INVESTMENT STRATEGIES

An Approach for Asset Allocation

Asset allocation is a critical part of any investment strategy. By taking the GHAUS approach, individual investors can make decisions in a simple and meaningful way.

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The risk and return of any investment portfolio can be altered by using three levers: asset allocation, security selection and market timing. The first lever refers to the proportion of the major asset classes (stocks, bonds, and alternatives) in the portfolio; the second to the implementation of the asset allocation selected, or more precisely, the assets (stocks, bonds, funds) used to obtain exposure to each asset class; and the third refers to changes in asset allocation or security selection over time. In this article, I will focus on the first of these levers – asset allocation.

There is broad consensus that asset allocation is far more important than security selection and market timing in determining performance. Some estimates show that over 90 percent of the differences in risk and return across portfolios can be explained by differences in asset allocation, with the rest explained by those in security selection, market timing or other factors. So investors would be wise to focus their time and effort on this portfolio lever.

THE GHAUS APPROACH

Determining the optimal combination of stocks, bonds, and alternatives is a mix of art and science. There is neither a perfect way to determine an asset allocation nor a perfect asset allocation for any given investor.

However, I would like to propose a simple, plausible and effective approach that investors can use. I refer to this as GHAUS. This abbreviation is taken from the variables an investor needs to consider when selecting an asset allocation, in the order they should be considered. These variables are:

Goal
(of the portfolio to be built)

Holding period
(of the portfolio to be built)

Ability to tolerate losses
(of the investor)

Upside and downside potential
(of the portfolios considered)

Shorter holding periods
(than that expected for the portfolio to be built)

These variables are taken into account in a three-step approach, which puts the individual investor in the driver's seat. Investors can directly choose the asset allocation that is ideal for them. They do this after performing an evaluation, according to their preferences, of the trade-off between the upside and the downside potential of a set of portfolios.

The GHAUS approach has several desirable features. First, it is simple, intuitive and does not require

the investor to have any financial expertise. Second, it accounts for the most relevant variables, considering both the upside potential and the downside potential of a range of portfolios. Third, it captures downside potential through the probability and magnitude of expected losses, which to most investors are more meaningful than volatility as a measure of risk. Fourth, it accounts directly for the investor's tolerance for risk, requiring that he explicitly considers his ability to tolerate losses. And last but not least, it does not come out of nowhere. Instead, it is chosen by the individual investor after a careful evaluation of the relevant trade-offs.

ANALYZING THE DATA

It is useful to start with a concrete example, focusing only on two asset classes, stocks and bonds. Stocks are represented by the S&P 500 and bonds by one-year U.S. Treasury Bills. Returns are nominal and account for capital gains/losses and cash flows. The 50-year sample period begins in January 1965 and ends in December 2014.

Table 1 displays some characteristics of 11 asset allocations containing different proportions of stocks (S) and bonds (B) ranging, as the first column indicates, from a portfolio fully invested in bonds (S=0 / B=100) to one fully invested in stocks (S=100 / B=0). Because we consider only two asset classes, it should be clear that the proportion of the portfolio not invested in stocks is invested in bonds. All figures in the table are given as percentages.

Two holding periods are considered in Table 1, one year (12 months) and five years (60 months). The main reason for focusing on "short" holding periods of one and five years is that most investors cannot help evaluating the portfolio in the short term even if they invest for the long term.

The second and third columns of the table show the annualized return (GM) and volatility (SD) of all portfolios. The rest of the columns show, for each holding period, the proportion of holding periods with losses (PL), the average loss across all the holding periods with losses (AL), and the average gain across all holding periods with gains (AG). To illustrate, a portfolio invested 60 percent in stocks and 40 percent in bonds had an annualized return and volatility of 8.6 percent and 9.1 percent; it delivered losses in 17.1 percent (0.7 percent) of all 12-month (60-month) periods considered; when it did, it lost an average of 7.1 percent (4.1 percent) per period; and when it gained, it delivered a 12.5 percent (56.1 percent) gain per period.

