

# Investing in Equity Mutual Funds



**AND**

## **The Center for Financial Studies**

Southern New Hampshire University\*

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# Investing in Equity Mutual Funds

## Executive Summary

The purpose of this module is to present the attributes of equity mutual funds as an asset class, as well as the advantages to investors in using equity mutual funds. The module can be divided into three related segments:

1. An overview of the structure of mutual funds and how mutual funds are priced, advantages and disadvantages of investing in mutual funds and things to consider when selecting a mutual fund
2. Narrowing the sample of mutual funds from which to make a selection
3. Making a final selection of a mutual fund that is likely to meet the investor's goals

Segment 1 is a discussion of advantages, disadvantages and things to consider when investing in mutual funds. Segment 2 is an exercise in which participants identify criteria specific to their particular investment goals and then use that information and an internet tool to identify several mutual funds that are likely to help the student meet his goals. Segment 3 is another hands-on internet exercise in which the student compares two of the mutual funds identified in Segment 2 and makes a final fund selection.

Of the modules in this series, this module is one of the most technical. It is not necessary that the facilitator teach all of the numerical detail in order for the students to grasp the concepts.

## Educational Motivation

- To appreciate the advantages of investing in mutual funds as well to gain awareness of the downside of investing in mutual funds
- To become familiar with selecting mutual funds that match the investor's criteria

- To reinforce the use of and more effectively understand on-line computer-based technology for financial analysis

## Overview of Material

### **Key Terminology:**

**Asset:** Item of value. In this module, asset refers to financial assets such as stocks and bonds.

**Asset class:** A category of financial asset, such as stocks, bonds or real estate.

**Balanced fund:** A mutual fund that invests in a mix of stocks and bonds to take advantage of both the growth potential stocks provide and the income stream bonds typically provide and to reduce risk. Also called a "hybrid" fund.

**Closed-end fund:** A type of investment company that sells a set number of shares in a single initial public offering. Unlike mutual funds, a closed-end fund does not usually redeem its shares. This type of fund is not commonly used by the typical retail investor and is not discussed in this module.

**Current yield:** The annual income amount generated by an investment divided by the investment's current market value.

**Diversification:** A means of managing risk by investing in several different securities within an asset class, across asset classes and globally.

**Dividend:** A distribution of money, stock or other property that a company may pay to its shareholders, usually on a quarterly in the US. Companies are not required to pay dividends.

**Expense ratio:** The portion of the fund's assets that are used to pay the operating expenses of the fund. This money is subtracted from the fund, having a negative effect on total fund value.

**Growth fund:** A mutual fund that invests in firms that are expected to appreciate substantially in value, often due to earnings being reinvested rather than being paid out as dividends.

**Horizon:** A time in the future when an investor intends to make use of invested funds. For example, the horizon for an 18-year old investor's retirement account is 52 years if the investor intends to retire at age 70.

**Income fund:** A mutual fund that invests in firms that are expected to pay dividends and/or bonds that will regularly pay interest.

**Investment company:** A corporation, business trust, partnership, or limited liability company that issues securities and is primarily engaged in the business of investing in securities. The three basic types include open-end companies (also known as mutual funds), closed-end funds, and unit investment trusts.

**Load:** A sales charge paid when mutual fund shares are purchased (front-end load) or redeemed (back-end load).

**Mutual fund:** A type of investment company that pools money from many investors and invests the money in stocks, bonds, short-term money-market instruments, or other securities as described in the fund's prospectus. Technically known as an open-end fund or open-end investment company. The mutual fund owns the assets and the contributors of the pooled money own shares of the mutual fund. Mutual funds are managed by separate entities called investment advisers.

**NAV:** Net Asset Value. An investment company's total assets minus its total liabilities. The NAV of a single share (or the "per share NAV") is the NAV divided by the number of shares outstanding. Mutual funds generally must calculate their NAV at least once every business day, typically after the major US exchanges close.

**Open-end fund:** A type of investment company that redeems its shares as requested by shareholders and that will

create new shares of the fund as required to meet demand for new shares. When most people think of mutual funds, they are thinking of open-end funds, and these are the type of funds discussed in this module.

**Prospectus:** As it applies to mutual funds, a formal document that describes the objectives and constraints under which a mutual fund manager makes investment decisions, as well as other information about the fund. Prospectuses are also used for other types of securities.

**Redemption:** Selling back of mutual fund shares to the mutual fund investment company.

**Return:** Dividends, interest or other types of income received as a result of owning an asset, plus any change in value of the asset while the investor owns it.

**Turnover:** The portion of the fund's assets that are sold and replaced over the course of the year.

**Unit Investment Trust (UIT):** A type of investment company that sells a set number of shares in a single initial public offering (like closed-end funds). Unlike both closed-end funds and mutual funds, UITs have a set termination date, on which the trust dissolves and the assets are sold to pay back investors. This type of investment company is not commonly used by the typical retail investor and is not discussed in this module.

