

PERSPECTIVES

Asset Allocation: Your most important investment decision



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In this special issue of *Perspectives*, we discuss asset allocation – that is, the way you divide your money into different types of assets. Here's why we felt the topic was compelling enough to deserve its own issue: *Asset allocation is probably your most important investment decision*. We examine what exactly asset allocation means; the types of assets; and how they differ. Finally, we look at how to decide on the best asset allocation for you.

Stan

Your first – and probably your most important – investment decision is how to divide your money into different types of assets. This is called *asset allocation*. In this special issue of *Perspectives*, we will discuss: What asset allocation means; the types of assets; and how they differ. Finally, we'll look at how to decide the best asset allocation for you.

There are many ways of classifying assets, so it can be confusing. The most basic division is by *asset class*. Almost everything can be broken down into one of two types: *equities* or *fixed income*. If it's not one of these, it is usually a blend of the two. These two asset classes are also called *stocks* and *bonds*, different words for essentially the same thing.



Equities and fixed income are very different from each other. The balance between them dramatically affects the risk and return of your portfolio. Because the balance is so important, you need to focus on this first. But to do so, it helps to know what equities and fixed income are – and how they compare.

Equities represent ownership in a business. When people think about equity, the thing that usually comes to mind is the equity they have in their home. Equity in your home is the value of your home, minus whatever mortgage. When you own shares in a business, the concept is the same. The value of a stock is the value of a business, less any debt the business might have. Owners of shares own the profits of the business; it is these future profits that ultimately determine the value of the business.

With fixed income, rather than being an owner, you are a lender. Usually with fixed income, you are paid a fixed rate of interest. The income and

principal can be guaranteed by government, or an obligation of a company. Fixed income can also vary by the *term*, meaning how long before your money is supposed to be returned to you. Fixed-income investments include: Treasury bills (T-bills); bonds; and term deposits.

Risks and returns of equities vs. fixed income

The main source of returns for equities is the profits or earnings those businesses make. But for any company, future profits are always uncertain. That's because every company faces competition. It's a dog-eat-dog world – and usually it's hard to know who will be the diner and who will be the dinner!

However, if you look at all the companies *together*, the total profits are much more stable. One company's decline is usually another company's gain. So, the earnings of the entire economy are much more stable and reliable than those of any individual company. In fact, according to Nobel Prize winner Robert J. Shiller, the aggregate earnings from the U.S. S&P 500 companies have never experienced a negative year since reliable data became available in 1871.

Still, aggregate earnings do fluctuate. One of the main causes of this is the *business cycle*: the ebb and flow of the economy as it expands and contracts. The normal course of the economy is expansion. Contractions usually last six to nine months, and occur two to three times in a decade. That means 80% of the time, the economy is expanding.

Company profits tend to fall when the economy contracts. But the declines are usually limited and they typically recover quickly. This is because companies can adjust to contractions and restore profits by cutting costs. Over longer periods, profits can rise at a different pace than the economy, depending on how the economic pie is split between wages, profits and taxes. Improvements in productivity are a key to increasing profits faster than the economy.

Stocks trade at prices that are a multiple of past or expected future earnings, commonly known as the *price-to-earnings ratio* (P/E). Over the past 100 years, this multiple has averaged around 16.5 times past earnings according to the data by Shiller. During optimistic times or when interest rates on fixed income are low, stocks trade at a higher multiple. During pessimistic times or when interest rates are high, stocks trade at a lower multiple. Add human psychology to the mix, and you will get huge swings in stock prices from one year to the next. Over the long term – five to 10 years or more – the swings mostly cancel each other out. This levelling leaves equity investors with longer-term returns linked to the overall profits the companies have made.

With fixed-income investments, the returns you get are usually set when you invest. For government bonds, the returns tend to be just slightly above the expected inflation. The risk is that the actual inflation may be higher than expected, maybe even higher than the entire return of the bond. Here, you would lose purchasing power. For fixed-income investments which are *not* government-guaranteed, the interest rate is usually higher – allowing for the risk that the principal and interest might not be paid back.

Stocks vs. bonds over the past 100 years

In Aesop's fable *The Tortoise and the Hare*, slow and steady wins the race. But is that how it works in life? For investing, slow and steady can be a recipe for near-certain losses.

Let's look at stocks vs. bonds returns over the past 100 years. Think of *The Tortoise and the Hare* as a story about asset allocation: of fixed-income investments, which appreciate slowly and appear reliable; and of stocks, which can appreciate strongly and quickly, but appear risky. Which is your best bet? The answer depends on what kind of race you're running.

