WELLS FARGO ASSET MANAGEMENT

Equity factors in focus for target date portfolios

Multi-Asset Solutions

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Key points

- A target date portfolio's glide path represents the shift from equities to fixed income. Investors often judge these portfolios by comparing the glide paths. This focus overlooks an important dimension of performance: how efficient the portfolios are in gaining exposure to equities and fixed income across the entire investment horizon.
- Conventional target date portfolios reduce market risk over time by shifting equity exposure to fixed income exposure. However, this shift from equities to fixed income increases longevity risk, or the probability that the investor will outlive their assets.
- Factor-based strategies gain exposure to identifiable drivers of returns that are persistent over time. Multi-factor strategies construct an optimal mix of stocks across a set of factors more efficiently (compared with single-factor strategies or traditional capitalization-weighted strategies), so that the factors are not working at cross-purposes.
- Multi-factor equity strategies in target date portfolios can reduce market risk and longevity risk by making the equity exposure more efficient across the investment horizon. This lowers volatility in the short run and improves performance in the long run.
- Wells Fargo target date portfolios, with multi-factor strategies researched and implemented by Analytic Investors, can provide stronger downside protection than conventional target date portfolios while participating meaningfully in market rallies. They are designed to improve risk-adjusted returns and increase the probability of meeting the investor's retirement needs.

Evolving with factors

Most target date portfolios use a mix of market capitalization–weighted index strategies, avoiding the added cost and risk of actively managed strategies. What distinguishes one set of target date portfolios from the others is the glide path, or how the mix of equities and fixed income changes over time. Investors typically compare portfolios in terms of the steepness of the glide path (or the rate at which the portfolio shifts into fixed income), the final mix of equities and fixed income, and whether it is designed to take an investor "to" *or* "through" the target retirement date. These are all important characteristics. But what is overlooked by this focus is the efficiency of the exposure to equities and fixed income over the entire investment horizon.

Conventional target date portfolios hold index strategies that indiscriminately buy the market portfolio regardless of the market environment. Many target date portfolios have been taking on more market risk, expecting that higher risk will be rewarded with higher returns in this low-yield environment. Wells Fargo's target date portfolios have fought this trend because they were originally designed to be more conservative than the typical target date portfolio. Instead, the portfolios aim to improve performance through greater efficiencies: maintaining the best attributes of market-cap indexes (transparency and low fees) while focusing on factors to deliver better investment outcomes.

The goal is to capture the equity risk premium in a more efficient way. The equity risk premium is the expected excess returns to investing in equities relative to risk-free securities like Treasury bills. One way factor-based investing can do this is by protecting against the downside in the short run while meaningfully participating in market rallies. We do this with factor-based strategies that focus on five key drivers of returns at the security level: value, momentum, quality, volatility, and size.

Greater efficiency with factors

Asset returns are driven by many different forces; some are common to a group of assets, others are unique to an industry or specific to a security. The main drivers of a diversified portfolio's returns are macroeconomic forces, such as expectations and surprises to growth, inflation, and real interest rates.

Factors are features of assets that filter these fundamental macroeconomic forces, which are identifiable determinants of returns that are persistent over time. While there are hundreds of "factors" that have been identified in the equity markets alone, only a handful have been shown to be stable over time.

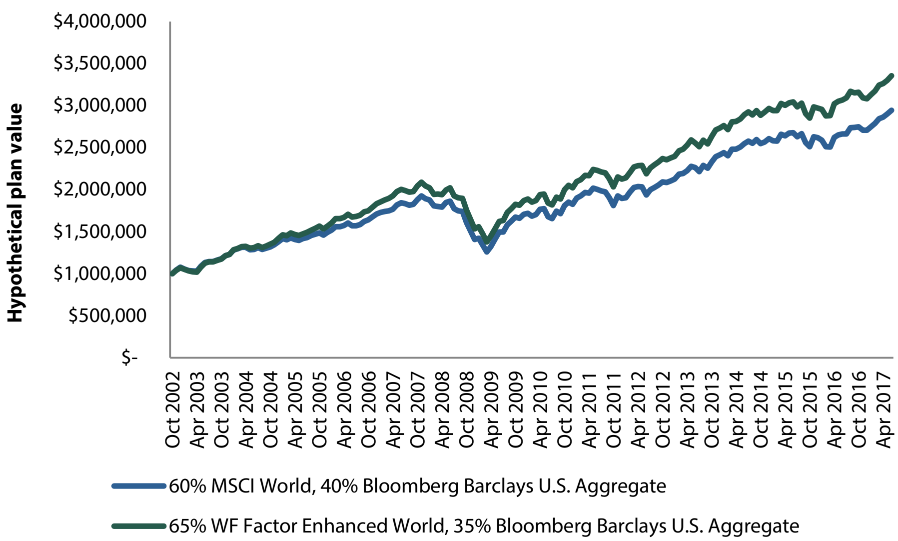
Factors are persistent and identifiable determinants of returns

Take volatility as an example of how factors determine returns. All stocks have some degree of volatility, from relatively low to relatively high. If we rank all stocks according to their volatility, we find that (over time) stocks with lower volatility earn higher risk-adjusted returns than stocks with higher volatility. This has been true over long periods, but there are certain market environments in which this is not the case.

