IN THIS PAPER
We’ll discuss what asset allocation is, why it matters, and how you can help make sure your asset allocation is aligned with your long-term goals and risk tolerance.

WHAT EXACTLY IS ASSET ALLOCATION, AND WHY DOES IT MATTER?
Simply put, asset allocation is an investment strategy that strives to balance risk by dividing assets among different categories such as stocks, bonds, cash, and alternative investments. The theory is, since each asset class has different levels of risk and return, each will behave differently in varying market environments. A study by economists Roger Ibbotson and Paul Kaplan found that more than 90% of the variability of a typical plan sponsor’s performance over time is attributable to asset allocation. In other words, if you’re a long-term investor, asset allocation is an important determinant of your investment earnings over the long run.

DETERMINING YOUR ASSET ALLOCATION
Choosing your asset allocation is a decision unique to your goals, time horizon, and tolerance for risk, which can all change over time as your financial circumstances and needs evolve. It depends on factors such as your contribution rate, growth objectives, and target retirement date. A popular rule of thumb is to subtract your age from the number 110 to determine what percentage of your investments should be in stocks. The balance should then be allocated in bonds and cash. For instance, if you are 50 years old, 60% should be in stocks – and as you get older, the percentage in stocks should decrease.

Different asset classes achieve different objectives in a portfolio. In addition, certain asset classes can be more appropriate given your time horizon and risk tolerance. Risk can be defined in many ways, but most commonly it refers to the amount of money you feel comfortable losing, even temporarily.

Your goals for retirement may look very different from those of your co-workers. This is especially true for people who are retiring in the next few years versus those who have a few decades until retirement.

While the end goals and years until retirement vary from person to person, most people want the same thing: to build their retirement nest egg while not taking too much risk. Beyond just choosing the best investments for your retirement savings account, it’s important to also get the asset allocation decision right.
THE IMPORTANCE OF ASSET ALLOCATION WHILE SAVING FOR RETIREMENT

A COMPARISON OF ASSET CLASSES

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Objective</th>
<th>Time Horizon</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (stocks)</td>
<td>Capital Appreciation</td>
<td>Medium- to Long-Term (5+ years)</td>
<td>Moderate to High</td>
</tr>
<tr>
<td>Fixed Income (bonds)</td>
<td>Income, Capital Preservation</td>
<td>Short- to Medium-Term (3-5 years)</td>
<td>Low to Moderate</td>
</tr>
<tr>
<td>Cash</td>
<td>Capital Preservation</td>
<td>Short-Term (0-3 years)</td>
<td>Low</td>
</tr>
</tbody>
</table>

When determining your optimal asset class mix, it’s important to understand the trade-off between risk and potential return. These two factors are directly related, meaning the higher the return you desire, the more risk you must be willing to accept. The graph below, though not inclusive of all investment categories, illustrates this concept.

THE RISK-REWARD TRADE-OFF OF VARIOUS INVESTMENTS

When determining your optimal asset class mix, it’s important to understand the trade-off between risk and potential return. These two factors are directly related, meaning the higher the return you desire, the more risk you must be willing to accept. The graph below, though not inclusive of all investment categories, illustrates this concept.

DIVERSIFICATION

No asset allocation discussion is complete without mentioning diversification. Diversification is an investment strategy that incorporates a wide variety of investments into a portfolio in an attempt to limit excessive exposure to any single asset or risk. Simply stated, it’s “not putting all of your eggs in one basket.”

The objective is to have the positive performance of some investments neutralize the negative performance of others. For example, when markets are healthy, holding a larger percentage of stocks serves as a strong tailwind, since stocks tend to earn higher returns than fixed income and capital preservation strategies over time. However, when markets correct, stocks also tend to experience greater declines in value. In volatile market environments, fixed income and capital preservation strategies are more likely to work in your favor.

If one could predict when these market changes will take place, you could shift your portfolio back and forth among the various asset classes to take full advantage of their benefits. However, it’s very difficult to successfully time the market. Instead, most investors use diversification to help maximize their return potential over time while mitigating risk.

As you can see in the Callan Periodic Table, the various asset classes perform differently year after year. If your investment portfolio is well-diversified across a variety of asset classes, it can help ensure that you always have some exposure to the best performing investments, but are also protected against dramatic declines when markets reverse direction.

