Asset Allocation and Security Selection

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Executive Summary

The purpose of this module is to present the rudiments of asset allocation and security selection procedures. This module is divided into three main segments:

1. Understanding an investor's appetite for risk and related risk tolerance via a risk tolerance assessment calculator

2. Discussing how asset allocation strategies—an aggressive approach, a moderate approach, a conservative approach and a short-term approach—are related to risk tolerance

3. Exploring security selection techniques to select investments within an asset class via an online security selection worksheet and a stock screening tool

The session might begin Segment 1 with a discussion of why risk evaluation must play a central role in both the asset allocation and security selection decisions. The facilitator will want to emphasize both risk tolerance (a measure of the investor s willingness to take on risk) and also the capability to take on risk based on income, wealth level, etc. This discussion will lead easily to the online risk tolerance assessment in Segment 2.

In Segment 2, working with student risk tolerance assessments, the facilitator might discuss asset allocation strategies for several of these risk assessment profiles. For most high school audiences, the facilitator will want to allot some time to a discussion of asset categories that may be appropriate for investors—many such categories will be defined in the **Key Terminology** section below. Students should understand the differences in the four prototype asset allocation templates provided in a handout.

Finally, in Segment 3, the module addresses the use of security selection techniques that can be used to populate selected asset classes coming out of the asset allocation decision. As an illustration, this module uses a stock security selection online wizard that can be used to generate stock information based, for example, on fundamental business analysis, analysts' reports and comparisons to competitive firms. In addition, stock screening based on both technical and fundamental analysis is presented. An alternate less in-depth stock screening tool is also presented.

Educational Motivation

- To understand the key role of risk in investment planning
- To understand asset allocation opportunities that are consistent with assessed risk tolerance
- To illustrate elements of security selection methods

Overview of Material

Key Terminology:

Business risk: Risk inherent to the type of business.

Cash equivalent investments: Low risk investments that pay interest, including Treasury bills, certificates of deposit (CDs) and money market funds.

Certificates of deposit (CD): A very short-term financial instrument that is issued by a bank and that earns interest. The United States Securities and Exchange Commission (SEC) describes CDs as follows: "A CD is a special type of deposit account with a bank or thrift institution that typically offers a higher rate of interest than a regular savings account. Unlike other investments, CDs feature federal deposit insurance up to $250,000."

Common stock: Ownership in a corporation that gives the holder a claim on earnings and assets of the company. Common stock may or may not pay a dividend, and the dividend may change from time to time. Common stock usually carries voting rights.

Corporate bond: Debt issued by a company. Typically, these bonds make periodic interest payments and repay the principal amount at maturity.

Emerging markets investment: Investing via individual securities or mutual funds in less developed markets and economies, e.g., China, Indonesia, Mexico and Turkey.

Exchange rate risk: Risk due to the need to convert the firm's revenues and/or expenses to/from another currency, incremental to business risk and political risk. Changes in currency exchange rates can impact the value of an international investment.

Financial risk: Risk due to a company having debt, incremental to business risk.

Fundamental analysis: A form of financial analysis that emphasizes the operating results and financial condition of the entity being evaluated.

Inflation risk: Risk due to decrease in value of an investment caused by rising price levels.

Investment horizon: Point in time at which investment funds will be needed for their intended purpose. For example, a 50-year-old person's investment horizon for a retirement fund may be 20 years.

Large cap stocks: Stocks of a company with a total market value (market capitalization) of more than $4–$5 billion.

Liquidity: Ease with which an asset may be converted to cash without loss of value. Short-term T-bills are highly liquid; shares of a privately-held foreign company are generally not.

Liquidity risk: Risk due to relative difficulty of converting an investment to cash without forfeiting value.

Maturity risk (bonds): Risk due to possible changes in value caused by fluctuations in interest rates.

Money market fund: A mutual fund that invests in short-term, low-risk securities including Treasury bills and certificates of deposit.

Political risk: Risk due to the political situation in the firm's country, incremental to business risk and exchange rate risk.

Real estate investment trust (REIT): A management company that invests in various real estate investments; investors can purchase shares on exchanges and over-the-counter.

Reinvestment risk: Risk due to the possibility of not being able to reinvest the proceeds from an investment at an acceptable rate of return.

Return: Change in value of a security or portfolio over an evaluation period; may consist of interest, dividends, and/or change in market price.

Risk: Degree of uncertainty in the rate of return of a security or a portfolio.

Small cap stocks: Stocks of a company with a total market value (market capitalization) of less than $1 billion; firms normally have annual revenues of less than $250 million.

