

Investment Planning Answer Book by Jay L. Shein, Asset Allocation Methodology

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When designing and managing a portfolio, the advisor will have to understand the investor's time frame, objectives, goals, and tolerance for risk. This will be necessary for properly allocating and managing a portfolio. There are many strategies that can be used as part of portfolio design and management. Choosing between a strategic allocation and a tactical one may be one of the decisions that have to be made. What methods will be used to implement or enhance portfolio design and the decision making process may also be part of the methodology.

Investment Planning Answer Book by Jay L. Shein, Q 5:1, What is Asset Allocation?

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Asset allocation involves diversifying an investment portfolio into broad asset classes to optimize the portfolio's return for a given level of risk or to minimize the level of risk for an expected return. This process includes both selecting asset classes with returns that do not move closely together and allocating investments among the various asset classes. Although asset allocation is only one of the steps in the investment management process, the wealth management community has experienced a recent tendency to expand the term "asset allocation" to include every aspect of the entire investment management process. For the sake of simplicity, the term "asset allocation" in this discussion includes the other steps of the investment management process unless the exact procedures utilized to determine an optimal allocation of assets are specifically addressed.

Investment Planning Answer Book by Jay L. Shein, Q 5:2, How did Modern Portfolio Theory Begin?

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Modern Portfolio Theory (MPT) is the theoretical framework of today's investment management process. MPT came to light with the publication of "Portfolio Selection" by Dr. Harry Markowitz in the *Journal of Finance* in 1952. The prevailing attitude at that time was to concentrate investments on the security that had the highest expected return.

MPT postulates that an investor should be concerned with risk as well as return, and it provides a mathematical basis for quantifying risk. MPT looks at the entire portfolio and distinguishes between the riskiness of an individual stock and the riskiness of an entire portfolio. According to MPT, an efficient combination of assets can be determined that will maximize the return for a given level of risk.

Determining the "efficient frontier" of possible investment portfolios requires complicated mathematical calculations that were difficult, time-consuming, and costly for even the most sophisticated computers at the time of Dr. Markowitz's publication. The recession from 1972 through 1974 brought MPT to prominence. The passage of the Employee Retirement Income Security Act of 1974 (ERISA) [P.L. 93-406] spurred the growth of institutional investment-consulting firms and impacted the development of the investment-consulting profession.

The theoretical framework of the investment management process is called Modern Portfolio Theory. As this theory is over 50 years old, which is also true of many baby boomer financial advisors, it may be somewhat of a misnomer to apply the term "modern" to such a seasoned system. Nonetheless, in the interest of historical accuracy and common usage, it shall remain Modern Portfolio Theory. While it is beyond the scope of this discussion to provide a detailed history of the origin and evolution of MPT, it is necessary to briefly review its place in the history of the investment management process in order to establish a foundation for later discussions.

MPT focuses on the selection of an entire portfolio of investments rather than on how to select an individual security. Harry Markowitz's "Portfolio Selection" from the *Journal of Finance* [March 1952] marked a change in thinking in the investment world. Until this article was published, the prevailing attitude among investors and economists had been that the key to investment success was to identify a security that had the highest expected return and concentrate your investment on that security. In 1934, Benjamin Graham and David Dodd authored *Security Analysis* [McGraw-Hill] which remains the definitive text for the fundamental analysis of securities. Graham and Dodd established fundamental analysis as the standard for how Wall Street approached investment policy. The prevailing idea was that superior returns can be achieved by screening investments for those diamonds in the rough that are, as of yet, undiscovered.

Gerald M. Loeb, a seasoned Wall Street veteran, published *The Battle for Investment Survival* [John Wiley & Sons, Inc., originally published by Simon & Schuster, Inc.] in 1935, and it quickly became a best seller. Mr. Loeb's approach to investment is reflected in the titles of the first two chapters, which are "It Requires Knowledge, Experience and Flair" and "Speculative Attitude Is Required." An excerpt from chapter nine relays the following idea: "When an investment is made, its prospects must be so good that placing a rather large proportion of one's total funds in such a single situation will not seem excessively risky. Expressing the matter in a different way, this means that once you attain competency, diversification is undesirable." This attitude was typical of Wall Street. The old adage "Don't put all your eggs in one basket" was seen as an anecdotal admission of ignorance. The prevailing belief was "Put all your eggs in one basket and watch that basket very carefully." In an environment where the pursuit of investment return was paramount, the introduction of a theory that risk was as important, if not more important, than return in investment policy, was innovative.

Another important impact of Dr. Markowitz's article was its economic approach to risk and investments using a theoretical framework. While the idea of risk was certainly nothing new, Dr. Markowitz theorized that an investor should be concerned with risk as well as return, and he provided a mathematical basis to quantify

risk. In applying this quantitative analysis to the entire investment portfolio, Dr. Markowitz theorized that an investor could increase return while systematically reducing the overall risk of the portfolio. Contrary to the prevailing economic theory that any gain to an economic system required a corresponding cost, Dr. Markowitz determined that you could have your cake and eat it too. In 1993, Peter Bernstein noted in his *Capital Ideas: The Improbable Origins of Modern Wall Street*, [Free Press] "Markowitz's most original contribution was his insistence on distinguishing between the riskiness of an individual stock and the riskiness of an entire portfolio. The riskiness of a portfolio depends on the covariance of its holdings, not on the average riskiness of the separate investments."

Investors now had a theoretical framework to determine an efficient combination of assets that would maximize return for any level of risk. For the first time in history investment risk was no longer uncontrollable.

At one time in history, Dr. Markowitz's paper had little effect on investors. First of all, times were good and risk management was not a high priority on Wall Street. Of greater importance was the practical limitation of technology. A determination of the "efficient frontier" of possible investment portfolios required complicated mathematical calculations that were difficult, time-consuming, and costly for even the most sophisticated computers of that time. The event that brought MPT to prominence was the recession of 1972 through 1974. This recession brought the worst stock market collapse since the Depression. The general market experienced a 50-percent loss of value and many large companies were facing severe unfunded pension liabilities. In that environment, the idea of managing investment risk was readily welcomed. Consulting firms such as A.G. Becker, Frank Russell, and Callan Associates were formed to assist large institutional investors in implementing the ideas of MPT. These firms were able to apply advancements in computer technology with MPT and bridge the gap between academia and Wall Street.