**Volatility:** Degree of uncertainty of the expected rate of return of a security or a portfolio, such as a mutual fund.

### **Background Information**

The sections **General information, Advantages of investing in equity mutual funds, Disadvantages of investing in equity mutual funds** and **Things to consider when selecting an equity mutual fund**, covered below, provide the basis for the discussion in Segment 1. Points that the facilitator may address include:

- What is a mutual fund?
- How does a mutual fund differ from other types of securities, such as an individual stock?
- What are some benefits of investing in mutual funds versus other types of securities?
- What are some disadvantages associated with investing in mutual funds versus other types of securities?
- What should be considered when selecting a mutual fund?
- How mutual funds differ from exchange-traded funds (ETFs) as discussed in the companion module **Internet Resources for Bond, Bond Fund & Exchange-Traded Fund (ETF) Investors.**

**General information**

(The US Securities and Exchange Commission provides a comprehensive mutual fund tutorial in "Invest Wisely: An Introduction to Mutual Funds, available at <http://sec.gov/investor/pubs/inwsmf.htm>.)

An investment company is an entity that is primarily engaged in the business of investing in securities and issues securities of its own. There are three basic types of investment companies: open-end companies (also known as mutual funds), closed-end funds, and unit investment trusts. Mutual funds are by far more commonly used by the typical private investor than other types of investment companies and are the only type discussed in this module.

When you buy shares of a mutual fund, you are adding your money to a pool of money contributed by many investors. This pool of money is managed by professional investment managers who invest the pooled money in stocks, bonds, real estate or other assets as described in the fund's prospectus. The mutual fund owns the assets. The contributors of the pooled money own shares of the mutual fund which represent a proportionate share

of ownership of the assets owned by the mutual fund. How does this work?

Suppose five (5) investors have each contributed \$10,000 to a mutual fund so that the total value of the fund is \$50,000, all cash. The fund in turn issues 1000 mutual fund shares to each of the five investors so that there are 5000 mutual fund shares outstanding. The NAV of the mutual fund is \$10:

$$\text{\$50,000 total fund value} / \text{5000 shares} = \text{\$10/share.}$$

The fund manager will invest the \$50,000 in financial securities as allowed by the fund's prospectus. Suppose this fund's prospectus states that it is a US equity fund, i.e., it invests in stocks of US firms. The fund manager could purchase the following stocks:

Stock	#shares @Price	Investment
National City Bank (NCC)	200sh @ \$34	\$6,800
ChevronTexaco (CVX)	100sh @ \$59	\$5,900
General Electric (GE)	200sh @ \$35	\$7,000
McDonald's (MCD)	200sh @ \$35	\$7,000
Micron Technology (MU)	500sh @ \$14	\$7,000
Motorola (MOT)	300sh @ \$23	\$6,900
Procter & Gamble (PG)	100sh @ \$58	\$5,800
Total Stock Value		\$46,400
Cash		+ \$3,600
<b>Total Fund Value</b>		<b>\$50,000</b>

Note that trade commissions that would ordinarily be incurred by the fund manager have been ignored in order to keep the analysis simple.

At the time of the stock purchases, the fund owns stocks that total \$46,400 in value and keeps \$3,600 in cash so that the total fund value is \$50,000.

If the stock prices are the same at the market close on the day of purchase, the NAV of the mutual fund on that day is still \$10, \$50,000 total fund value divided by 5000 shares outstanding – only the type of assets owned by the fund has changed. The NAV of the mutual fund will remain \$10 until the market close the next day, at which time it will be recalculated based on the closing prices of the stocks owned by the mutual fund.

Now let's check the stock prices at the end of a trading day a month later, and let's say that PG paid a dividend of \$0.28/share during that month. Since the mutual fund owns 100 shares of PG, the fund received a dividend check for \$28:

$$100 \text{ shares} * \$0.28/\text{share} = \$28.$$

If the fund kept the dividend as cash, the cash value increases from \$3,600 to \$3,628. The prices of the stocks have also changed so that the total stock value is now \$47,300 and the total fund value is now \$50,928 as shown below.

Stock	#shares @Price	Investment
National City Bank (NCC)	200sh @ \$35	\$7,000
ChevronTexaco (CVX)	100sh @ \$60	\$6,000
General Electric (GE)	200sh @ \$34	\$6,800
McDonald's (MCD)	200sh @ \$33	\$6,600
Micron Technology (MU)	500sh @ \$16	\$8,000
Motorola (MOT)	300sh @ \$24	\$7,200
Procter & Gamble (PG)	100sh @ \$57	\$5,700
Total Stock Value		\$47,300
Cash		+ \$3,628
<b>Total Fund Value</b>		<b>\$50,928</b>

Now the NAV of the mutual fund is \$10.1856/share:

$$\$50,928 \text{ total fund value}/5000 \text{ shares.}$$

If one of the investors redeemed 100 of his shares, he would receive \$10.1856 for each share, or \$1018.56:

$$100 \text{ shares} * \$10.1856/\text{share} = \$1018.56.$$

Because an open-end mutual fund must stand ready to redeem shares as demanded by its shareholders, a mutual fund should keep adequate cash to meet anticipated redemptions so that the fund manager is not forced to sell stock in order to meet redemptions. Hence, a mutual fund will not fully invest all of its funds in financial securities.