### THE CALLAN PERIODIC TABLE OF INVESTMENT RETURNS

Annual returns for key indices ranked in order of performance (2009-2019)

<table>
<thead>
<tr>
<th>Year</th>
<th>Emerging Market Equity</th>
<th>Small Cap Equity</th>
<th>U.S. Fixed Income</th>
<th>Real Estate</th>
<th>Large Cap Equity</th>
<th>Small Cap Equity</th>
<th>U.S. Fixed Income</th>
<th>Real Estate</th>
<th>Large Cap Equity</th>
<th>U.S. Fixed Income</th>
<th>Real Estate</th>
<th>Large Cap Equity</th>
<th>U.S. Fixed Income</th>
<th>Real Estate</th>
<th>Large Cap Equity</th>
<th>U.S. Fixed Income</th>
<th>Real Estate</th>
<th>Large Cap Equity</th>
<th>U.S. Fixed Income</th>
<th>Real Estate</th>
<th>Large Cap Equity</th>
<th>U.S. Fixed Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YTD 2019</td>
<td>78.51%</td>
<td>26.85%</td>
<td>7.64%</td>
<td>24.73%</td>
<td>38.62%</td>
<td>15.02%</td>
<td>1.30%</td>
<td>21.31%</td>
<td>37.28%</td>
<td>0.01%</td>
<td>17.03%</td>
<td>60/40 Index Portfolio</td>
<td>12.18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ANNUAL RETURNS**

**Sources:**
- Bloomberg Barclays Corp High Yield
- Bloomberg Barclays US Aggregate
- Bloomberg Barclays Global Aggregate ex US
- FTSE EPRA Nareit Developed
- MSCI Emerging Markets
- MSCI World ex USA
- Russell 2000
- S&P 500
- 60/40 Index Portfolio

**Source:** Callan. Past performance is not indicative of future results. It is not possible to invest directly in an index. There are inherent limitations to indices that are designed to track the alternative investments universe. Index data is shown for illustrative purposes only and not designed to represent any specific investment. Specific investment statistics could differ materially from those shown above. Data source: PerTrac Financial Solutions, LLC and eVestment.

**Large Cap Equity (S&P 500)** measures the performance of large capitalization U.S. stocks. The S&P 500 is a market-value-weighted index of 500 stocks.

**Small Cap Equity (Russell 2000)** measures the performance of small capitalization U.S. stocks. The Russell 2000 is a market-value-weighted index of the 2,000 smallest stocks in the broad-market Russell 3000 Index.
Non-U.S. Equity (MSCI World ex USA) is an international index that is designed to measure the performance of large and mid cap equities in developed markets in Europe, the Middle East, the Pacific region, and Canada. Emerging Market Equity (MSCI Emerging Markets) is an international index that is designed to measure the performance of equity markets in 24 emerging countries around the world. U.S. Fixed Income (Bloomberg Barclays US Aggregate Bond Index) includes U.S. government, corporate, and mortgage-backed securities with maturities of at least one year. High Yield (Bloomberg Barclays High Yield Bond Index) measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody’s, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt. Non-U.S. Fixed Income (Bloomberg Barclays Global Aggregate ex US Bond Index) is an unmanaged index that is comprised of several other Bloomberg Barclays indices that measure the fixed income performance of regions around the world, excluding the U.S. Real Estate (FTSE EPRA/NAREIT Developed REIT Index) is designed to measure the stock performance of companies engaged in specific real estate activities in the North American, European, and Asian real estate markets. The 60/40 Index Portfolio is allocated 60% to equities and 40% to bonds.

NEXT STEPS: PULLING IT ALL TOGETHER

Most 401(k) plans offer target-date funds, which adjust the asset allocation for you based on how many years you are from retirement. However, you also have the option to build your own asset allocation using the funds in the plan lineup. If you choose to do it yourself, the following considerations can help you determine an appropriate investment mix:

• Write down your expected time horizon until retirement, your retirement goals, and how much risk you are willing to tolerate.

• Based on your retirement goals, estimate how much money you’ll need to have saved by retirement. Compare this amount to how much you currently have saved.

• If you’re more than 10 years from retirement, you may want to increase your potential growth rate by investing in higher risk/higher reward assets like stocks.

• If you’re less than 10 years from retirement, you may be better served investing in lower risk/lower reward investments like bonds while increasing your monthly contribution rate.

Finally, talk to your financial advisor if you’re still not sure how to apply these concepts to your 401(k) account. He or she can help you decide whether a target-date fund or customized approach is more appropriate for you. In addition, your 401(k) plan’s recordkeeper may have educational resources and tools to help you meet your retirement goals.

There is no assurance that any investment strategy will be successful. Investing involves risk and investors may incur a profit or a loss. Asset allocation and diversification do not ensure a profit or protect against a loss.

Bond prices and yields are subject to change based upon market conditions and availability. If bonds are sold prior to maturity, you may receive more or less than your initial investment. There is an inverse relationship between interest rate movements and fixed income prices. Generally, when interest rates rise, fixed income prices fall and when interest rates fall, fixed income prices rise. Holding stocks for the long-term does not insure a profitable outcome.

Sector investments are companies engaged in business related to a specific sector. They are subject to fierce competition and their products and services may be subject to rapid obsolescence. There are additional risks associated with investing in an individual sector, including limited diversification.

International investing involves special risks, including currency fluctuations, differing financial accounting standards, and possible political and economic volatility. Investing in emerging markets can be riskier than investing in well-established foreign markets.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Declines in the value of real estate, economic conditions, property taxes, tax laws and interest rates all present potential risks to real estate investments. In a rising interest rate environment REITs (real estate investment trusts) may experience an increase in rent rates or mortgage rates or may experience higher acquisition costs.