Another event that greatly spurred the growth of the institutional investment-consulting firms was the passage of the Employee Retirement Income Security Act of 1974 (ERISA) [P.L. 93-406]. The investment guidelines contained in ERISA would have an impact on the development of the investment-consulting profession. Over the past 35 years, investment management consultants and advisors have become a central part of the investment process for institutional investors (i.e., private investors, trusts, corporate pension plans, foundations, and insurance companies).

Investment Planning Answer Book by Jay L. Shein, Strategic Allocation

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Strategic asset allocation involves crafting a portfolio of various asset classes with specific target mixes. The objective of strategic allocation is to maintain these mixes.

Investment Planning Answer Book by Jay L. Shein, Q 5:3, What are the advantages of strategic asset allocation?

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Strategic asset allocation involves crafting a portfolio of various asset classes with specific target mixes. The objective of strategic allocation is to maintain these mixes.

Strategic asset allocation may be easier to implement and manage. Once the investment advisor has determined the most appropriate mix of asset classes for the investor, the advisor can implement the allocation by the use of various investment vehicles such as individual securities, exchange traded funds, closed end funds, mutual funds, separate account managers, or other investment vehicles. Usually this mix will not be changed over time unless there are significant changes in the investor's objectives or tolerance for risk. Other than possible changes that trigger an adjustment in the allocation, the advisor will simply rebalance the portfolio to bring it back to the original allocation over time when using the strategic asset allocation approach. The advisor will have to determine what the rebalancing ranges are and what time periods trigger that rebalance. For instance, will it be rebalanced quarterly when any asset class is out of balance more than 5 percent? Or will it be rebalanced immediately when any asset class is out of balance more than 5 percent? Income taxes will have to be considered in a taxable portfolio as rebalancing will trigger a taxable event. While an investment advisor should be aware of taxes, the rebalancing should be based on economic decisions rather than strictly tax decisions. The advisor should attempt to be tax aware not tax efficient. Part of the investment policy should discuss rebalancing guidelines.

One strategy that seems to offer a well-rounded tradeoff between risk, return, and taxes is to rebalance any asset class, both broad or sub-asset classes when they are more than 20 percent out of balance. For example, a portfolio of 60 percent stocks and 40 percent bonds now becomes 72 percent stocks and 28 percent bonds. It is out of balance by 20 percent since 20 percent of the 60 percent stocks bring the stock allocation to 72 percent. A better approach would be using this 20 percent trigger for all of the sub-asset classes. This would mean if any of the asset classes got out of balance by more than 20 percent of their initial portfolio allocation, they would be rebalanced back to the initial portfolio allocation.



EXAMPLE

<u>Initial Portfolio Allocation</u>		<u>Current Portfolio Allocation</u>	
Large Capitalization Stocks	25%	Large Capitalization Stocks	25%
Small Capitalization Stocks	10%	Small Capitalization Stocks	10%
U.S. Bonds	30%	U.S. Bonds	30%
Foreign Bonds	10%	Foreign Bonds	12%
Real Estate	5%	Real Estate	5%
Foreign Stocks	15%	Foreign Stocks	13%
Alternative Investments	5%	Alternative Investments	5%

In this example, because foreign bonds grew in value by 20% to a total allocation of 12%, the foreign bonds should be reduced to bring it back to 10%. In this approach, the advisor should look at the portfolio frequently, if possible every two weeks. This strategy is designed to have a higher probability of complementing the elements of risk, return, and taxes. Therefore, this rebalancing strategy will cause the advisor to look at the portfolio allocation frequently but rebalance infrequently.

Investment Planning Answer Book by Jay L. Shein, Q 5:4, How is the tactical allocation used?

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Tactical asset allocation can take many forms. It is an active management strategy: tactical asset allocation allows the advisor to make changes to a portfolio allocation based on their convictions about various asset classes looking forward. At its simplest level, an advisor using tactical asset allocation may overweight or underweight stocks or bonds in an investment portfolio. Some tactical asset allocation strategies may just move from stocks to cash and back depending on the advisor's expectations. This method is sometimes referred to as market timing. While strategic allocation strategy has a component of tactical allocation as it rebalances portfolios back to their target, this is part of the discipline of strategic allocation. The advisor who employs a tactical asset allocation strategy will require more effort but will be well rewarded if the advisor's decision making process adds value over the strategic approach. Some of the critics of tactical asset allocation strategies imply that this approach has a possibility of missing the best performing days or months over long periods of time and hence will under-perform a strategic approach. It seems logical that an advisor whose decision process allows them to make tactical shifts which catch just some of the significant upswings of various asset classes and avoids some of the significant downswings of various asset classes will be well rewarded in the long run.

Investment Planning Answer Book by Jay L. Shein, Q 5:5, Are there examples of the tactical allocation approach?

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One approach to tactical asset allocation is to set an initial target allocation and deviate from that target when there is a perception or confidence that certain asset classes are undervalued or overvalued. For instance, if the advisor felt the economy was starting to improve coming out of a recession, they may have confidence in the fact that small growth companies will outperform other U.S. stocks. They then would add to or overweight small growth stocks. The tactical asset allocation approach has as its foundation the objective of outperforming a strategic portfolio. The idea is to buy low and sell high. Tactical approaches assume that there are inefficiencies that appear in the market over time which can be exploited by the investment advisor.

Another approach that seems to have merit is the momentum strategy. With the momentum strategy, the advisor will look at acceleration in a stock or asset class's price, revenue, or earnings. Momentum strategies expect movements in security prices, revenue, or earnings to continue. Momentum strategies are sometimes referred to as trend analysis. There is research that indicates that momentum strategies can add value. For instance, with a momentum strategy, if an asset class such as emerging market stocks was moving upward in price, the advisor may invest in that asset class. Similarly, if the price of the emerging market stock was moving down, the advisor might short that asset class. The advisor should gather the necessary skills such as visual analysis and quantitative methods to increase the probabilities that this approach will work to their advantage.

One of the perceived advantages of the momentum strategy is that momentum across equity styles such as small cap growth, small cap value, mid cap growth, mid cap value, large cap growth, large cap value, and micro cap stocks persists. The effects of momentum also seem to persist across regional international equities. There also seems to be a momentum effect with high yield bonds.