Technical analysis: A form of financial analysis that relies on historical information and patterns.

Treasury bill: A short-term debt security issued by the US government; also known as a T-bill.

Treasury bond: A long-term government issued security, issued with a 10- to 30-year maturity, which pays a fixed interest rate two times a year; also known as a T-bond.

Treasury note: An intermediate-term government debt security issued with a 2- to 10-year maturity; also known as a T-note.

Background Information

The sections **Risk Tolerance/Risk Capacity, Asset Allocation** and **Security Selection** covered below can provide the basis for the classroom discussion.

Risk Tolerance/Risk Capacity

Before considering investing of any kind, it is prudent to evaluate both the risk tolerance and risk capacity of the investor. Risk tolerance refers to the investor's appetite for taking on risk; risk capacity addresses how much risk the investor can afford to take on given her financial situation. Both elements of risk consideration are equally important.

Most investors are risk-averse. That is, with all else the same, the investor would prefer less risk to more. Similarly, the investor would prefer the highest expected return available for a given level of risk exposure. Therefore, most investors take on additional risk not because they are wild and crazy, but because they expect to earn a higher return on those riskier investments.

The facilitator might portray this relationship as an available spectrum of investments from a low risk/low return holding all the way up to a high risk/high return investment position. For example, a very conservative or highly risk-averse investor (e.g., a senior citizen on a fixed retirement income with limited assets) would be content to earn a relatively low rate of return on her investment knowing that the investment is not very risky. A low risk investment portfolio is one for which we are highly confident that the actual rate of return on the investment will be very close to the return that we expect. The potential variation of the actual return relative to the promised or expected return is quite small. In the extreme case in which we hold riskless (sometimes called risk-free) investments, there is no risk that our return will differ from the promised return. Classic examples of investments that are considered to be riskless include various securities issued and guaranteed by the US government, e.g., Treasury bills, notes and bonds. On the other hand, a very aggressive investor would be comfortable investing in highly risky holdings with the expectation that his return on the investment will be commensurately high.

Working hand in hand with the investor's appetite or tolerance for risk is the investor's financial capacity to afford exposure to risk. The risk tolerance assessment will also reveal the investor's capacity for risk by considering the following measures:

- Investment horizon
- Age
- Income status
- Financial responsibilities
- Job status
- Size of investment portfolio
- Investment knowledge

The facilitator could discuss these attributes in the context of an investor's ability to take on risky investments. As in related modules, some of the questions in the assessment will not apply directly to high school students, e.g., the students likely do not have financial responsibility for others. However, the students will certainly appreciate the applicability of those attributes. Based on risk tolerance and risk capacity, the online assessment will recommend asset allocation strategies.

Asset Allocation

Asset allocation is the process by which the investor divides her portfolio into various asset classes. Typical asset categories might include US stocks, bonds (Treasury, municipal and corporate), cash and cash equivalents, foreign stocks and bonds, and alternative assets including tangible commodities (e.g., gold), collectibles and real estate.

It could be productive to proceed with the discussion using the output scores and recommended asset allocations from the risk tolerance assessment. Ask each student to use the provided Risk Tolerance/Risk Capacity Worksheet to record asset allocation recommendations based on risk tolerance and risk capacity. There should be a spirited discussion of the wide range in these recommendations for various class members. The facilitator will want to explore with the class why a recommended allocation is appropriate given the student's risk capacity and risk tolerance score. It is also very useful to discuss situations in which the risk tolerance profile diverges from the risk capacity profile, so that the assessment leads to materially different asset allocation recommendations. The facilitator will want to discuss the inconsistency of these results. For example, if the investor's risk tolerance exceeds her risk capacity, she may be tempted to make riskier investments than she can afford. On the other hand, if her risk capacity exceeds her risk tolerance, she may take on less risk and consequently give up some potential return.

Next, it can be useful to move from the individual circumstances of each student investor to view model asset allocation portfolios that a professional advisor might recommend for specific risk tolerance profiles. The Model Asset Allocation handout provides an illustration.

Security Selection

Security selection is the choice of specific securities within an asset class. Based on risk considerations, the investor establishes the asset allocation strategy. She must then populate each asset category with specific individual securities and/or mutual funds to satisfy the allocation. Our lesson on security selection will highlight approaches to selecting individual securities. To keep the discussion shorter, this module focuses on selecting stocks.