Many mutual funds offer different classes of shares, meaning shares that carry different costs and constraints. This topic will be further discussed in the **Things to consider when selecting an equity mutual fund, Operating expense ratio** section below.

### **Advantages of investing in equity mutual funds**

Advantages traditionally associated with investing in mutual funds:

**Liquidity:** Mutual funds are highly liquid, meaning that they are easily converted to cash by redeeming the shares with the investment company. Share redemption can be done as easily as a phone call or online.

**Professional management:** Mutual funds are managed by professional money managers who make the daily decisions regarding what assets the fund buys and sells. The manager is constrained in the decisions he or she makes regarding the fund by the fund's prospectus. For example, if a fund's prospectus describes the fund as an income fund, the fund manager must invest most of the fund in assets that pay interest or dividends. He may not invest large amounts of the fund in firms that plow all of their earnings back into the company to fuel growth.

**Diversification:** A share of a mutual fund represents ownership of a portion of all the holdings owned by the mutual fund. For example, an investor who owns one share of the sample fund above owns some of all

the stocks in the fund. By diversifying the assets in a portfolio, i.e., by owning a variety of financial assets, an investor can reduce the risk associated with investing. This is analogous to not “putting all your eggs in one basket”, as the saying goes.

**Affordability:** While some funds require a sizeable initial investment, many have no such requirement. Furthermore, many mutual funds that have a minimum initial investment requirement waive this requirement for a retirement account and/or for an account to which regular monthly contributions are made.

Many mutual funds are no-load funds, meaning that there are no transaction costs at the time of the investment or upon redemption. It is usually the case that there is no charge for moving money from one fund to another within a family of funds, e.g., from one Royce Funds mutual fund to a different Royce Funds mutual fund.

**Recordkeeping:** The mutual fund company keeps track of how many shares an investor has purchased or redeemed and the dates of the transactions. Most mutual fund companies send investors periodic reports in addition to an annual summary. The annual summary typically reports:

- the dollar amount and date of dividend distributions made by the fund (not the stocks held by the fund) to the investor during the year, and whether the dividends were reinvested?
- the dollar amount and date of any redemptions taken by the investor during the year
- the cost basis (amount invested) for the shares redeemed and
- the holding period for tax purposes (short-term or long-term)

**Daily share pricing (NAV):** The share price of a mutual fund is determined at the end of each trading day as described above. This means that regardless of the time of day at which the investor buys shares of a mutual fund, the price per share is set at the close of the trading day.

### **Disadvantages of investing in mutual funds**

There are some disadvantages associated with mutual funds of which an investor would want to be aware:

**Tax consequences:** *Note that these tax consequences are usually not relevant for mutual funds held within a retirement account.*

If a mutual fund receives any income (interest and/or dividends) resulting from the fund’s investments, each of the fund shareholders is liable for income tax on his proportional share of the income, even if the shareholder did not withdraw any money from the mutual fund.

Likewise, if the fund sells any securities, each of the fund shareholders may be liable for income tax on his proportional share of the capital gain, even if the shareholder did not withdraw any money from the mutual fund. A fund with a high turnover rate is more likely to have this consequence than a fund with a low turnover rate.

**Daily share pricing (NAV):** Some more active investors may find the inability to take advantage of continuous trading during the day frustrating. Exchange-traded funds (ETFs) as discussed in the companion module **Internet Resources for Bond, Bond Fund & Exchange-Traded Fund (ETF) Investors** are similar to mutual funds in many ways but are priced throughout the day.

### **Things to consider when selecting an equity mutual fund**

**Types of equity funds:** *Equity funds* depend primarily on increases in stock prices and payment of dividends for increased fund value. Equity funds fall into several categories:

- Aggressive growth – These funds typically invest in smaller firms that plow earnings back into the company to fuel growth instead of paying dividends. Aggressive growth funds tend to be more volatile than other equity funds.

- Long-term growth – Long-term growth funds usually invest firms that are expected to grow at a slower, steadier pace.
- Growth and income – These funds invest in large well-known firms that regularly pay dividends, such as those listed on the S&P500 stock index.
- International – International funds invest in firms outside of the US.
- Global – Global funds invest in firms all over the world, including the US.
- Sector funds – These funds invest in firms of a specific industry sector. For instance, a biotechnology sector fund would invest heavily in the firms within the biotechnology industry sector.
- Index funds – Index funds are designed to track a market index. For example, a S&P 500 stock index fund would own the same stocks that are used to calculate the S&P 500 stock index in the same proportion that is used in determining the index. Therefore an index fund would perform nearly identically to the index it is intended to track, the difference being fees incurred by index fund investors.