The advisor that uses a momentum strategy as part or all of their tactical allocation approach would allocate or over-allocate their portfolios in the asset classes that show the greatest momentum. If the momentum of a specific asset class was downward, the advisor would short the asset class. Many advisors and investors may not be comfortable with shorting the various asset classes because of the high risk inherent in taking a short position. To alleviate this problem, there are currently many exchange traded funds (ETFs) which are essentially inverse position in various asset classes. These investment vehicles could be considered a proxy for the short position without the equivalent risk associated with shorting.

Investment Planning Answer Book by Jay L. Shein, Q 5:6, Can a strategic and tactical asset allocation approach be combined?

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One suggested approach is to combine tactical asset allocation with strategic asset allocation. This would allow the investment advisor to manage investment portfolio with attributes of both approaches. The advisor could write investment policy with wide ranges for asset allocation. There could be a minimum investment at all times in stocks or bonds so there is always a minimum level of portfolio diversification. This also keeps the portfolio from being committed too heavily to any single asset class.



EXAMPLE

<u>Asset Category/Class</u>	<u>Target Allocation</u>	<u>Acceptable Range</u>
Cash/Cash Equivalents	1%	0-30%
Fixed Income	41%	10-75%
Stocks	40%	12-64%
Real Estate	5%	0-15%
Commodities/Precious Metals	3%	0-15%
Other Alternative Investment Strategies	10%	0-30%
Total	100%	

This example can be modified in any way to fit an advisor's style or conviction regarding portfolio management. As can be seen with this example, there is always a minimum invested in stocks and fixed income. This should not be construed as offering any guarantee relative to future performance. The investment advisor could use individual securities, passive investments such as indexes, mutual funds, and/or separate account managers to implement their portfolio allocations.

Investment Planning Answer Book by Jay L. Shein, Macro Opportunistic

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The macro opportunistic approach is an investment methodology that considers opportunities for portfolio management wherever they are and whatever they are. This does not mean that every investment or investment vehicle is used in or considered in a portfolio. What it does mean is that the investment advisor would look for opportunities and adapt portfolio management strategies as the opportunities appear. It is not a pure science but also includes some art. Albert Einstein said, "After a high level of technical skill is achieved, science and art tend to coalesce in esthetics, plasticity, and form. The greatest scientists are always artists as well." The well-known twentieth century British economist John Maynard Keynes said, "The social objective of skilled investment should be to defeat the dark forces of time and ignorance which envelop our future." Advisors using a macro approach should be proactive and continuously look for opportunities. Macro opportunistic investment management tends to be an absolute return strategy rather than a relative return strategy.

Investment Planning Answer Book by Jay L. Shein, Q 5:7, How would a macro opportunistic investment manager approach investing?

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One example of a macro opportunistic investment strategy could be to focus on global macro-oriented investment portfolios. The advisor could look for and invest globally in equity/stocks, bonds, currencies, commodities, alternative investments, and fixed income strategies. The strategy could use methods to protect the downside in the portfolio such as but not limited to inverse hedging, shorting, or put options. The macro strategy may at times have positions in the United States, Latin America, Asia, or Europe. This strategy's primary investment interest is understanding the macro environment in order to make better short-term, medium-term, and long-term investment decisions.

An advisor that applies a global macro strategy will usually start with a very broad top down approach to investing around the world before drilling down to finer details. The goal is to produce superior risk-adjusted returns in the long run. The macro approach looks for investments that are undervalued or far from equilibrium to buy long and investments that are overvalued or far from equilibrium to short. These opportunities occur when investors in the market have different views of the underlying economic fundamentals. This macro approach is definitely an active approach to portfolio management.

Investment Planning Answer Book by Jay L. Shein, Q 5:8, What are examples of macro opportunistic investment strategy?

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One approach is to purchase large company U.S. stocks when bond yields are declining faster than earning yields on a broad index of large company U.S. stocks. When there seems to be panic in the world economies, many times the yields on both bonds and stocks fall. Stocks are falling because earnings are likely to fall. Bond yields drop because investors assume that interest rates will be reduced in order to improve the economy, and investors selling stocks are investing in safer bonds. This situation should not last forever. The macro investor could use this opportunity to short large company U.S. stocks and buy bonds long. Paying attention to the stock and bond markets can help the macro investor make the appropriate investments. Many advisors focus on the stock market while ignoring the bond market. Investment advisors can easily invest in the stock and bond markets using exchange traded funds. If the macro investor observes bonds making a significant run in any one direction, it could be that a large investment may be being made by many investors such as pensions, endowments, and individuals. Many bond investors are much more aware of the macroeconomic issues and individual company issues. Following this lead may allow the advisor who takes the macro approach to benefit. While this strategy may work much of the time, advisors should use risk management strategies to reduce the risk of making a wrong decision. A macro manager will typically have a very flexible investment policy which will allow them to move from opportunity to opportunity. Even though they may have a very flexible investment policy like a tactical approach, the advisor might be well served by having some minimum asset classes always included in the portfolio such as minimum allocation to stocks and bonds. Another approach an advisor wishing to take a macro approach could be to combine it with a multi-strategy policy. With this approach, the advisor would look at all of the opportunities available but may use some other models in the decision making process such as quantitative, technical, fundamental, or trend following. Like many active strategies, a macro approach requires monitoring on an ongoing basis.

Investment Planning Answer Book by Jay L. Shein, Timing

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Market timing has many definitions. Some would suggest that any decision other than the strategic allocation of a portfolio is a market timing decision. Others feel that market timing is defined as being invested in an asset class such as stocks 100 percent or cash 100 percent. This author feels that pure market timing should be relegated to either being invested in stocks 100 percent or cash 100 percent.

Investment Planning Answer Book by Jay L. Shein, Q 5:9, What is an example of pure market timing?

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The investor currently invested in 100 percent U.S. stocks feels that the economy is going to decline significantly. The investor would sell the U.S. stocks and invest in cash or a cash equivalent vehicle. On the contrary, if the advisor felt the economy was going to improve, they could move 100 percent of their money from cash to stocks.