One tool used in Segment 3 (http://moneycentral.msn.com/investor/research/wizards/SRW.asp) addresses how an investor might research a stock to determine if it is an acceptable investment candidate. This approach organizes the analysis into five related categories:

- Fundamentals: using firm-specific financial and accounting data to determine if the enterprise is strong; financial statement analysis and accounting ratio analyses are employed
- Price History: investigating how the stock has performed recently and using basic technical analysis
- Price Target: working with selected valuation techniques and comparing to peer firms to estimate a stock price target over the next 1–2 years
- Catalysts: establishing an opinion of a stock based on publicly available information and news
- Comparison: comparing a stock with two other stocks in the same industry sector

On each page in this website, the user can study in-depth information for the selected security.

A second stock screener (http://moneycentral.msn.com/investor/finder/predefstocks.aspx) delivers security selection screening based upon technical and fundamental analysis. These searches can be less intimidating to the student because the screen itself sets the criteria under which top selections are made. A discussion could take place on the appropriateness of the search criteria as opposed to the identification of particular securities that meet the criteria. The technical screen identifies stocks based on patterns in stock price and/or volume. Different sorts are performed based on classical technical analysis approaches. The fundamental screen identifies stocks using accounting information and other market information based on the business and financial operations of the firm.

Web Site Documentation

http://www.finra.org/Investors/SmartInvesting/Retirement/Smart401kInvesting/Investing/
A guide to risk, asset allocation, diversification, and rebalancing.

http://www.sec.gov/investor/pubs/assetallocation.htm
A beginner's guide to asset allocation, diversification, and strategies for rebalancing one's portfolio.

http://moneycentral.msn.com/investor/calcs/n_riskq/main.asp
An online risk tolerance/risk capacity assessment; recommended asset allocation strategies are provided based on the responses.

http://www.pathtoinvesting.org/portfolioman/stratstyle/assetalloc/pm2_assetalloc_011.htm
An asset allocation tutorial discussing various asset classes, the determination of asset allocations based on risk assessment, and a description of the model asset allocation portfolios discussed in the module.

http://moneycentral.msn.com/investor/research/wizards/SRW.asp
A security selection wizard for stock investing that helps investors qualify an individual stock for inclusion in a portfolio by evaluating the stock along five characteristics.

http://moneycentral.msn.com/investor/finder/predefstocks.aspx
A website for security selection screening using technical analysis and fundamental analysis.

Lesson Plan and Relevant Assignments

Materials Needed:

- WEBSITES handout
- RISK TOLERANCE/RISK CAPACITY worksheet
- MODEL ASSET ALLOCATIONS handout

90-Minute Lesson Plan:

10 minutes: Segment 1. Discuss the risk/return trade-off and emphasize the importance of risk considerations for investors. Distribute the WEBSITES and MODEL ASSET ALLOCATIONS handouts and RISK TOLERANCE/RISK CAPACITY worksheet.

30 minutes: Segment 2. Encourage students to complete the **Risk Tolerance/ Risk Capacity Assessment** assignment and discuss the risk tolerance and risk capacity results.

20 minutes: Segment 2 continued. Use the risk tolerance assessment results to motivate the asset allocation discussion; review the four model asset allocation portfolios in the MODEL ASSET ALLOCATIONS handout.

30 minutes: Segment 3. Have students complete the **Research a Stock to Illustrate the Security Selection Process** assignment below. Use the five security selection criteria of the wizard to analyze a stock; use the power search tool to select securities based on technical and/or fundamental analysis.

OR

Segment 3. Have students complete the **Using Technical Screens and Fundamental Screens for Security Selection** assignment below.

35-minute Lesson Plan:

The facilitator will want to decide whether to emphasize asset allocation or security selection during the latter part of the class meeting.

10 minutes: Segment 1. Discuss the risk/return trade-off and emphasize the importance of risk considerations for investors.

15 minutes: Segment 2. Encourage students to complete the **Risk Tolerance/ Risk Capacity Assessment** assignment and discuss the risk tolerance and risk capacity results.

10 minutes: Segment 2 continued. Use the risk tolerance assessment results to motivate the asset allocation discussion; review the four model asset allocation portfolios in the MODEL ASSET ALLOCATIONS handout.

OR

10 minutes: Segment 3. Have students complete the **Research a Stock to Illustrate the Security Selection Process** assignment below. Use the five security selection criteria of the wizard to analyze a stock; use the power search tool to select securities based on technical and/or fundamental analysis.

OR

Segment 3. Have students complete the **Using Technical Screens and Fundamental Screens for Security Selection** assignment below.