*Balanced funds* invest in a combination of stocks and bonds. Because returns on stocks and bonds tend to not move in lock step, a balanced fund typically is less volatile than an equity fund.

*Income funds*, as described above, invest in firms that are expected to pay dividends and/or bonds that will regularly pay interest. The current yield would be a factor of consideration when investing in an income fund.

**Load:** A load is a transaction fee paid at the time of investment (front-end load) and/or at the time of redemption (back-end load). Some funds charge a fee at the time of investment (front-end load) and/or at the time of redemption (back-end load). Loads typically range from 1% to 6% of the investment or redemption. It is often the case with back-end loads that the applicable percentage for the load decreases over time. For example, you

may pay a back-end load of 5% if you redeemed your mutual fund shares BEFORE six years after investment but would pay no load if you redeemed the same shares AFTER six years. For some funds, the load varies according to the size of the investment or value of the investor’s account.

**Operating expense ratio:** A reported return on a mutual fund is net of the operating expense ratio. This ratio represents the percentage of the fund’s assets that are applied to paying the fund’s annual operating expenses such as the fund manager’s salary, trading commissions, office expenses, and marketing fees (also called 12b-1 fees). Unlike a load, the operating expense ratio is ongoing for the life of the fund. Generally, a fund with a load will have a lower expense ratio than an otherwise identical no-load fund.

Let’s compare the costs of two classes of shares of a fund so that the investments are identical except for expenses: One share class carries a relatively large front-end load and small operating expense ratio. The other share class carries a larger operating expense ratio but no load if the investor holds her shares for more than one year. In determining which is more advantageous, shares with no load or shares with a lower operating expense ratio, an investor should consider how long she expects to hold the investment. For example, American Funds Capital World Growth and Income Fund offers several classes of shares, including Class A and Class C.

Investment in American Funds Capital World Growth and Income Fund (less than \$25,000)		
Share Class	Load	Operating Expense Ratio
A	5.75% front-end	0.77%
C	1% back-end IF redeemed in less than one year (otherwise, no load)	1.62%

Suppose an investor plans to invest \$10,000 in this fund and intends to hold the shares for longer than one year. If she buys Class A shares, she will pay \$575 upfront in fees (5.75% of \$10,000) but will pay no fees when she redeems her shares. If, on the other hand, she buys Class C shares, she will not pay any upfront fees, nor will she pay the 1% back-end load if she redeems any shares after one year.

How long would the investor have to hold the mutual fund shares in order for the Class A shares to be the better option, i.e., at what breakeven point does the higher operating expense ratio of the Class C shares become more expensive than the front-end load of the Class A shares? Because Class A and Class C shares are of the same mutual fund, any difference in change in value of the two classes of shares should have a negligible impact on our analysis.

The difference in the operating expense ratios of the two classes is 0.85%:

$$1.62\% (C) - 0.77\% (A) = 0.85\%.$$

Therefore, in the first year, the Class C shares would cost \$85 more in operating expense than the Class A shares:

$$0.85\% * \$10,000 = \$85.$$

The dollar amount of the operating expense will fluctuate year to year as the asset base of the fund fluctuates. However, the first year value allows us to make a quick estimate of the breakeven point. We do this by dividing the front-end load of the Class A shares by the excess annual operating expense of the Class C shares:

$$\$575/\$85 \text{ per year} = 6.8 \text{ years.}$$

Our quick estimate indicates that if the investor intends to hold the mutual fund shares for longer than 6.8 years, she should buy the Class A shares versus Class C.

If the investor purchased Class C shares and redeemed the shares in less than one year, she would incur the back-end load when she redeemed her shares.

It is more challenging to compare Class A and Class B shares. Class B shares require

a back-end load which often decreases over time. For example, Class B shares of fund may require a 5% load if shares were redeemed after less than one year but no load if shares were redeemed after six years. More information about classes of mutual fund shares can be found at <http://www.finra.org/InvestorInformation/InvestorAlerts/MutualFunds/UnderstandingMutualFundClasses/index.htm>.

The Financial Industry Regulatory Authority (FINRA) provides an online tool that analyzes the effects of loads and ongoing expenses on mutual fund investment returns at <http://apps.finra.org/InvestorInformation/EA/1/mfetf.aspx>.