Investment Planning Answer Book by Jay L. Shein, Fundamental and Technical Analysis

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Two of the primary ways at looking for investment opportunities are fundamental and technical analysis. Fundamental analysis can range the gamut from economic indicators to financial statement analysis. It may include making decisions after looking at the industry, economy, company variables, and estimating the value of a company and then comparing it to the current market price of that company. Fundamental analysis looks at the relationships that exist for any given security at that moment in time, but more importantly, it looks at trends in those relationships over time. It considers the composition of the company's asset, its capital structure and leverage, its earnings, and competitive position for an inkling of its future performance. Technical analysis usually looks at past price movements and volume of individual securities, industries, sectors, or the stock market as a whole to find patterns that may predict the future.

Investment Planning Answer Book by Jay L. Shein, Q 5:10, What are some fundamental economic indicators that can assist in making financial decisions?

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Economic indicators can assist the investment advisor in making smarter investment decisions. These indicators are not always correct but do have merit. The stock market is very sensitive to U.S. employment reports. If jobs are being created, it is an indication that the economy is growing. If more people are applying for unemployment and are out of work, it is an indication that the economy is declining. This indicator seems to shock the stock and bond market. The unemployment rate is one of the highlights of this report. When there is a surge in job creation, the bond markets may decline as this could be an indication of a surging economy and inflation which is detrimental to the bond market. If the United States just came out of a recession, an increase in employment will not likely have a major effect on bond prices because there is no immediate concern for inflation. If employment accelerates when the economy is already at or near its growth capacity, you may see a steep decline in bond prices.

This employment report can also have an impact on the value of the U.S. dollar. If there is a great employment report indicating the economy is growing, U.S. interest rates may increase which would make the dollar more attractive to foreign investors. The reverse of this would be a bad employment report implying that interest rates will be reduced which will therefore cause the U.S. dollar to be less attractive to foreign investors.

A good employment report can be very good for stock market investors. As employment increases, the amount of hours worked each week increases and the people working become consumers. This increases the expectations that profits and sales of businesses will rise, therefore, driving up the price of stocks. If there is no growth in employment, the population will be less likely to shop, therefore, reducing earnings and profits on corporations and driving down the price of stocks. Employment information can be found at the Bureau of Labor Statistics Department of Labor website at <http://www.bls.gov>.

Gross Domestic Product (GDP) is another important U.S. economic indicator. Some consider it one of the most important because it measures how quickly or how slowly the economy is growing. It is published by the Bureau of Economics website at www.bea.gov. This is considered one of the more important statistics that comes out each quarter. The GDP is the total cost of all goods and services made in the United States. Since the GDP report comes out quarterly, much information has already been released in other reports that are used to make predictions about economic growth or contraction. The GDP figures are not always what was expected and can be quite different from what was projected by economists. If GDP is growing at a reasonable rate, it should be positive for stocks. If it is growing too quickly, it will have a negative effect on bonds as that would indicate accelerating inflation. For the U.S. dollar, an increasing GDP is positive unless it is growing too quickly which could reduce U.S. competitiveness in the world.

Information on personal income and outlay is valuable information to see how much Americans are receiving, spending, and saving. The web address for this information is at the Bureau of Economic Analysis (BEA) is www.bea.gov. Consumer expenditures are one of the main driving factors of sales, job growth, and imports. If personal income rises so will spending. This report breaks down income and spending by personal income, savings, and expenditures. How does this affect the stock and bond markets? Because this report comes out later in the month, it has less value for investment portfolio managers. For stocks, the investment manager would like to see high personal income and high spending/outlays. This would be indicative of a growing economy. However, if consumption is rising, this high consumer demand could cause investors to reduce their stockholdings because of their fear of accelerating inflation and increasing interest rates which would be bad for both stock and bond investors.

Bonds, on the other hand, do not like to see quick growths in income and spending. Data that reinforces slow growth is more likely to support higher bond prices and lower yields. Accelerating growth therefore implies rising inflation would normally have a negative impact on bond prices.

Another U.S. economic indicator that the markets can be highly sensitive to is retail sales. This information can be found at www.census.gov published by the U.S. Census Bureau. Since consumer spending makes up over 70 percent of the economic activity and retail sales is a significant part of that, it indicates a growing economy. This indicator only tells what is being spent on goods and does not tell what is being spent on services. Similar to personal income and spending, retail sales increasing too quickly indicates a heating economy which could be negative for bonds. If retail sales are increasing, this would be positive for corporate revenue and therefore, should be a positive for the overall stock market.

There are also many economic indicators that have value for use outside of the United States. One of those is the German Industrial Production. This is published the second week of each month. The source of this information is the Federal Statistics Office of Germany whose web address is www.destatis.de. The most populated and richest country in Europe is Germany. Germany's output is responsible for approximately one-third of everything that is produced in the twelve countries that make up Euroland and use the euro currency. Those who are looking for early signs of economic growth or contraction in Euroland can use this indicator to help them in making decisions in that part of the world.

Investment advisors who would like to look at additional economic indicators could look at some of these websites. Many of these economic indicators are published in the financial press, and various economic interpretations of these indicators can also be found in the financial press. Economic indicators for the United States and around the world are something that can assist advisors in making decision but should not be relied upon as an exact science.

Investment Planning Answer Book by Jay L. Shein, Q 5:11, What information is contained in the various components of fundamental analysis?

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Some of the things that the advisor should look up for fundamental analysis are profit and loss statements, balance sheets, financial ratios, and market performance ratios. Profit and loss statements summarize a company's activity over a specified period of time. Most companies produce both annual and semi-annual profit loss statements. Some of the information included is as follows: costs of goods sold, operating expenses, sales, and net profits.

The assets, liabilities, and shareholders equity are listed on the balance sheet. Ratio analysis promotes the use of uniform methods which allow us to compare changes in the operations of a company over time. With all the financial statements, the goal is to determine if a security is undervalued so they can be purchased with the anticipation of appreciation.

Investment Planning Answer Book by Jay L. Shein, Q 5:12, How can profit and loss statements be used in security selection?

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With profit and loss statements, you are looking for positive trends from period to period. For instance, if we see a 30 percent increase in sales revenue with only a 25 percent increase in operating expenses, this will lead to improved gross margin. If the advisor saw operating profits after tax and abnormal items increase by 80 percent, we see that the company has increased or has reduced cost which should give way to the improved profit performance in the current year. While these two examples would be encouraging, they are not sufficient to indicate the financial strength of the company.

