

### The Asset Allocation Process

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## *Types of Asset Allocation*

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#### Overview

To gain a basic understanding of the asset allocation process, investors need to think about their evolving financial requirements, the various types of asset allocation, and how asset allocation interacts with other investment disciplines. Most investors tend to have different asset allocation needs as their wealth levels change through time. This essay explores some of the ways to meet these needs as investors seed, build, and realize their fortunes.

The main *types* of asset allocation—style, orientation, and inputs—are also discussed here. An asset allocation *style* may be conservative, moderate, or aggressive; the *orientation* of an asset allocation may be strategic, tactical, or a blend of the two; and the main *inputs* to an asset allocation may be quantitative, qualitative, or both. A process known as *performance attribution analysis* is also discussed in this essay, showing how to deconstruct the specific sources of contribution to an investor's strategic benchmark return versus his or her actual tactical results.

This essay concludes with a description of how the process of allocating assets interacts with style and sector selection, region and country selection, industry and security selection, manager selection, currency selection, and market timing selection.

An investor's *scope* of asset allocation essentially describes and defines the investor's universe or circle of investment activity. This investment realm may include *all* geographic regions and asset classes, or it may be limited to *one* country or region (such as North America, Europe, Latin America, or Asia) and include a relatively confined number of asset classes, such as equities, bonds, and cash. After delineating the scope of his or her asset allocation, the investor can then properly consider the *types* of asset allocation that may be adopted in constructing the portfolio. Asset allocation types may be classified according to their style, their orientation, and their inputs, and they may be combined in a variety of ways, as shown in Exhibit 1.

#### Asset Allocation Styles

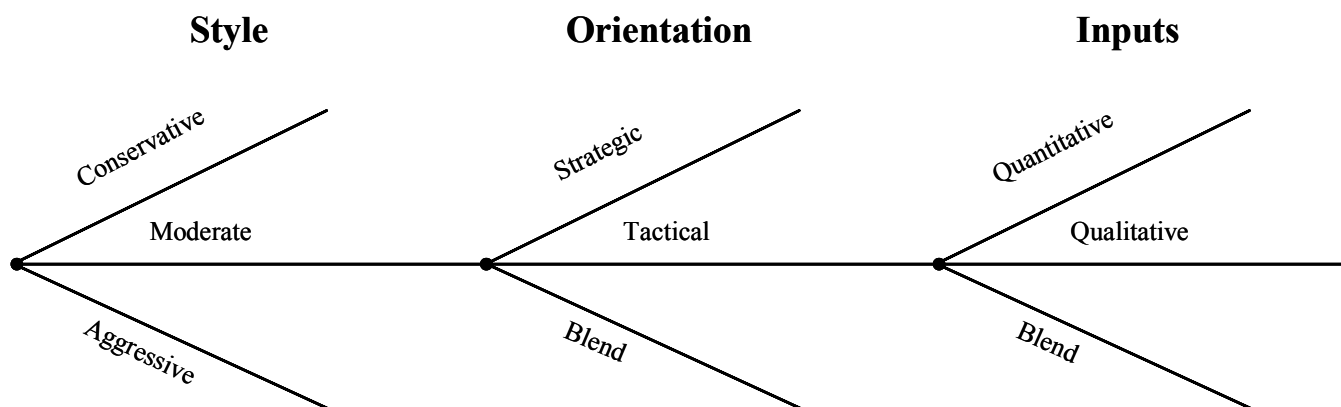
The *style* of an asset allocation may be described as Conservative, Moderate, or Aggressive. It is difficult to strictly characterize any particular asset or investor temperament as conservative, moderate, or aggressive in all market climates, partly owing to the fact that these styles have some degree of interaction with and dependency on prevailing investment norms and the existing financial market environment. It is entirely possible that a top-quality asset allocation style that might be considered *highly conservative* (such as high weightings in bonds and cash) under one set of circumstances (stable financial markets with low inflation or disinflation in the general price level), might be deemed *highly aggressive* under another set of circumstances (such as volatile financial markets with high inflation in the general price level and wide swings in interest rates and bond prices).