**Volatility:** As described above, volatility is the degree to which the return on an investment in a mutual fund fluctuates. Volatility is frequently measured by standard deviation, a statistical measure of how widely the return varies around the average over time. The higher the standard deviation, the greater the volatility. Kiplinger.com ranks mutual funds according to their standard deviations and then classifies the funds according to their rank:

Standard Deviation	Volatility Rank
High	Top 10%, meaning the funds that fall in the 90 <sup>th</sup> percentile
Moderately High	The next 20%, or 70 <sup>th</sup> – 90 <sup>th</sup> percentile
Moderate	The middle 40%, or 30 <sup>th</sup> – 70 <sup>th</sup> percentile
Moderately Low	The next lower 20%, or 10 <sup>th</sup> – 30 <sup>th</sup> percentile
Low	The 10 <sup>th</sup> percentile

**Past performance:** While past performance is no guarantee of future returns, past performance can provide an indication of how a fund performs under various circumstances. For example, a

fund's performance in past bear markets, i.e., periods during which the financial markets generally performed badly, may provide an indication of how the fund is likely to perform during future economic downturns.

**Fund manager's tenure:** When considering past performance, the investor should also consider the tenure of the fund manager. More attention should be given to the performance in years in which the current manager was managing the fund.

**S&P star ranking:** This ranking indicates how a fund has performed in the past relative to peer funds. Morningstar provides a similar ranking system. Kiplinger.com ranks mutual funds according to their risk characteristics and performance and then classifies the funds according to their S&P star rank:

<b>S&amp;P Star Rank</b>	<b>Performance Relative to Peers</b>
5 Stars	Top 10%, meaning the funds that fall in the 90 <sup>th</sup> percentile
4 Stars	The next 20%, or 70 <sup>th</sup> – 90 <sup>th</sup> percentile
3 Stars	The middle 40%, or 30 <sup>th</sup> – 70 <sup>th</sup> percentile
2 Stars	The next lower 20%, or 10 <sup>th</sup> – 30 <sup>th</sup> percentile
1 Star	The 10 <sup>th</sup> percentile

### **Web Site Documentation**

<http://sec.gov/investor/pubs/inwsmf.htm>

A tutorial about mutual funds.

<http://www.finra.org/InvestorInformation/InvestorAlerts/MutualFunds/UnderstandingMutualFundClasses/index.htm>

A tutorial about mutual fund classes.

<http://content.kiplinger.com/personalfinance/basics/archives/2003/03/funds.html>

A thorough tutorial about mutual funds.

<http://finance.yahoo.com/funds/basics>

A thorough tutorial about mutual funds.

<http://www.kiplinger.com/personalfinance/tools/fundfinder/>

A search tool that identifies mutual funds that meet criteria set by the user, such as minimum initial investment, volatility, load, etc.; also provides flexibility in how data may be displayed.

<http://partners.financenter.com/kiplinger/calculator/us-eng/fund10.fcs>

A calculator that determines which of two funds is more suited to the investor's goals.

<http://apps.finra.org/InvestorInformation/EA/1/mfetf.aspx>

A tool for analyzing the effects of loads and expenses on mutual fund investment returns.

<http://finance.yahoo.com/funds>

A mutual fund tutorial.

<http://screen.yahoo.com/funds.html>

A mutual fund screener similar to the [www.kiplinger.com](http://www.kiplinger.com) screener.

### **Lesson Plan and Relevant Assignments**

#### **Materials Needed:**

- WEBSITES handout
- EQUITY MUTUAL FUND SELECTION CRITERIA worksheet
- EQUITY FUND SELECTION worksheet

#### **90-minute Lesson Plan:**

20 minutes: Segment 1. Pass out WEBSITES handout, as well as EQUITY MUTUAL FUND SELECTION CRITERIA and EQUITY FUND SELECTION worksheets. Review key terminology and background information.

40 minutes: Segment 2. Have students complete the assignment **Narrowing Equity Mutual Fund Choices** below.

25 minutes: Segment 3. Have students complete the **Equity Fund Selection** assignment using two funds from their results in the **Narrowing Equity Mutual Fund Choices** assignment (recorded on the EQUITY FUND SELECTION worksheet) in Segment 2.

5 minutes: Invite students to further explore mutual funds by visiting the mutual fund tutorial at <http://content.kiplinger.com/personalfinance/basics/archives/2003/03/funds.html> or <http://finance.yahoo.com/funds/basics>.

### 35-minute Lesson Plan:

The instructor will want to focus on either general traits of mutual funds as explored in Segment 2 above OR on the effect of costs as explored in Segment 3 above. If the instructor chooses to focus on the effect of costs, prior to the class session the instructor will want to select 3 or 4 mutual funds according to the **Narrowing Equity Mutual Fund Choices** assignment in Segment 2 for use in the **Equity Fund Selection** assignment.

15 minutes: Segment 1. Pass out WEBSITES handout, as well as EQUITY MUTUAL FUND SELECTION CRITERIA or EQUITY FUND SELECTION worksheets. Review key terminology and background information.

15 minutes: Segment 2. Have students complete the assignment **Narrowing Equity Mutual Fund Choices** below.

**OR** 15 minutes: Segment 3. Have students complete the **Equity Fund Selection** assignment using two funds from their results in Segment 2 and the EQUITY FUND SELECTION worksheet.