Investment Planning Answer Book by Jay L. Shein, Q 5:13, How can balance sheets be used for fundamental analysis and security selection?

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The balance sheet lists the assets, liabilities, and shareholders' equity in a company. Typically, these items are arranged in order of their liquidity. The easier something is converted to cash, the more liquid it is. The total amount of the company's assets is always equal to the sum of the company's liabilities and shareholders' equity. In other words, liabilities plus shareholders' equity must equal total assets. Net assets are equal to the shareholders' equity. All the assets owned by a company are financed with the combination of shareholders' equity and liabilities. Of course, the solvency of a company is of great concern. One would typically prefer to invest in a company that has more shareholders' equity than less relative to liabilities. The reason this is preferred is that higher shareholders' equity has a better chance to meet all obligations from the cash value of its asset. If a company is in bankruptcy, it has to pay off its creditors by law to discharge its liabilities before it can pay the shareholders. When there are more shareholder funds as opposed to liabilities, there is a larger block of assets to convert to cash should a liquidity crisis occurs. Since we cannot know how much a company can get for its assets, especially if it takes place under distressed circumstances, this is an important consideration. When assets on the balance sheet increase, it suggests that the company is expanding or has possibly acquired another business. If this corresponds to an increase in revenue and bottom line profits, it would be positive. This alone does not indicate that this is a company that should be purchased. It should be understood that an increase in assets needs to be funded through increased debt (liabilities), equity, or a combination of both. Suppose, total liabilities have increased by 50 percent and that is more than the increase in assets. The financial condition of the company would decline in the short-term, but this might give the company the opportunity and capacity to increase profits which may be beneficial in the long-term.

Investment Planning Answer Book by Jay L. Shein, Q 5:14, How can we see if a company is effectively using its resources?

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We can see if a company is effectively using its resources by using financial ratios. Different ratios are designed to evaluate key measures of performance. An important benefit of using financial ratios is that it allows for a uniform methodology to compare a change in a company over time. With ratio analysis, we can review the performance of a company, its long and short-term liquidity, and how efficiently it operates. Using this type of analysis, changes can be measured and compared to things such as the performance of one company to another or an industry benchmark. There are many popular financial ratios typically used to analyze financial statements. It is better to focus on some generally accepted ratios that are used to analyze stocks when determining a company's financial strength. At this point, it should be observed that one should not judge a company's ratios by viewing one ratio in isolation. They should look at previous periods to look for trends and compare the company with other companies in the same industry or sector. Financial ratio analysis is not the only method to judge a company. It should supplement the analysis of a company and what their business consists of and where they are going.

Investment Planning Answer Book by Jay L. Shein, Q 5:15, How is a current ratio used?

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The current ratio is a company's current assets divided by its current liabilities. This ratio calculates the capacity for a company to cover its current liabilities if they liquidated their current assets. The higher the ratio, the better it is. Some consider a current ratio of 1.2 or higher a good rule of thumb, but lower ratios do not necessarily indicate an unsatisfactory number. Many companies can operate over long periods of time with lower ratios. Ratios are relative measures and should be used to compare prior periods with other companies.

Investment Planning Answer Book by Jay L. Shein, Q 5:16, Is the debt to equity ratio important?

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The debt to equity ratio is calculated by taking total liabilities divided by the total equity of the company. It is an indication of how much leverage is used to finance the company. There is no rule of thumb, however many businesses target a debt to equity ratio of less than one. This ratio can be used to show the financial stability of a company on a long-term basis. If it is rising too high, it may indicate the company is relying too much on debt to fund their operations. If a company is generating strong profits and their debt to equity ratio is increasing some, this can be acceptable.

Investment Planning Answer Book by Jay L. Shein, Q 5:17, What ratio can be used to measure basic profitability of a company?

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Return on equity (ROE) measures whether a company has the ability to earn an acceptable return that will allow it to attract future investments and survive in the long run. It is calculated by dividing operating profits after tax by total equity. An ROE of greater than ten percent is a good target. When looking at a company, a good ROE or a trending upward ROE is a positive event. Like all ratio analysis, there are exceptions to what is indicative of a good ratio. There are no hard and fast rules when analyzing a company. Many methods and ratios should be used to evaluate the stock in a company.

Investment Planning Answer Book by Jay L. Shein, Q 5:18, What are some performance ratios that can help with fundamental analysis?

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The idea behind fundamental analysis is to purchase undervalued stocks in anticipation of the appreciation that will occur when their value is recognized. These performance ratios usually need to be compared with other companies in prior periods to recognize trends.

The earnings per share ratio is calculated by taking earnings divided by the number of shares. It determines the amount of profit earned per share of stock. It is commonly used to express a company's profit. The price to earnings (P/E) ratio is calculated by taking the current stock price divided by the earnings per share. The price to earnings ratio gives an indication of future earnings and the quality of the earnings in the past. It is a good ratio when used to compare to other companies, especially in similar industries and to the market as a whole. Generally, P/E ratios increase in a bull market and decrease in a bear market. If the price of the stock accelerates faster than the earnings, many investors may consider the stock too expensive.

The price to sales ratio is calculated by taking the current stock price divided by the sales per share. This can be an early indicator of future performance. A lower price to sales ratio may give a premonition of improving profits in the future. Studying the price to sales ratio enables investors to observe if the company is growing at a stable rate. If the company is increasing their sales too rapidly, they may have falling margins and see their costs spiraling out of control. The dividends per share ratio, which is calculated by taking the total dividends paid divided by the average number of ordinary shares outstanding during the period measured, is a good measure to indicate a company's dividend payout.

These tools for fundamental analysis are used to help make better decisions. The final decision whether to invest in a particular stock involves many other facets including: risk tolerance and the portfolio diversification objectives. Many advisors may use a haphazard approach to investing in stocks. The advisor will be better served by having a more structured approach and methodology. This approach may include fundamental analysis, technical analysis, economic indicators, other models, or a combination of them.

Investment Planning Answer Book by Jay L. Shein, Q 5:19, Are there any benefits to using technical analysis?