Assignments:

Segment 2 – Risk Tolerance/ Risk Capacity Assessment
Each student will have the opportunity to take the assessment. Students need to understand that all questions may not apply directly to them, but they should answer all questions.
URL: http://moneycentral.msn.com/investor/calcs/n_riskq/main.asp.

1. Click "Next" from the start page to enter the assessment.
2. By clicking in the appropriate radio dial, take the quiz and click on "Next" to view results.
3. Observe the risk tolerance quiz results for risk tolerance and risk capacity.
4. Copy your recommended risk tolerance asset allocation and your risk capacity asset allocation on the RISK TOLERANCE/RISK CAPACITY worksheet.

Segment 3 – Research a Stock to Illustrate the Security Selection Process
URL: http://moneycentral.msn.com/investor/research/wizards/SRW.asp

1. Near the top of the page, enter the name or symbol of the stock you plan to research and click "GO" next to the entry field. A stock FUNDAMENTALS page will appear.
2. Click on "Next" near the FUNDAMENTALS title to move to the PRICE HISTORY page. A PRICE HISTORY page will appear.
3. Click on "Next" near the PRICE

   HISTORY title to move to the PRICE

   TARGET page. A PRICE TARGET page

   will appear.
4. Click on "Next" near the PRICE TARGET title to move to the CATALYSTS page. A CATALYSTS page will appear.
5. Click on "Next" near the CATALYSTS title to move to the COMPARISON page. A COMPARISON page will appear.

Segment 3 – Using Technical Screens and Fundamental Screens for Security Selection
In this website exercise, students will be provided stock screens based on both technical analysis and fundamental analysis. This exercise uses predefined screens and is likely to be less intimidating to less sophisticated investors.
URL: http://moneycentral.msn.com/investor/finder/predefstocks.aspx

1. Click on any of the blue highlighted titles under technical screens or fundamental screens to link to a list of stocks that meet the screening criteria.
2. In any list of stocks, click on the stock symbol (in blue along the left column) to access more comprehensive financial information on the stock.

ASSET ALLOCATION AND SECURITY SELECTION

WEBSITES

http://www.finra.org/Investors/SmartInvesting/Retirement/Smart401kInvesting/Investing/
A guide to risk, asset allocation, diversification, and rebalancing.

http://www.sec.gov/investor/pubs/assetallocation.htm
A beginner's guide to asset allocation, diversification, and strategies for rebalancing one's portfolio.

http://moneycentral.msn.com/investor/calcs/n_riskq/main.asp
An online risk tolerance/risk capacity assessment; recommended asset allocation strategies are provided based on the responses.

http://www.pathtoinvesting.org/portfolioman/stratstyle/assetalloc/pm2_assetalloc_011.htm
An asset allocation tutorial discussing various asset classes, the determination of asset allocations based on risk assessment, and a description of the model asset allocation portfolios discussed in the module.

http://moneycentral.msn.com/investor/research/wizards/SRW.asp
A security selection wizard for stock investing that helps investors qualify an individual stock for inclusion in a portfolio by evaluating the stock along five characteristics.

http://moneycentral.msn.com/investor/finder/predefstocks.aspx
A website for security selection screening using technical analysis and fundamental analysis.

http://www.ipers.org/calcs/AssetAllocator.html
An easy-to-use calculator that provides an asset allocation strategy based on selected personal data.

ASSET ALLOCATION AND SECURITY SELECTION

MODEL ASSET ALLOCATIONS

INVESTOR PROFILE	MODEL PORTFOLIO
Aggressive	80% stocks 15% bonds 5% cash
Moderate	60% stocks 35% bonds 5% cash
Conservative	40% stocks 40% bonds 20% cash
Short-term (12 year investment horizon)	20% stocks 40% bonds 40% cash

SOURCE: http://www.pathtoinvesting.org

ASSET ALLOCATION AND SECURITY SELECTION

RISK TOLERANCE/RISK CAPACITY ASSET ALLOCATIONS

RECOMMENDED ASSET ALLOCATION BASED ON RISK TOLERANCE ASSESSMENT

_____% Large company US stocks

_____% Small company US stocks

_____% International stocks

_____% Bonds

- _____% short-term 1–3 years
- _____% mid-term 3–5 years
- _____% long-term 5–10 years

RECOMMENDED ASSET ALLOCATION BASED ON RISK CAPACITY ASSESSMENT

_____% Large company US stocks

_____% Small company US stocks

_____% International stocks

_____% Bonds

- _____% short-term 1–3 years
- _____% mid-term 3–5 years
- _____% long-term 5–10 years

Source: http://moneycentral.msn.com/investor/calcs/n_riskq/main.asp.