At the turn of the new millennium, many financial market participants might have described a Conservative asset allocation style as one which had: (i) relatively *lower* levels of exposure to: equities; alternative investments of an equity-like character (such as high yield and emerging markets debt; real estate; absolute return investments; certain kinds of hedge funds; private equity; and venture capital investments); and investments outside the investor's home country and currency; possibly combined with (ii) relatively *higher* levels of exposure to: cash and short-term investments; fixed-income securities; and investments inside the investor's home country and currency. At the other end of the style spectrum, under the same financial market circumstances, an Aggressive asset allocation style might have had: (i) relatively *higher* levels of exposure to: equities; alternative investments of an equity-like character; and investments outside the investor's home country and currency; possibly combined with (ii) relatively *lower* levels of exposure to cash and short-term investments, fixed-income securities, and investments inside the investor's home country and currency. In a similar financial environment, a Moderate asset allocation would be positioned somewhere between the description of a Conservative asset allocation and the description of an Aggressive asset allocation.

## Asset Allocation Principles

Exhibit 1

### Types of Asset Allocation



Source: Morgan Stanley Private Wealth Management Asset Allocation Group

Besides the composition of asset classes within each style, other features of asset allocation styles include the objectives and intended price behavior of the portfolio. In general, a Conservative asset allocation style is intended to exhibit lower price volatility (as measured by the standard deviation of returns from the portfolio) and possibly, to generate a somewhat greater proportion of its returns in the form of dividend and interest income rather than primarily through capital gains. By contrast, an Aggressive asset allocation style may very well exhibit higher price volatility and generate a somewhat greater proportion of its returns in the form of capital gains rather than primarily through income. A Moderate asset allocation style is intended to exhibit price volatility below that of the Aggressive style and above that of the Conservative style, with a Moderate asset allocation portfolio's returns possibly derived from somewhat of a mixture of income and capital gains.

#### Asset Allocation Orientation

As shown in Exhibit 1, the *orientation* of an asset allocation can be described as Strategic, Tactical, or a blend of Strategic/Tactical orientations. A Strategic asset allocation attempts to establish the best long-term mix of assets for the investor, with relatively less focus on short-term market fluctuations. As such, the Strategic asset allocation should reflect: (i) the investor's intermediate and long-term perspective on financial markets and specific asset classes; (ii) distinctive aspects of the investor and his or her long-horizon goals for the assets which might tilt the asset allocation in a particular direction (such as toward exposure to a certain currency, or toward investments with lower liquidity, greater variability in returns, or a lesser degree of

certainty as to the timing of potential returns); and (iii) various means, and the reliability thereof, for monitoring and managing long-term risk.

The investor's Strategic asset allocation serves several purposes. It helps establish which asset classes will be included in the long-term asset mix. For example, some investors may decide to identify and spell out in writing their preferences for long-term asset allocation exposures to asset class subgroups, such as small-capitalization equities, emerging markets equities, convertible securities, or real estate investment trusts (REITs). Usually, the investor's strategic asset allocation may be expected to change relatively infrequently, and primarily in response to: (i) meaningful changes in the investor's risk profile and returns objectives; (ii) altered expectations about assets' returns, standard deviations, and/or correlations; and (iii) the emergence of a new class of assets heretofore not considered by the investor.

The overall Strategic asset allocation may also find expression in the form of a written document, on a stand-alone basis or accompanying an Investment Policy Statement, and can serve as a guidepost around which any Tactical asset allocation moves are effected. Through the use of policy ranges, the investor can indicate how closely or loosely any Tactical asset shifts may vary from the Strategic allocation. For example, the investor's Strategic asset allocation may call for a 30% weighting in high-grade bonds, with a 10% allowable band (i.e., as high as 40% and as low as 20%).