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Investment advisors who use fundamental analysis or economic indicators often feel that this type of analysis is the best tool for investing and tend to ignore technical analysis. Advisors who use technical analysis often ignore fundamental analysis or economic indicators. A fundamental analyst usually looks at financial statements while a technical analyst looks at graphs and charts. An analyst using fundamental methods is looking for a company that is undervalued and has a high propensity to increase in value. A technical analyst does not feel there is any value in analyzing a company's fundamentals because they are all reflected in the price of a company's stock. Both camps, the fundamental and technical analysts, have good arguments to back up their conviction. Investment advisors may find it beneficial to consider both as part of their decision making process. For example, if the fundamental data of a company indicates a good value, yet the stock of that company is trending down which would be indicated on a chart through technical analysis, it would seem that it would be inadvisable to invest in that stock.

Investment Planning Answer Book by Jay L. Shein, Q 5:20, How are moving averages calculated and used in technical analysis?

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Because investments can be very volatile, moving averages can be used to smooth the price fluctuations. The three moving average methods in technical analysis are simple, exponential, and weighted. The most common type is the simple moving average. A simple average would be calculated by figuring the summation of the closing prices of an investment at the end of each day over some specified period of time (e.g., ten days) and then dividing this number by the total number of time periods. The formula for the calculation of the simple average is as follows:

$$\text{Simple average} = \frac{\sum_{i=1}^n C}{n}$$

Where:

C = closing price

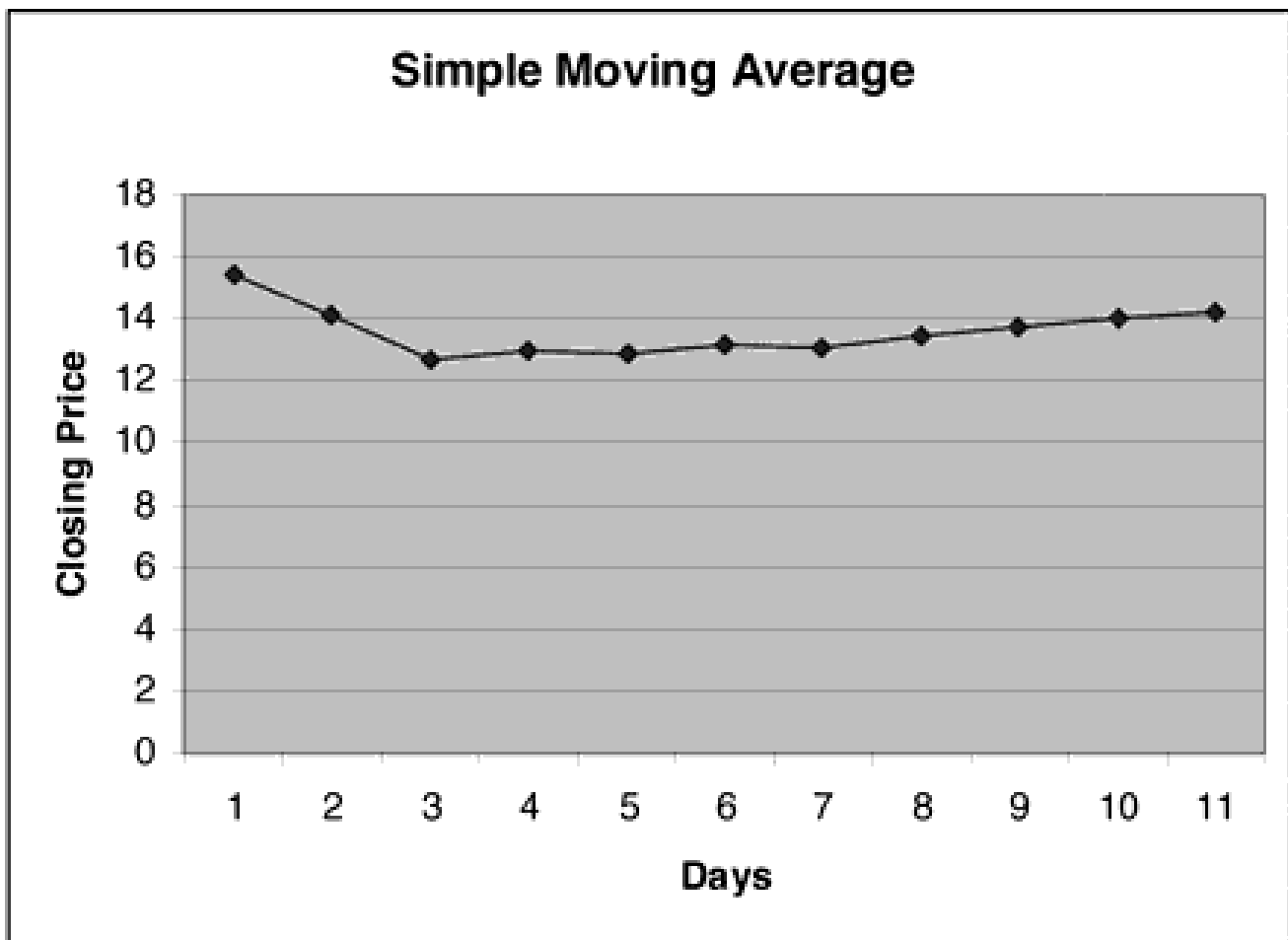
n = number of periods

For the following example, the simple average for the first ten days would be 15.4 using the previously mentioned formula.

<u>Day</u>	<u>Closing price</u>	<u>Simple average of last 10 days</u>
1	25	
2	26	
3	10	
4	15	
5	12	
6	15	
7	11	
8	14	
9	13	
10	13	15.4
11	12	14.1
12	12	12.7
13	13	13
14	14	12.9
15	15	13.2

16	14	13.1
17	15	13.5
18	16	13.7
19	16	14
20	15	14.2

The Simple Moving Average (SMA) can be plotted by moving forward one day and repeating the simple average calculation. This number will be the next point on the plot. Then plot each day's simple average on a graph. This would give the graphical representation of a Simple Moving Average. This could also be used with weekly or monthly closing prices in order that you would have a weekly or monthly Simple Moving Average rather than a daily moving average. For example, using the previously mentioned ten days of closing prices:



Moving averages are used to compare the relationship between the investment price and the moving average of that investment price. The simplest use of a moving average would be when the price of an investment moves above its moving average, that investment would be purchased, and it would be sold when it falls below its moving average. Using longer moving average periods such as weekly or monthly instead of daily will reduce the amount of changes in a portfolio. A moving average period longer than a day will probably be more appropriate for the investment advisor that is making tactical changes to the investment portfolio. This method is not designed to invest at the very bottom or to get out at the very top. Moving averages are a type of trend-following strategy. Some popular moving average periods are the forty week and the two-hundred day.