THE THREE STEPS

● **Step 1:** The first step consists of determining both the goal and the implied holding period of the portfolio. The goal and the holding period are two "inputs" that should come from the reason an individual has for investing for the future rather than consuming today. It is important to clearly specify both,

EXHIBIT 1:

GHAUS Asset Allocation

				12 Months			60 Months		
S	B	GM	SD	PL	AL	AG	PL	AL	AG
0	100	5.8	1.9	0.0	N/A	5.9	0.0	N/A	36.4
10	90	6.3	2.4	0.8	-1.2	6.5	0.0	N/A	39.6
20	80	6.9	3.5	4.2	-2.4	7.4	0.0	N/A	42.7
30	70	7.3	4.8	8.5	-3.3	8.5	0.0	N/A	45.9
40	60	7.8	6.2	12.6	-4.4	9.9	0.0	N/A	49.1
50	50	8.2	7.6	15.1	-5.8	11.1	0.2	-4.6	52.5
60	40	8.6	9.1	17.1	-7.1	12.5	0.7	-4.1	56.1
70	30	9.0	10.5	19.7	-8.2	14.0	2.6	-3.6	60.6
80	20	9.3	12.0	21.4	-9.5	15.5	6.1	-4.3	66.5
90	10	9.6	13.5	21.9	-11.3	16.8	8.7	-6.3	72.4
100	0	9.9	15.0	23.1	-12.6	18.4	11.1	-8.3	78.5

S = stocks **B** = bonds **GM** = annualized return **SD** = annualized volatility **PL** = proportion of holding periods with losses
AL = average loss across all holding periods with losses **AG** = average gain across all holding periods with gains All figures **in percentage (%)**

which may critically help an investor endure the bad times he or she will likely have to go through during the portfolio's life. For the purpose of this discussion, I will assume that the investor has decided to hold the portfolio for five years.

- **Step 2:** The next step involves evaluating the upside and downside potential of the portfolios considered. The annualized return of the portfolios in Table 1 ranges between 5.8 percent for the most conservative allocation and 9.9 percent for the most aggressive one. Most investors are likely to direct their attention to the portfolio with the highest return, and that is perhaps the best place to start.

Over the last 50 years, a portfolio fully invested in stocks delivered an annualized return of 9.9 percent. Across all the five-year periods in which the portfolio increased in value, it gained an average of 78.5 percent (12.3 percent annualized). These figures summarize the upside potential of this allocation.

The critical part, however, is to consider the portfolio's downside potential and the investor's ability to bear it. A portfolio fully invested in stocks decreased in value in 11.1 percent of all the five-year periods considered; in those periods, the average loss was 8.3 percent (1.7 percent annualized). Is the investor willing to lose that much, with that probability?

An investor who finds the downside potential of this allocation acceptable can move on to Step 3. If the portfolio seems too risky, then the investor should move upwards in Exhibit 1 until finding a probability of loss and average loss that he is able to bear over five-year periods; he can then move on to Step 3.

For our discussion, I will assume that the investor is going to find the portfolio fully invested in stocks to be too risky, and that, upon further analysis, he will decide he can bear the downside potential of a 60-40 stock-bond allocation.

- **Step 3:** The final step consists of assessing the downside potential of the asset allocation found acceptable in Step 2, but this time over a shorter holding period. The reason for this step is that an individual may be investing for the long term but cannot help reacting to short-term events; hence it is important that the individual explores and understands what may happen over holding periods shorter than those intended for the portfolio.

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The investor now needs to explore the downside potential of this portfolio over a shorter holding period. Let's assume the investor now considers a one-year period. As shown in Table 1, a 60-40 portfolio decreased in value in 17.1 percent of the one-year periods considered; in those periods, the average loss was 7.1 percent. Is the investor willing to lose that much, given this probability? An investor who finds this downside potential acceptable has found their ideal asset allocation. If not, he needs to move upwards in Table 1 until he finds an allocation with a downside potential he is willing to bear over one-year periods.

Step 3 could obviously be repeated over increasingly shorter holding periods. This may be particularly useful to investors who cannot help focusing on short-term fluctuations, and less useful to investors who are able to take the long view. One way or another, after first considering the upside and downside potential of a set of allocations over the portfolio's intended holding period, and doing the same over one or more shorter holding periods, the investor should have found an appropriate asset allocation.

A SIMPLE SOLUTION

As I mentioned, asset allocation is both an art and a science. It is also the most important aspect in determining portfolio performance. The GHAUS approach I propose here can help investors address this task in a simple and sound way.

MORE INFORMATION:
Estrada, Javier, "GHAUS Asset Allocation", *Journal of Asset Management*, Vol. 17, No. 1, 2016, pp. 1-9.