5 minutes: Invite students to further explore mutual funds by visiting the mutual fund tutorial at <http://content.kiplinger.com/personalfinance/basics/archives/2003/03/funds.html> or <http://finance.yahoo.com/funds/basics>.

### Assignments:

#### Segment 2 - Narrowing Equity Mutual Fund Choices

The sheer number of mutual funds available to investors can make starting the fund selection process a daunting task. In this exercise, students will use a sample fund selection questionnaire which may be helpful when used in conjunction with the online Mutual Fund Finder to limit the sample of funds from which to make a final selection. This questionnaire is similar to one found in the *Internet Resources for Bond, Bond Mutual Fund & Exchange-Traded Fund (ETF) Investors* module of this series.

URL:

<http://www.kiplinger.com/personalfinance/tools/fundfinder/>

1. Have students establish criteria for selection of a mutual fund using the EQUITY MUTUAL FUND SELECTION CRITERIA worksheet below. Note that each criterion descriptor is a link that leads to a deeper explanation of the criteria. It is not necessary to select every criteria provided on the website.
2. Direct students to the website above. Remind students that criteria must be realistic in order to obtain any results from the search. For instance, a search for a US equity fund with a 1-year total return of 20% in 2002 would likely have resulted in no funds because the US stock market overall performed very badly in 2002.
3. After obtaining a result of several mutual fund choices based on some of the criteria, encourage students to discuss how they might use the other criteria to further narrow their selection.

### Segment 3 – Equity Fund Selection

It's possible that students will still have several mutual funds from which to choose following the **Narrowing Equity Mutual Fund Choices** assignment. It is helpful to remember that 76% of an investor's return on his portfolio results from the mix of asset classes (stocks, bonds, etc.) and only 24% results from the particular security selected (Source: Vanguard, 2003 <http://moneymanager.smh.com.au/articles/2003/07/28/1059244523025.html>).

Making no investment decision is likely to be a much more expensive mistake than a wrong security selection.

URL:

<http://partners.financenter.com/kiplinger/calculator/us-eng/fund10.fcs>

**OR**

[http://apps.finra.org/Investor Information/EA/1/mfetf.aspx](http://apps.finra.org/Investor%20Information/EA/1/mfetf.aspx)

1. Direct students to select two funds from their results from the **Narrowing Equity Mutual Fund Choices** assignment. For each fund, have students note the fund name, ticker symbol, and *Total Return 5-year* before clicking on the fund ticker symbol link. The link will take the student to a webpage specific to the fund where the student will find the fund's NAV per share, as well as the fund's load (if any).
2. Direct students to note the fund's load and whether the load is front-end or back-end (deferred).
3. Direct them to use either of the online calculators found at the websites above to determine which fund is a better investment for this investor.

Instructions for completing the Inputs on the web-based calculator are provided on the EQUITY FUND SELECTION worksheet. Note that the following assumptions and/or allowances are made for this exercise:

- Total return for the past five years is assumed to approximate the long-term growth rate for the fund
- For horizons of more than 30 years, the

fund selection would most likely not change; hence, a horizon of 360 months is used for horizons of 30 or more years

- Students are instructed to enter zeroes for several of the data items as indicated in the table in the EQUITY FUND SELECTION worksheet in order to keep the exercise manageable.

Results provided include Estimated Selling Price of each fund at the investor's horizon and total fees and taxes expected to be incurred during the investor's holding period. Of particular interest for this module are the Before- and After-tax returns of each fund, which include the effects of taxes and fees.

## **EQUITY MUTUAL FUNDS**

### **WEBSITES**

<http://sec.gov/investor/pubs/inwsmf.htm>

A tutorial about mutual funds.

<http://www.finra.org/InvestorInformation/InvestorAlerts/MutualFunds/UnderstandingMutualFundClasses/index.htm>

A tutorial about mutual fund classes.

<http://content.kiplinger.com/personalfinance/basics/archives/2003/03/funds.html>

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A thorough tutorial about mutual funds.

<http://www.kiplinger.com/personalfinance/tools/fundfinder/>

A search tool that identifies mutual funds that meet criteria set by the user, such as minimum initial investment, volatility, load, etc.; also provides flexibility in how data may be displayed.

<http://partners.financenter.com/kiplinger/calculate/us-eng/fund10.fcs>

A calculator that determines which of two funds is more suited to the investor's goals.

<http://apps.finra.org/InvestorInformation/EA/1/mfetf.aspx>

A tool for analyzing the effects of loads and expenses on mutual fund investment returns.



## EQUITY MUTUAL FUNDS

### EQUITY FUND SELECTION

Select two funds from your results in the **Narrowing Equity Mutual Fund Choices** assignment. Click on each fund to find its NAV. Then use the calculator at the website below to finalize your selection. Enter zeroes as indicated in the table below. Enter the NAV for "Share purchase price" and the *Total Return 5-year* for "Growth rate, share price". Divide the amount you plan to invest by the share purchase price and enter this number in the "Number of shares you will purchase" box. Click "Get your results".