The past 100 years have been wildly volatile: inflation, deflation, the deep Depression, two global financial crises, explosive growth, two World Wars, embargoes, assassinations and worldwide pandemics. We often forget how frightening these things seemed at the time. Although the world may seem scary now, it's likely that the period ahead won't be all that different from some of the periods we've experienced in the past. History repeats itself; you just don't know which part of the past you will get! But the past informs the future. By studying history, you can get a good feel of the range of possible outcomes going forward.

Data from the University of Chicago show that, over the past 100 years, if you had owned equal amounts of every U.S. stock excluding the smallest 20%, you would have enjoyed average annual growth of 11.6%, and an inflation-adjusted (real) return of 8.7%. Over the same period, fixed-income investments averaged 4.2%, or real returns of just 1.3% per year. So, the real returns from equities were nearly seven times higher than those of bonds. If you started with \$100,000 in bonds, this would have grown by about \$28,000 after 20 years, using real returns. That same amount invested in stocks would have grown by \$413,000 – 14 times as much!

Here's a table showing the growth in stocks vs. bonds over the past 100 years:

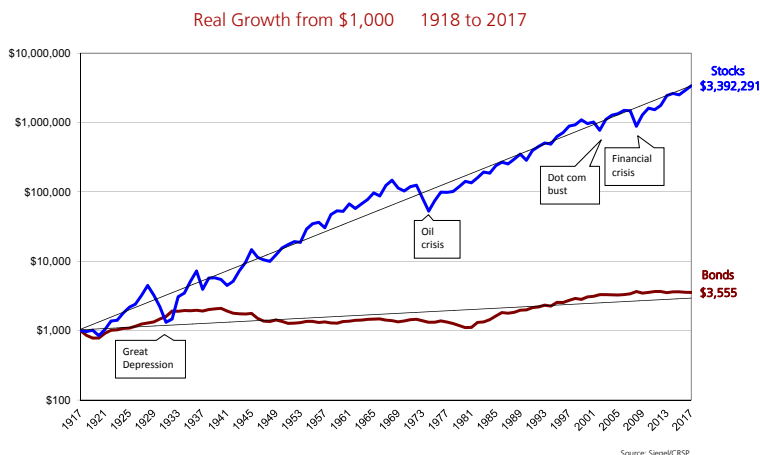
100 Year Returns: Growth in stocks vs bonds 1918 to 2017

	Average Nominal Returns	Average Real* Returns	Average real growth from \$100,000				
			1 Year	5 Years	10 Years	15 Years	20 Years
Stocks	11.6%	8.7%	\$8,717	\$53,942	\$125,106	\$238,389	\$413,487
Bonds	4.2%	1.3%	\$1,314	\$7,993	\$16,063	\$23,215	\$28,270
Inflation	2.9%						
Difference in growth (\$)			+\$7,403	+\$45,949	+\$109,042	+\$215,175	+\$385,217
Difference in growth	2.7x	6.6x	6.6x	6.7x	7.8x	10.3x	14.6x

* "Real" returns are returns after subtracting inflation Source: Siegel, CRSP, Barclay's Capital, U.S. Dept of Labor, U.S. Dept of the Treasury

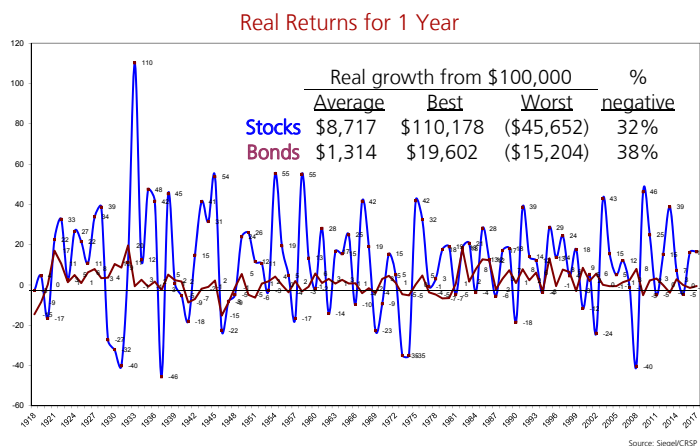
You may be asking: But aren't stocks much riskier than bonds? Yes and no. The stock market is volatile in the short term, making stocks seem risky. But if you invest for the longer term, say 10 years or more, history shows that up markets have almost always more than offset down markets, giving reliable returns for stocks after inflation. We'll look at this in more detail below.

Here's a graph showing 100 years of growth in stocks vs. bonds:



The 100-year perspective above shows the huge difference in returns over time. You can also see that stocks fluctuate more, although the difference doesn't look so bad over this long period.

