- ___2. Record the ending values a. Dow Jones Industrial index and b. S&P 500 index as indicated.
- ___3. Compute the holding period and annualized rate of return for your portfolio and for the two indexes.
- 4. (Optional). Add comments on your original objectives and performance in light of knowledge you have gained.

Some Online Resources

There are now many Websites that provide price and other useful information about stocks and other financial assets. You may use one of these as an alternative to the printed *Wall Street Journal* if you choose.* The *Wall Street Journal* has an electronic edition. If you sign up for a student subscription to the printed version, you will also have access to the electronic version. Check out some of the following websites: (I will poll the class for recommendation for other sources.)

Yahoo!Finance <http://finance.yahoo.com/>

The Stock Research button will take you to an index from which you can choose Historical Data. You can obtain historical price data and dividend data. You can go there directly using:

<http://chart.yahoo.com/d>

The Yahoo site also has listing for options and bonds etc.together with explanatory material about the markets and other institutional information.

Fidelity www.Fidelity.com

Fidelity commissions <http://www300.fidelity.com/> **

MSN.com www.msn.com

mySchwab.com www.myschwab.com

Waterhouse.com www.waterhouse.com

Financial data finder <http://fisher.osu.edu/fin/osudata.htm> is useful for finding financial data on the web.

- Ted Bos's site www.economagic.com is a great source for economic and financial data.

*NOTE: If you use an electronic source for price data, please indicate the source in your reports. Be sure to use the closing prices for the indicated valuation dates when you set up your original portfolio and when you do the final valuation.

**I will hand out in class copies of the Fidelity Silver stock commission schedules. Check the above site for commissions for other assets.