URL & Source: <http://partners.financer.com/kiplinger/calculate/us-eng/fund10.fcs>

FUND TICKER ----->	#1	#2
Share purchase price	\$	\$
Number of shares you will purchase		
Growth rate, share price	%	%
<u>Growth rate, dividends and gains</u>	0 %	0 %
<u>Front load/purchase fees</u>	%	%
Yearly management fees	%	%
<u>Back load/selling fees</u>	%	%
<u>Annual long-term gains/share</u>	\$ 0	\$ 0
<u>Annual short-term gains/share</u>	\$ 0	\$ 0
<u>Quarterly dividends/share, taxable</u>	\$ 0.00	\$ 0
Quarterly dividends/share, Fed. Tax-exempt	\$ 0.00	\$ 0.00
Quarterly dividends/share, state Tax-exempt	\$ 0.00	\$ 0.00
Quarterly dividends/share, non-taxable	\$ 0.00	\$ 0.00
Additional amounts invested		\$ 0
<input checked="" type="checkbox"/> Biweekly <input type="checkbox"/> Monthly <input type="checkbox"/> Yearly		
Months you will own		
Your federal tax rate		%
Your state tax rate		%
<b>Dividends and gains are:</b>		
<input checked="" type="checkbox"/> Automatically reinvested in the fund		
<input type="checkbox"/> Invested elsewhere at a rate of <input type="text" value="4.00"/> %		
<input type="checkbox"/> Spent		

NAV

NAV + initial investment

TOTAL RETURN  
5 Years

Expense Ratio

Front-end load

Back-end load

Horizon  
(years \*12, max 360)

#1 after tax return: \_\_\_\_\_

#2 after tax return: \_\_\_\_\_

## EQUITY MUTUAL FUNDS

### EQUITY MUTUAL FUND SELECTION CRITERIA SOLUTION

Note that answers will vary student to student. This profile is representative of an 18-year old student who is selecting mutual funds for a retirement account.

For this exercise, we will use <http://www.kiplinger.com/personalfinance/tools/fundfinder/>. A sample fund selection questionnaire may include questions similar to those provided below.

Mark your criteria for selecting a mutual fund, keeping these things in mind:

Your horizon: 52 yrs

How much volatility are you comfortable with:

- High or Moderately high: I have a long horizon (more than 10 years) and plenty of time to make up for any losses.
- Moderate: I have a long horizon and plenty of time to make up for any losses, but I will be kept awake at night, worrying about my investments, and checking on my investments every day.
- Moderately low: I will use these investment funds in the next 6-10 years.
- Low: I will use these investment funds in the next 3-5 years.
- I will use these investment funds in the next 1-3 years and so MONEY MARKET is the right choice for me.

Do you want to invest globally or do you want to confine your investment choices to the US? (circle one) Global US only

Do you want appreciation in value over the long term, or do you want a source of income? (circle one) Appreciation Income

Are you looking for a fund that invests in only stock, or do you want ~~one fund that holds both~~ stocks and bonds? (circle one) One asset class Stocks & Bonds

Based on your answers above, which is the best option (circle one):  
Stock Fund Balanced Fund

How much money do you have to invest, i.e., your initial investment? \$500

Based on your criteria, use the online Fund Finder to select a mutual fund that offers at least two classes of shares, one with a front-end load and one with no load (*Maximum Load* column on the Fund Finder website). Note the fund and the ticker symbols for the share classes here:

Fund #1: Putnam Asset Allocation Growth A Ticker: PAEAX

Fund #2: Capital Income Builder A Ticker: CAIBX

**EQUITY MUTUAL FUNDS**

**EQUITY FUND SELECTION**  
**SAMPLE SOLUTION**

Select two funds from your results in the **Narrowing Equity Mutual Fund Choices** assignment. Click on each fund to find its NAV. Then use the calculator at the website below to finalize your selection. Enter zeroes as indicated in the table below. Enter the NAV for "Share purchase price" and the *Total Return 5-year* for "Growth rate, share price". Divide the amount you plan to invest by the share purchase price and enter this number in the "Number of shares you will purchase" box. Click "Get your results".