Investment Planning Answer Book by Jay L. Shein, Q 5:21, Are there other popular trend indicators used in technical analysis?

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Another popular trend indicator is the Moving Average Convergence Divergence (MACD). MACD, like the SMA, is a mathematical calculation that uses the security's price to assist in anticipating a change in price. The basic MACD is calculated by subtracting the twenty-six day moving average of an investment from its twelve day moving average. The MACD uses three moving averages. The twenty-six and twelve day averages are exponentially smooth moving averages that form the MACD line. Usually a nine day moving average is used to smooth the MACD line and forms the signal line. Buy signals occur when the faster MACD line crosses above the slower signal line. When the faster MACD line crosses below the slower signal line, a signal to sell occurs. Signals given with daily data would generate more frequent changes so it is best to place more credence on weekly data. Weekly data has more significance than daily data when looking for a trend. Using monthly data can also be valuable when looking at long-term trends.

There are three basic kinds of market indicators in technical analysis which are as follows: monetary indicators that look at economic data, sentiment indicators that consider investor expectations, and momentum indicators such as MACD. The monetary indicators tell us what prices should do, the sentiment indicators tell us what prices are expected to do, and the momentum indicators tell us what the prices are actually doing. Like fundamental analysis, technical analysis may have value for portfolio investment decisions. The investment advisor who is interested in fundamental or technical analysis should study and read more on these subjects. Fundamental and technical analysis should be considered as tools used to assist in the investment decision process.

Investment Planning Answer Book by Jay L. Shein, Q 5:22, What is the basic premise of Fusion Analysis?

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Investment advisors are continually looking for methods to improve their investment portfolio outcomes. In other words, they are looking for a "free lunch." According to the Efficient Market Hypothesis (EMH), "there is no free lunch," that is, an investor will not be able to consistently outperform the market because of the available public knowledge on publicly traded stocks and bonds. There are many exceptions and uncertainties that are growing regarding EMH. Even EMH has various forms. The weak-form EMH throws doubt on technical analysis by its conclusion that securities prices on public exchanges have already factored in past publicly available information. The semi-strong form suggests that fundamental analysis is of little value, stating both that prices reflect all publicly available information and that new publicly available information will be quickly reflected in prices. The strong-form EMH proposes that stock prices reflect all information from public and private sources. It is not the intent of this section to weigh in on active versus passive management, fundamental versus technical analysis, or other methods of portfolio management and analysis. Rather, the intent herein is to expose the reader to multiple disciplines that can be applied to portfolio management in isolation or in combination. The combining of these disciplines is referred to as Fusion Analysis.

Behavioral Finance has attracted much attention since the Nobel Prize was awarded for this topic in 2002. Behavioral Finance suggests that due to human emotions by participants in the markets, irrational decisions are made. Behavioral Finance has a connection to Technical Analysis (TA).

The capital markets do not always seem to exhibit a mean-variance efficient profile that is symmetrical. In other words, capital markets do not always maximize return for a given level of risk or minimize risk for a given level of return. The suggested flaw in EMH is that since investors do not have perfect information, they will at times behave in an irrational manner. The inconsistencies in the behavior of investors can therefore create opportunities that are exploitable, thus allowing tools such as fundamental analysis, technical analysis, behavioral analysis, and other quantitative methods to work.

Investors might be well-advised to consider all the tools available to them without prejudice. Some type of active management may have an opportunity to outperform buy-and-hold strategies or reduce portfolio risk and therefore help investors stay on track toward their goals. The blending of fundamental and technical analysis is typically referred to as Fusion Analysis.

Investment Planning Answer Book by Jay L. Shein, Q 5:23, What are some fundamental analysis methods that might be combined with technical analysis?

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Fundamental Analysis (FA) is a method used to measure the intrinsic value of securities. It can range from financial statement analysis to evaluating economic indicators or other quantitative and qualitative information. Someone using fundamental analysis attempts to study different things that might affect a security's value. Examples may include evaluating a company's management, free cash flow, the overall economy, or the financial shape of the company's industry or sector. It can also be used to help evaluate pooled investments such as exchange traded funds, mutual funds, or separately managed accounts. The object is to determine if the security is undervalued or overvalued. When prices are observed in real time on a freely traded security, the security price should be based on the balance between supply and demand. For many market investors/participants, fundamental analysis is the basis of their decisions. Additional information regarding some common measures used in fundamental analysis is listed below:

- Return on Equity (ROE) is best used to compare companies in similar industries. It is calculated by dividing after-tax operating profits by total equity. The after-tax operating profit of a company is composed of the total revenue of the company, less all expenses, including interest and taxes. This measurement can help determine whether the company has the ability to earn an acceptable return, which would make it attractive for future investors. A common target for ROE is 10 percent. A high ROE or a ROE that is trending upward over time may indicate a good investment.
- Free Cash Flow (FCF) is money left over after investment. A company can use this FCF to pay dividends, buy back stock, or pay down debt. FCF can help determine if a company is really making money or not. A newer company typically has a negative FCF because it is investing a lot in its future. More mature companies then start to generate FCF. Companies that generate significant FCF are probably very successful. Fundamental economic indicators often play an important role in the success of some companies. For example, the employment reports often seem to affect the stock market and a company's success, depending on their industry. As employment numbers increase, the stock market may react favorably as more hours worked each week in the economy cause workers to purchase more goods and services. This in turn increases the expectations that sales and profits will rise, which should then force up the price of stocks. Of course, if employment does not grow, then stock prices can decline. Information on U.S. employment can be found at the United States Department of Labor, Bureau of Labor Statistics website at <http://www.bls.gov>.