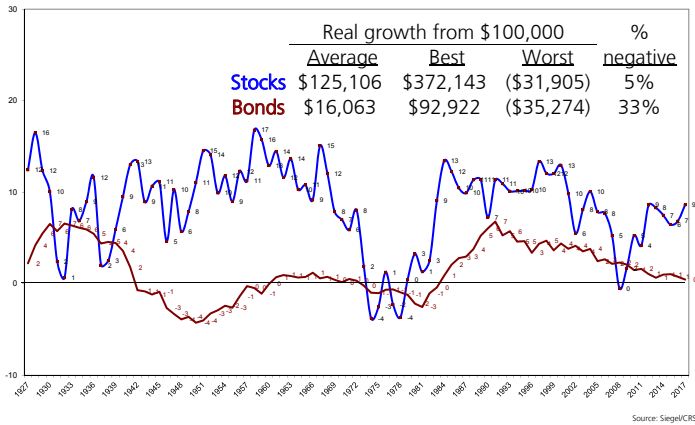
The chart below shows the same 100 years of real returns but shows them over one-year periods to show more clearly the differences in short-term returns:



When you look at one-year periods you can see clearly that returns from stocks vary much more than bonds. However, when you look at longer terms, as on the next chart, you find that most down years with stocks are more than made up for with the up years.

The following chart shows real returns over 10-year periods:

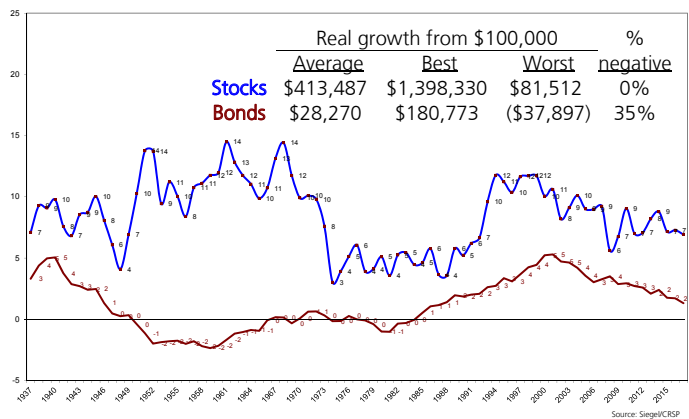
Average Annual Real Returns for 10 Years



Here you can see a couple of things. First, the variability with stocks is much lower over 10 years compared to one year periods. Second, you can see that the potential losses from bonds have become greater over 10 years. Remember that these are *real* returns, which means returns *after* inflation. Inflation actually makes bonds riskier than stocks over the long term. The worst 10-year period for bonds was 10% lower than the worst 10-year period for stocks. The chance of losing money over any 10-year period was nearly seven times greater for bonds than it was for stocks.

And over 20-year periods, these differences became even more pronounced:

Average Annual Real Returns for 20 Years



Over 20-year periods, stocks beat bonds every time and always beat inflation. The worst return for stocks over 20 years was a profit of \$81,000 above inflation! So, based on history, the longer your investment horizon, the less risky stocks are, and the riskier bonds become.

In summary, depending on your needs, both the tortoise and the hare can be ideal. The key takeaway here is that one type of asset isn't always better than another. How long you can invest for is critical in determining the right mix for you. If you have only a few years to invest, then your money should be mostly in fixed income. If you have savings earmarked for needs five to 10 years or more from now, consider investing more in stocks.

The best asset mix for your needs

Now we know that money you need in the short term should mostly be in fixed income, and money you don't need for a long time can go mostly into equities. But life is more complex than just now vs. a long

time from now. Fact is, people have needs throughout their lives. What about those times in-between?

The Stan Clark Financial Team has developed an algorithm that we can use to calculate an overall best mix for you based on the time horizon of each and all of your future needs. Here's how it works.

First, based on the last 100 years, we analyzed in detail the risk and return of various mixtures of stocks and bonds. We then look at these mixes over all time horizons, ranging from one year to 30 years. From this work, we determine the "best mix" for each year depending on whether someone wanted to absolutely minimize risk, or if they were willing to take a little more risk for much higher expected returns.

Then, we match those best mixes each year with how much you expect to need from your portfolio each year. We get those expected needs from your personal financial plan.

This process tells us exactly how much we should keep in fixed income to provide for near-term needs, and how much can be allocated into equities to provide growth and inflation protection for longer-term needs. The resulting overall mix is optimal for you, based on your own specific future plans.

Here's an example. Let's say you are planning to retire in three years and you expect to need \$50,000 from your portfolio in that first year of retirement. If you carved off a separate portfolio to fund that need, how would you invest that portfolio? Three years isn't far away, so we wouldn't want to put much of it into equities. For a conservative investor, our system might suggest putting about 15% into stocks to fund this specific need.