Different factors work in different market environments. A multi-factor approach diversifies the portfolio across factors and across different factor-cycle lengths. By balancing factor exposures across the full market cycle, we gain more efficient equity exposure. This increases the opportunity for growth while maintaining a consistent risk target.

Figure 1 illustrates the performance advantage with historical data. Increasing the equity exposure using multi-factor strategies improved returns on this hypothetical $1 million portfolio by $414,000. It also decreased volatility by one-tenth. A multi-factor strategy can underperform during short periods, but over a full market cycle, a multi-factor strategy may deliver higher returns with lower risk.

Figure 1: Multi-factor strategies have shown higher returns and lower risk



Source: Analytic Investors and eVestment. Hypothetical $1 million portfolio, October 2002 through June 2017. The start date reflects the first date the strategy became active. The WF Factor Enhanced World Equity Sleeve (65% equities and 35% fixed income) is a multi-factor benchmark created by Analytic Investors from the Passive Equity Sleeve (60% equities and 40% fixed income). The Passive Equity Sleeve is a global equity benchmark.

Note: The Simulated performance disclosure can be found at the end of the document.

Figure 2 shows descriptive statistics for the two approaches in Figure 1. During this time-frame, a passive 60/40 portfolio had an annualized return of 7.61% and standard deviation of 8.96%. Although the factor-enhanced approach had a higher equity allocation, because the equity allocation was managed by balancing factors instead of based on market capitalization, the annualized return was 8.57% and the standard deviation was 8.97%. The factor-based portfolio increased equity exposure without materially increasing the risk, resulting in more favorable risk-adjusted performance.

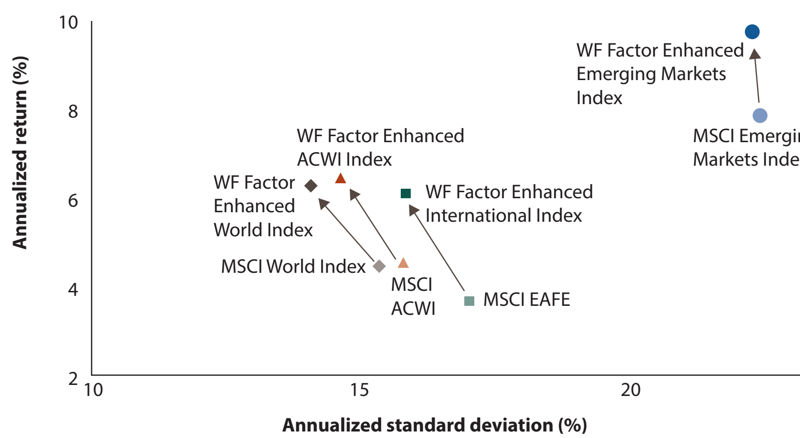
Figure 2: The multi-factor equity approach may improve risk-adjusted performance

	Passive Index 60% MSCI World 40% Bloomberg Barclays U.S. Aggregate	Factor Enhanced 65% WF Factor Enhanced World 35% Bloomberg Barclays U.S. Aggregate
Return	7.61%	8.57%
Risk	8.96%	8.97%
Return/risk	0.85	0.96

Source: Analytic Investors.

Taking a closer look at the equity exposure, we can see how multi-factor portfolios performed across different market geographies. Figure 3 shows improved risk and improved returns for each benchmark, resulting in better Sharpe ratios.

Figure 3: Multi-factor equity strategies improved Sharpe ratios



Sources: Analytic Investors and FactSet, April 2004-June 2017.

Getting the right exposure to factors

Even though factor strategies are transparent and rules-based, the ways in which they are implemented across firms can vary dramatically and can lead to significant performance differences. Thorough understanding of market principles and good execution matter most.

Wells Fargo's multi-factor strategies are researched and implemented by Analytic Investors, an investment team at Wells Fargo Asset Management. The firm has led the field in research into factor-based investing. Their deep understanding and commitment to ongoing research continues to provide greater insight into each factor and the market dynamics that influence returns. Analytic's research has been published in peer-reviewed journals such as *The Journal of Portfolio Management* and the *Financial Analysts Journal*, and is frequently cited by practitioners and scholars.

The Multi-Asset Solutions team and Analytic Investors share the belief that an integrated approach to multi-factor strategies (also known as a bottom-up approach) is more effective than a segregated approach (or top-down approach). Both approaches are rules-based and systematic, providing the transparency and low fees that investors expect. The differences are in how portfolios are constructed and the efficiencies that follow.