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To enhance the usefulness of the Strategic asset allocation, the investor may select appropriate indices for each asset class in the Strategic asset allocation, in order to create a blended benchmark return against which the overall tactical investment results of the asset allocation may be measured. An example of this calculation methodology is shown in Exhibit 2.

In the sample comparison of the *strategic* asset allocation *benchmark* (column (5)) returns with the *tactical* results *actually generated* by the investor (column (6)), it can be seen that the portfolio's actual return exceeded the strategic blended benchmark return for the year under consideration by a total of 440 basis points, or 4.4% (equal to 20.9% versus

16.5%). This positive 4.4% difference in returns is equal to column (6) minus column (5).

Columns (7), (8), and (9) in Exhibit 2 deconstruct the specific sources of this outperformance through a process known as *performance attribution analysis*. Performance attribution analysis seeks to identify the specific positive or negative contributions to the difference between: (i) the *strategic* allocation benchmark return (produced by the strategic asset allocation weightings for each asset class multiplied by the total return for the index representing each asset class); and (ii) the investor's *tactical* return (produced by the investor's tactical asset allocation multiplied by the total return actually earned by the investor's designated vehicle or manager for each asset class).

Exhibit 2:

### Strategic and Tactical Benchmark Returns for a Representative Strategic Asset Allocation (Total Nominal Returns in US Dollars)

Asset Class	Index	(1) Investor's Strategic Asset Allocation	(2) Investor's Asset Allocation	(3) Latest Year's Index Total Return for Strategic Allocation	(4) Latest Year's Tactical Return for Investor	(5) = (1) x (3) Contribution of Asset Class to Strategic Allocation Blended Benchmark Return	(6) = (4) x (2) Contribution of Asset Class to Investor's Tactical Return	(7) = (6) - (5) (7) = (8) + (9) Total Difference Between Strategic Allocation Benchmark Return and Investor's Tactical Return	(8) = [(2) - (1)] x 4 Difference Attributable to Asset Allocation Decision	9 = (1) x [(4) - (3)] Difference Attributable to Tactical Return vs. Index Return	
Large-Capitalization US Equities	S&P 500	45%	50%	28.6%	32.5%	12.9%	16.3%	3.4%	1.6%	1.8%	
Japanese Equities	MSCI Japan	5%	3%	5.1%	4.0%	0.3%	0.1%	-0.2%	-0.1%	-0.1%	
Emerging Markets Equities	IFCI Composite	5%	2%	-22.0%	-17.0%	-1.1%	-0.3%	0.8%	0.5%	0.3%	
US Long-Term Treasury Bonds	Ibbotson Associates Long- Term Government Bonds	30%	30%	13.1%	14.6%	3.9%	4.4%	0.5%	0.0%	0.5%	
High Yield Bonds	Ibbotson Associates High Yield Corporate Bonds	5%	5%	0.6%	-1.0%	0.0%	-0.1%	-0.1%	0.0%	-0.1%	
Cash	30-Day US Treasury Bills	10%	10%	4.9%	5.2%	0.5%	0.5%	0.0%	0.0%	0.0%	
<b>Total</b>		<b>100%</b>	<b>100%</b>					<b>4.4%</b>	<b>2.0%</b>	<b>2.4%</b>	
<b>Total Blended Strategic Benchmark Return</b>						<b>16.5%<sup>1</sup></b>					
<b>Total Blended Investor's Tactical Return</b>						<b>20.9%<sup>1</sup></b>					
<b>Total Difference in Strategic vs. Tactical Return</b>						<b>4.4%</b>	<b>4.4%</b>	<b>=</b>	<b>2.0%</b>	<b>+</b>	<b>2.4%</b>

Note: <sup>1</sup>Numbers may not add due to rounding

Source: Morgan Stanley Private Wealth Management Asset Allocation Group

Simply expressed, performance attribution analysis helps the investor determine: (i) how much of the difference in returns is due to strategic versus tactical asset allocation decisions; and (ii) how much is due to outperformance or underperformance by the investor (or his or her asset manager) compared with the performance of the benchmark index representing each specific asset class. Similar methodologies may be used within a given asset class. For example, performance attribution analysis may be employed within the Large-Capitalization US Equities asset class to

determine: (i) how much of the investor's actual performance is due to industry sector weighting decisions versus the S&P 500 benchmark; and (ii) how much is due to specific security selection within each industry sector versus the benchmark security composition for that sector.