URL & Source: <http://partners.financer.com/kiplinger/calculate/us-eng/fund10.fcs>

FUND TICKER ----->	#1 <b>PAEAX</b>	#2 <b>CAIBX</b>
Share purchase price	\$ 12.72	\$ 56.40
Number of shares you will purchase	39	9
Growth rate, share price	4.50 %	10.54 %
<u>Growth rate, dividends and gains</u>	0 %	0 %
<u>Front load/purchase fees</u>	5.25 %	5.75 %
Yearly management fees	1.25 %	0.57 %
<u>Back load/selling fees</u>	0 %	0 %
<u>Annual long-term gains/share</u>	\$ 0	\$ 0
<u>Annual short-term gains/share</u>	\$ 0	\$ 0
<u>Quarterly dividends/share, taxable</u>	\$ 0.00	\$ 0
Quarterly dividends/share, Fed. Tax-exempt	\$ 0.00	\$ 0.00
Quarterly dividends/share, state Tax-exempt	\$ 0.00	\$ 0.00
Quarterly dividends/share, non-taxable	\$ 0.00	\$ 0.00
Additional amounts invested		\$ 0
<input checked="" type="radio"/> Biweekly <input type="radio"/> Monthly <input type="radio"/> Yearly		
Months you will own		360
Your federal tax rate		%
Your state tax rate		%
<b>Dividends and gains are:</b>		
<input checked="" type="radio"/> Automatically reinvested in the fund		
<input type="radio"/> Invested elsewhere at a rate of <input type="text" value="4.00"/> %		
<input type="radio"/> Spent		

  

NAV

NAV ÷ initial investment

TOTAL RETURN 5 Years

Expense Ratio

Front-end load

Back-end load

Horizon (years \*12, max 360)

#1 after tax return: \_\_\_\_\_

#2 after tax return: \_\_\_\_\_

NAV

NAV ÷ initial investment

TOTAL RETURN 5 Years

Expense Ratio

Front-end load

Back-end load

Horizon (years \*12, max 360)

#1 after tax return: \_\_\_\_\_

#2 after tax return: \_\_\_\_\_



**EQUITY MUTUAL FUNDS**

**EQUITY FUND SELECTION**  
**SAMPLE SOLUTION**

Source: <http://partners.financenter.com/kiplinger/calculate/us-eng/fund10.fcs>

**Which fund is better?**

	<b>Fund 1</b>	<b>Fund 2</b>
<b>Your return</b>		
Before taxes	2.17%	8.70%
After taxes	2.17%	8.70%
<b>Other information</b>		
Selling price	\$15	\$90
Total fees	\$61	\$47
Total taxes	\$0	\$0

This estimate is based on current tax laws.

Note that results will vary depending on what students use for inputs.

## EQUITY MUTUAL FUNDS

### EQUITY FUND SELECTION SAMPLE SOLUTION

Source: [http://apps.finra.org/Investor\\_Information/EA/1/mfetf.aspx](http://apps.finra.org/Investor_Information/EA/1/mfetf.aspx)  
Comparing Class A and Class B shares of the same fund.

**You can compare the expenses of up to three Exchange Traded Funds, mutual funds or share classes of the same mutual fund.**

#### Fund 1: (Required)

Fund Family:

-- Select a Fund Family --



and/or

Ticker/Keyword:

CAIBX

Search

Fund:

Capital Income Builder Fund - Class A (CAIBX)



#### Fund 2: (Optional)

Fund Family:

-- Select a Fund Family --



and/or

Ticker/Keyword:

CIBBX

Search

Fund:

Capital Income Builder Fund - Class B (CIBBX)



#### 2. Enter Your Investment Details:

Investment  
Amount:

500

Dollars Enter an investment amount between \$1.00 and \$99,999,999.99.

Rate of Return:

10.54

Percent Enter a rate of return between 0.00 and 50.00 percent.

Holding Period:

20

Years Enter a holding period between 1 and 20 years.

You selected the same fund more than once.

Calculate My Expense Analysis

Reset Form

## EQUITY MUTUAL FUNDS

### EQUITY FUND SELECTION SAMPLE SOLUTION

Source: [http://apps.finra.org/Investor\\_Information/EA/1/mfetf.aspx](http://apps.finra.org/Investor_Information/EA/1/mfetf.aspx)  
Comparing Class A and Class B shares of the same fund.

### ***Estimated Fund Values After Expenses at the End of the 20-Year Holding Period:***

Results	Capital Income Builder Fund Class A	Capital Income Builder Fund Class B
Ticker Symbol:	CAIBX	CIBBX
Investment Amount:	\$500.00	\$500.00
Estimated Return You Selected:	10.54% (This rate of return is above historical market averages.)	10.54% (This rate of return is above historical market averages.)
Holding Period:	20 Years	20 Years
<b>Fund Value After 20 Year(s):</b>	<b>\$3,108.50</b>	<b>\$3,098.07</b>
Profit/Loss:	\$2,608.50	\$2,598.07
<b>Total Fees &amp; Sales Charges:</b>	<b>\$193.23</b>	<b>\$209.97</b>
Total Fees:	\$164.48	\$209.97
Total Sales Charges:	\$28.75	\$0.00

**Important:** The expense analyzer was designed to assist investors in evaluating and comparing expenses associated with mutual funds and ETFs. While we believe it is a very helpful tool, it is important to understand its limitations. The information generated by the expense analyzer is hypothetical in nature and assumes the fund's return and expenses remain the same each year. **Because returns and expenses may vary over time, your actual expenses and returns may be higher or lower.**