Fundamental Analysis can use many different ratios, calculations, and qualitative information to come to some conclusion as to the current and expected values of a security. Different analysts and investment advisors reach different conclusions regarding the value of a security. An advisor using a fundamental approach in isolation will be better served by using a variety of fundamental information. In the end, the result is a best estimation, not an absolute answer.

Investment Planning Answer Book by Jay L. Shein, Q 5:24, Should an advisor use fundamental or technical analysis?

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When evaluating this question, advisors must determine the best fit for their philosophy and investment methodology. If an advisor feels confident that a value of a stock is best determined by looking at the expected future cash flows of the company, then he or she may consider a fundamental valuation measure such as the Gordon Growth Model. This model can be used to value a company that is in a steady state of growth. The formula for the model is as follows:

$$\text{Value of Stock} = \frac{Div_1}{k_e - g}$$

Where:

Div_1 = Dividends expected one year from now

$k_e - g$ = Investors required rate of return

g = Growth rate in dividends perpetually

On the other hand, an advisor who believes that the price of a security or basket of securities is based primarily on the forces of supply and demand may use a technical analysis approach that makes use of charts and graphs to determine patterns or trends.

Investment Planning Answer Book by Jay L. Shein, Q 5:25, What are some technical indicators that can be used with Fusion Analysis?

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Technical Analysis (TA) provides a tool to predict securities prices using price and volume data displayed graphically. It is supposed to have a relationship to supply and demand. TA is often subjective, principally in recognizing patterns. For almost every generally accepted technical rule, there is a contrarian rule.

For instance, if everyone is bullish, there would be no one left to buy. This would cause prices to decline. One of the first known uses of TA was in the 1700s in Japan. It was used for trading rice. Before the end of World War II, TA was probably the most widely used form of analysis. Before the 1930s, the release of inaccurate financial information was not unusual. In fact, insider trading was common. At that time it appears that TA was more accurate as all information would then be reflected in the prices of securities and could be used for trading decisions. Academia has moved away from strong-form market efficiency—which assumes TA has no value—to the point where many universities offer courses in TA.

One of the premises for TA is that it works for any freely traded market with equities, fixed income, currencies or commodities. TA applies to both domestic and international markets. TA works for all time frames, both short term, such as a day, and longer term, such as weeks, months or years. There are many TA indicators. Some common ones are as follows:

- **Moving Averages:** This classic system buys (sells) when the closing price goes above (below) a moving average of the closing price. Moving averages are versatile and widely used by market technicians. It is basically a trend following device. Its objective is to help decide if a trend has begun, ended, or reversed.
- **Momentum oscillators** are another TA method that can be used to complement trend analysis. A popular momentum oscillator is the Moving Average Convergence Divergence (MACD). MACD is a technique which uses two exponentially weighted moving averages. The original MACD is the difference between a 12-day and a 26-day average. The signal line is a 9-day exponentially weighted moving average which is plotted over the MACD in order to show opportunities to buy or sell. The most basic crossover signal is to sell an investment when the MACD falls below its signal line and to buy when it goes above its signal line.
- **Stochastics and the Relative Strength Index (RSI)** are a couple of other momentum oscillators. The MACD, Stochastic, and RSI can be used to determine the strength of a trend, such as one determined by a moving average. These momentum oscillators are used to determine whether an investment is overbought or oversold when markets are being driven heavily by emotions. They can signal a correction in the capital markets when they reach historical extremes. A change in a trend can be signaled when they cross their zero line.

In Behavioral Finance, social psychology is used to explain anomalies in the markets. TA is another set of tools that investment advisors can use to analyze the markets. Information provided by TA allows advisors to observe both rational and irrational behavior of the masses of investors. Both academia and the Chartered Financial Analyst curriculum are beginning to accept and are teaching Behavioral Finance and TA. With TA, advisors may be able to see behavioral patterns that may be repeated to make more informed and profitable decisions.

Investment Planning Answer Book by Jay L. Shein, Q 5:26, How can Fusion Analysis be used?

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Fusion Analysis considers Behavioral Finance and combines Fundamental Analysis (FA) and Technical Analysis (TA). The timing of when TA and FA are applied can vary. TA can be used before or after FA. For instance, TA can be used to identify stocks that look like good opportunities to then be further analyzed with FA. As an example, an advisor could use TA to analyze the best or worst performing of the nine sectors in the S&P 500. Once identifying the desired sector, the advisor could turn to FA to evaluate specific trade decisions. On the flip side, an advisor could first use FA to evaluate what to buy or sell, then use TA to help determine the timing of that decision.

Some advisors use TA to identify trends in an investment which would indicate the market's favorable or unfavorable view of the fundamentals. An advisor that is a proponent of tactical asset allocation might use TA to make decisions on portfolio asset allocation changes. Looking at a chart is a very quick and efficient way to research an investment. Because of this, many practitioners will first look at a chart when investigating a new security. TA can also be used after FA to help determine if the conclusion reached by FA is consistent with the trend of the market. If it is not consistent, this might be an indication that the FA missed some information the market is taking into account or that the market itself is making an incorrect assumption. This would in turn open up a possible investment opportunity.

Investment Planning Answer Book by Jay L. Shein, Q 5:27, How should advisors approach Fusion Analysis?

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The Efficient Market Hypothesis (EMH) suggests that there are no anomalies worth exploiting or taking advantage of in the capital markets. The fundamental analyst would suggest that there are opportunities by evaluating fundamental quantitative and qualitative data. The technical analyst feels that the use of charts and evaluation of such things as price and volume tells the most likely future outcome. Probably there is no right or wrong answer for certain. There is evidence and academic studies to support these different philosophies. Advisors should consider their options and decide the best course of action for their philosophy and method of investing. However, a combined approach would seem to be more opportunistic than a singular one.

There are other tools and methods that advisors may want to consider. These include, but are not limited to: non-linear dynamic models, neural networks, fractals and quantitative systems. There are other ideas that can complement or replace some of those discussed in this paper. It could be that any one of the competing ideas may work together or in isolation. The Efficient Market Hypothesis, Fundamental Analysis and Technical Analysis devotees each have their own opinions and research. There is no guarantee that any method or strategy discussed in this paper will have value, but an advisor should be aware of the various tools that are available to best prepare for the task at hand. Advisors should always keep in mind that past performance is not a guarantee or indication of future performance.