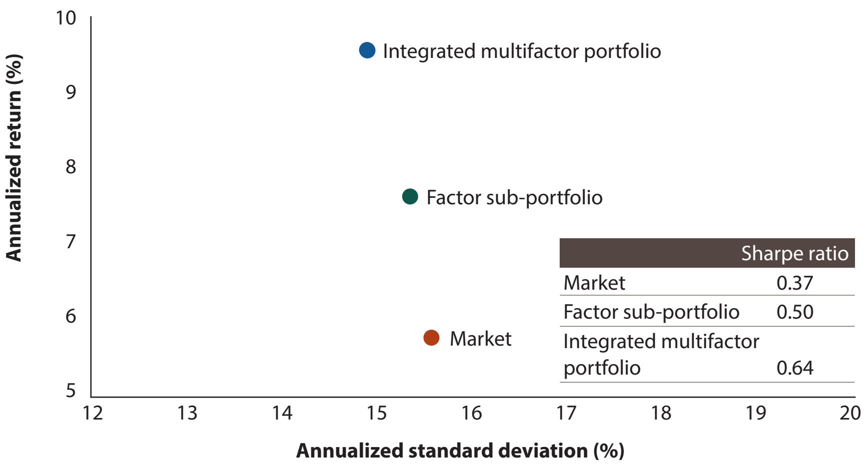
Note: The Simulated performance disclosure can be found at the end of the document.

With a segregated approach, single-factor portfolios are constructed separately and then combined into a multi-factor portfolio. With an integrated approach, one multi-factor portfolio is constructed that combines an optimal mix of stocks across all factors. The integrated approach is more efficient, because single-factor portfolios often have unintended exposures to other factors—there is no such thing as a "pure" factor portfolio. Combining single-factor portfolios into a multi-factor portfolio can give an unbalanced exposure to the multiple factors being targeted.

Everyday life is filled with examples of how a multi-factor approach to decision-making can lead to better results. Consider the typical flight search on a travel website. A traveler may not always want the cheapest flight, which often has a long duration and multiple layovers. On the other hand, the shortest flight may be too expensive. Most of the time, travelers want to balance various factors and find options that meet certain thresholds. A bottom-up multi-factor approach does just that.

Our belief in this approach is backed by historical data that shows a substantial performance advantage for the integrated approach to multi-factor portfolios, as shown in Figure 4.

Figure 4: Integrated multi-factor portfolios may result in a superior reward/risk ratio



	Sharpe ratio
Market	0.37
Factor sub-portfolio	0.50
Integrated multifactor portfolio	0.64

Source: Analytic Investors, as described in Clarke, Roger, Harindra de Silva, and Steven Thorley, 2016, "Fundamentals of Efficient Factor Investing," Financial Analysts Journal, vol. 72, no. 6 (November/December): 9-26.

With Analytic Investors' multi-factor strategies, the Wells Fargo target date portfolios can maintain their focus on risk control while gaining more opportunity for growth. This is an increasingly important issue, as we continue to face lower market return expectations and higher life expectancies. Efficient target date portfolios are a powerful way to help investors grow their nest eggs and preserve purchasing power in retirement.

A final word

Wells Fargo launched its first set of target date portfolios more than 20 years ago. Improvements since that time have included new asset classes, glide path enhancements, and more investment horizon options. This new evolution with multi-factor equity strategies makes the portfolios more efficient in how they achieve equity exposure, giving investors stronger downside protection without sacrificing opportunity for growth.

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Brian Jacobsen is a senior investment strategist on the Multi-Asset Solutions team at Wells Capital Management. He conducts research on risk premia and factors; leads the thought leadership efforts by collaborating with team members across the organization; consults on product development, enhancement, and management; and serves as one of the resident experts on the economy, politics, and the markets for internal and external publications and appearances. Dr. Jacobsen also participates on a number of investment councils and research councils. He is a frequent guest on national and international television and radio networks, including CNBC, Bloomberg, and Fox Business News. He is often cited in the press as a source on the Federal Reserve, world economies, and the global markets. He is an associate professor at Wisconsin Lutheran College. Dr. Jacobsen earned a bachelor's degree in finance from the University of Wisconsin, Madison, and a Ph.D. in economics from the University of Wisconsin, Milwaukee. He also holds a law degree from Marquette University Law School. He has earned the right to use the CFA and CFP designations.

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Ryan Shelby heads the Factor Solutions group at Analytic Investors which is responsible for developing factor-based investment solutions for institutional and retail clients.

Ryan has more than 15 years of investment experience and has been with Analytic investors since 2010. Previously, Ryan was a Portfolio Manager at Northrop Grumman where he was responsible for managing over $25B in Defined Benefit and Defined Contribution equity investments. Prior to that, Ryan was responsible for conducting asset allocation and investment manager due diligence for Wilshire Associates' Funds Management's Group.

Simulated performance results have many inherent limitations, some of which are described below. No representation is being made that any account will or is likely to achieve results similar to those shown. In fact, there are frequently sharp differences between simulated performance results and the actual performance results subsequently achieved by any particular trading program.

One of the limitations of simulated performance results is that they are generally prepared with the benefit of hindsight. In addition, simulated trading does not involve financial risk, and no simulated trading record can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses or to adhere to a particular trading program in spite of trading losses are material points which can also adversely affect actual trading results. There are numerous other factors related to the markets in general or to the implementation of any specific trading program which cannot be fully accounted for in the preparation of simulated performance results and all of which can adversely affect actual trading results.

Performance does not include advisory fees, brokerage or other commissions and other expenses a client would have paid. Results do not include the reinvestment of dividends and other earnings.