In Exhibit 2, it can be seen that of the +4.4% difference between the strategic allocation benchmark return and the investor's tactical return, +2.0% is attributable to the *asset allocation decision* and +2.4% is attributable to the *investor's*

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*tactical return* versus the benchmark index return. Of the +4.4% total return differential: (i) +3.4% was accounted for by Large Capitalization US Equities (of which +1.6% was due to the decision to tactically allocate 50% to this asset class, versus 45% for the investor's strategic asset allocation, and +1.8% was due to the fact that the investor's own (or externally hired) asset management results, +32.5%, outperformed the results of the S&P 500 Index for that year, +28.6%); (ii) +0.8% was accounted for by Emerging Markets Equities, (of which +0.5% was due to the tactical asset allocation decision to have only 2% of the portfolio in this asset class, versus 5% in the investor's strategic asset allocation, and +0.3% was due to the fact that the investor's own (or externally hired) asset management results -17.0%, outperformed the results of the IFCI Composite Index, -22.0%); and (iii) +0.5% was accounted for by US Long-Term Treasury Bonds (of which 0.0% was due to the tactical asset allocation decision, since the investor's 30% allocation to this asset class exactly matched the 30% strategic asset allocation, and +0.5% was due to the investor's own (or externally hired) asset management results, +14.6%, which outperformed the results of the Ibbotson Associates Long-Term Government Bond Index). The asset classes consisting of Japanese Equities, High Yield Bonds, and Cash made negligible or slightly negative contributions to the difference between the strategic allocation benchmark return and the investor's tactical return.

An additional reason to create a strategic asset allocation is to be able to refer to it at times when extremes of market enthusiasm or despondency are tempting the investor to make dramatic shifts in his or her asset allocation. Although times of financial upheaval often present attractive buying or selling opportunities, these are generally best addressed from a tactical standpoint rather than changing the overall strategy in response to short-term market swings. A strategic asset allocation may help bring a certain degree of reflection, reason, and a disciplined, methodical pace to important asset deployment decisions.

A Tactical asset allocation may take different forms and serve somewhat different purposes than a Strategic asset allocation. While some investors may adopt a primarily Tactical approach to asset allocation, viewing the long-term as effectively an ongoing series of short-term time frames, others use the Tactical asset allocation in conjunction with and as either a reinforcer of or a counterpoint to the portfolio's Strategic allocation policies. A common Tactical asset allocation time horizon may be one year, although some large institutional and individual investors with adequate

resources and mentality to do so make tactical asset allocation adjustments (or at least hold meetings to consider such adjustments) as frequently as quarterly, monthly, or even weekly.

Tactical asset allocation tends to be utilized in those periods when the investor has a reasonably firm conviction that an asset class is strongly overvalued (or undervalued), and is willing to back up that conviction on a short- to intermediate-term basis by underweighting (or overweighting) the asset class in question. In some cases, investors may use exchange-traded basket products, index futures, options, or other derivative instruments in order to adjust their exposure quickly. Owing to the price-aware, opportunistic nature of Tactical asset allocation, special forms of tactical risk management are also utilized; these include price alerts, limit and stop-loss orders, simultaneous transaction techniques, and value-at-risk (VAR) models.