Let's say you need more the next year: \$52,000. This would be four years away. You would have an extra year to recover from a downturn so you could put a bit more into equities for this need. Our method might suggest 21% in equities.

Our algorithm does this for every year for the rest of your life. It then adds up all the money you should keep in fixed income and all the amounts that can be invested in equities to meet your needs. The result is an overall best mix for your total portfolio. In this example, it might come out to 65% in equities. We call this the *Best Mix Equities Target*.

This is the mix that makes the most sense, based on objectively looking at history and your future needs.

Finding your comfort level when stocks fluctuate

But we also need to consider how comfortable you are with having that percentage in equities. Markets will always be volatile. It is important to understand your comfort level with fluctuations to avoid setting a mix that will cause you too much worry if a temporary downturn occurs.

To assess your comfort level with fluctuations, we take you through a series of questions. Although your personal comfort level is subjective, we try to make it measurable by using a clear process. All your answers are scored. Then we use an average of those responses to determine your overall tolerance to volatility.

The questions are divided into four sections, each providing a different perspective on your comfort level with volatility:

Rules-of-thumb: The first section consists of some fairly simple rules-of-thumb. Although everyone is different, we can categorize people into general groups. For example, people in their 20s would typically have a higher allocation to equities. Those in their 70s would have a lower allocation. Another example: People more interested in high long-term returns would have a higher equity mix. Others who prefer to avoid short-term price swings would typically want less in equities.

Risk behaviour: The second section consists of questions about your comfort level with risk in different areas of your life. For example, do you like to take chances? Have you ever borrowed to invest? People who like to take chances will usually be more comfortable with the fluctuations associated with equities.

Attitude towards volatility: This section evaluates more directly your attitude towards fluctuations in your portfolio – and the trade-off

between volatility and return. For instance, are you willing to accept higher-than-minimum volatility for slightly higher returns? Or, do you prefer your portfolio to be very stable, not risking any principal in the short term, even though this may cause low long-term returns? People with an accepting attitude toward volatility can have more of their portfolio invested in equities.

Financial capacity: The final section examines your financial ability to withstand fluctuations in your investment portfolio. For example, would you have enough income to cover an unanticipated expense, or would you need to dip into your long-term investments? People with a greater financial capacity to withstand fluctuations can have more invested in equities because they won't be forced to sell during down periods.

Each of these four sections provides us with a different estimate of the percentage of equities you could best tolerate. We then average these to come up with an overall Volatility Tolerance Equity Target.

Your Equities Target – putting it all together

So we now have the results from two distinct approaches to figuring out your right mix. The first method, your *Best Mix Equities Target*, is numbers-oriented. It considers each of your future needs, such as retirement, education expenses, vacations, etc. Then, based on when those needs occur, it determines your best mix to meet them. The second approach we use gives us what we call a *Volatility Tolerance Equity Target*. This is more feelings-oriented. It bases your mix on your comfort level with price fluctuations.

Each of the methods produces a suggested asset mix. Then we combine these two mixes to come up with your overall *Equities Target*. Think of the numbers-based method as what you should do if you were completely objective. Think of the feelings-based method as what you are able to do, given that being comfortable with your investments is also important. You can now see that your ideal mix combines the two: As close as possible to the mix you *should* have – but limited to what you *can* have.

Let's go through an example. Let's say that Dave and Sally are both 57 years old and planning to retire at age 65. They won't need any money from their portfolio until then. After retirement they will receive some government pensions and will need an extra \$30,000 per year from their portfolio. Because most of these needs are fairly far into the future, when we do the calculations perhaps the

Best Mix Equities Target: 80%
Volatility Tolerance Equities Target: 60%
→ Overall Equities Target: 70%

"Best Mix" comes out to 80%. They also completed the volatility tolerance questions. Let's say that, based on their answers, their volatility tolerance came out to only 60% – meaning they are a bit less comfortable with stocks. So, their overall Equities Target should be somewhere between 60 and 80%. In talking this over with them, we might suggest simply averaging the two numbers together – but within reason, so we don't go too far above your volatility tolerance. In this case, we might agree on an overall Equities Target of 70%.

Once we agree on an Equities Target, we suggest you be disciplined, and try to stick close to that target. Doing so can help you take advantage of market fluctuations by responding in the right way: adding when markets are low and reducing when markets are high. Your chances of success improve if you respond this way, rather than trying to time the market or react to changes the wrong way.

In conclusion, when you consider asset allocation, you should decide on an Equities Target that is right for you based on the timing of your needs and on your tolerance for volatility. This ensures that your investment strategy is properly customized to you. Remember that things change over time, and your ideal Equities Target can also change. That's why it's important to have regular reviews of your financial plan to make sure you stay on track. ■



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