As a matter of practice, a not inconsiderable number of investors use a combination of Tactical and Strategic allocations. Tactical allocation is employed to anticipate and respond to significant shifts in asset prices (akin to making short-term corrections in a trans-oceanic sailboat race). Strategic allocation is utilized to map out a long-term plan for how the investor's assets should be deployed in the quest to attain multiyear or even multidecade goals (in trans-oceanic sailing terms, akin to charting a course, navigating, and executing the large-scale maneuvers required to sail from starting point to destination).

### Asset Allocation Inputs

Exhibit 2 also shows another way of looking at asset allocation, focusing on the types of inputs used by investors to formulate the percentages of the overall portfolio that will be invested in each asset class. These percentages can be determined with the aid of quantitative models, qualitative judgments, or a combination of these two approaches.

The *quantitative* approach to asset allocation generally involves several steps, most of which have been rendered easier and more accessible by the broader distribution of asset allocation software, either on disk, in CD-ROM form, or via the Internet. First, the investor might select which asset classes and subclasses are going to be considered for the portfolio.

Second, the investor can spell out his or her assumptions about: (i) the future expected returns and (ii) the risk (expressed in standard deviation terms) of the asset classes

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being considered for investment, and (iii) the correlation of future expected returns between each pair of asset classes. As a starting point in this process, many investors take into consideration the past investment performance, the standard deviations, and the returns correlations over varying time frames, ranging from a few years to 5-, 10-, 20-, and 30-year periods.

Third, a so-called portfolio optimization program is used to generate a set of possible portfolio asset allocations, each with its own level of expected risk and return. From these results, a series of what are known as Efficient Frontier asset allocations can be selected, showing those portfolios having the minimum risk for a given level of expected return, as well as those portfolios having the maximum expected return for a given level of risk.

Fourth, after reviewing the set of asset allocations suggested by the portfolio optimization modeling software, the investor may very well decide to set upper and/or lower percentage limits on the maximum and minimum amounts that might be allowed in the portfolio. This last step involves human intervention and the investor's imposition of constraints on the optimization software.

As a practical matter, many of the investors who use portfolio optimization modeling software do not rely strictly upon the software's outputs to determine their asset allocation. Much like pilots who fly their aircraft using a combination of automatic controls and manual guidance, these investors realize that program-determined results are determined by *projections* of return, risk, and correlation assumptions—which may or may not turn out to resemble past history, and which may or may not need to be adjusted in some cases for higher investor costs for transactions, taxes, custody, and reporting. As a result, these results need to be carefully reviewed for soundness and consistency with the investor's own preferences and aversions.

As has been noted, the *qualitative* approach to asset allocation can play a role in portfolio construction, either working in tandem with quantitative tools, or as the primary input to portfolio design. The qualitative elements of asset allocation often rely heavily on the analysis of historical data, charts, statistical tools, and other models, but what sets the qualitative approach to asset allocation apart from the quantitative approach is its primary reliance upon the investor's own informed judgment and other sources of investment counsel, rather than mathematical algorithms or software programs, to establish initial portfolio weightings and then alter them at judicious intervals.

Generally speaking, qualitative asset allocation methodologies assess *fundamental* measures (such as economic indicators and earnings estimates, monetary conditions, and changes in wage, price, and productivity trends), *valuation* measures (such as real interest rates, the slope of the yield curve, price-earnings ratios, and price-to-book ratios), and *psychology/technical/liquidity* measures (such as funds flows, investor sentiment indicators, volatility indices, and price and volume charts). These assessments are carried out on an absolute basis and relative to long-term historical averages, often expressed in terms of the number of standard deviations above or below the long-term mean.

Another important component of the qualitative approach to asset allocation involves discussion and consultation with trusted sources about assumptions, past and projected returns, and cross-asset relationships to test their soundness, consistency, and practical validity. It is difficult to overemphasize the importance of reflection, common sense, and rational thinking in selecting and developing the qualitative and quantitative inputs to asset allocation. All the models, theoretical constructs, and rules-based allocation packages available to the investor are of little value if they are not leavened with wit, will, and wisdom.

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