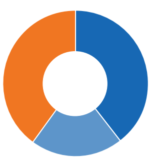
Morningstar ETFInvestor Model Portfolios

Each month, *Morningstar ETFInvestor* will highlight one of four model portfolios designed to meet different investment objectives. These model portfolios are not intended to be specific recommendations for portfolio construction, but rather to showcase actionable investment ideas and demonstrate how individual funds can fit into a broader portfolio. The accompanying articles will discuss the composition and performance of each portfolio, as well as adjustments investors could make to them and how these adjustments might affect performance.

The purpose of highlighting potential modifications to the model portfolios is to demonstrate the impact that specific choices regarding things like fund selection, asset allocation, and rebalancing have on each portfolio and discuss the trade-offs of using alternative approaches to each to achieve the portfolio's objective. For example, a modified version of the basic portfolio might replace **Vanguard Total Bond Market ETF** BND, which only includes investment-grade bonds, with **iShares Core Total USD Bond Market ETF** IUSB, which adds high-yield bonds. This will help demonstrate the merit (or lack thereof) of new funds, different allocations, and so on. The newsletter won't track the modified versions of the portfolios outside of the issue that describes them. However, it will track the performance of the baseline model portfolios, which will largely remain consistent over time.



Asset Class	%
U.S. Stocks	40
Foreign Stocks	20
Bonds	40

For ease of comparison, all four portfolios have the same target asset allocation (40% U.S. stocks, 20% foreign stocks, 40% bonds). There is nothing special about this asset allocation. The editor chose to tilt the portfolio toward stocks because they have higher expected returns (and risk) than bonds. The U.S. stock overweighting reflects most U.S. investors' home-market bias. Each portfolio rebalances back to its target weightings at the end of each year. While the composition of these model portfolios should remain fairly stable over time, the editor may make occasional changes to the portfolios to help them better meet their objectives.

Basic Portfolio

Objective: Harness the market's collective wisdom on the cheap.

The basic portfolio is the baseline against which the three other portfolios will be compared. It uses low-cost, broadly diversified market-cap-weighted ETFs from Vanguard. Each of these funds offers comprehensive coverage of its respective market.

Name	%
Vanguard Total Stock Market ETF VTI	40
Vanguard Total International Stock ETF VXUS	20
Vanguard Total Bond Market ETF BND	40

Defensive Portfolio

Objective: Exhibit lower volatility, better downside protection, and better risk-adjusted performance than the basic portfolio over the long term.

The defensive portfolio uses three low-volatility funds within its equity allocation. The 5% emerging-markets allocation approximates the weighting of these stocks in the basic portfolio. The fixed-income sleeve tilts toward short-term investment-grade bonds to further reduce risk.

Name	%
iShares Edge MSCI Minimum Volatility USA ETF USMV	40
iShares Edge MSCI Minimum Volatility EAFE EFAV	15
iShares Edge MSCI Minimum Volatility Emerging Mkts ETF EEMV	5
Vanguard Short-Term Bond ETF BSV	30
Vanguard Total Bond Market ETF BND	10

Factor Portfolio

Objective: Earn higher returns than the basic portfolio over the long term.

The factor portfolio includes funds that target securities with characteristics that have historically been associated with higher returns. The equity portion includes three multifactor funds that include large- and mid-cap stocks in their respective markets (U.S., foreign developed markets, and emerging markets) with a combination of attractive value, momentum, quality, and small size characteristics. However, they operate under a set of constraints designed to improve diversification. The factors these funds target have been linked to market-beating performance over the long term, but they tend to pay off at different times. Diversifying across these four factors should reduce the funds' risk of experiencing extended stretches of underperformance. That said, their aggressive pursuit of their targeted factors introduces active risk that won't always pay off.

The fixed-income fund, **WisdomTree Barclays Yield Enhanced U.S. Aggregate Bond ETF** AGGY, attempts to earn higher returns than the Bloomberg Barclays U.S. Aggregate Bond Index by overcoming that index's heavy reliance on government and agency debt. It reweights the components of that index to maximize yield, subject to several constraints. These include limiting tracking error to the Aggregate Index, as well as sector tilts, and capping the fund's interest-rate risk. The fund takes greater credit and interest-rate risk than the Aggregate Index but should earn higher returns as compensation for its more aggressive profile.

Name	%
iShares Edge MSCI Multifactor USA ETF LRGF	40
iShares Edge MSCI Multifactor Intrnational ETF INTF	15
iShares Edge MSCI Multifactor Emerging Markets ETF EMGF	5
WisdomTree Barclays Yield Enhanced U.S. Agg Bond ETF AGGY	40

Income Portfolio

Objective: Earn a higher distribution yield than the basic portfolio without taking much more risk.

The income portfolio is focused on income rather than total return, though this fund should offer slightly higher returns than the basic portfolio over the long term, with slightly greater risk. The U.S. equity portion of the portfolio includes **Vanguard High Dividend Yield ETF** VYM, which targets the higher-yielding half of the U.S. equity market and weights its holdings by market capitalization, with no quality screens.

Vanguard International High Dividend Yield ETF VYMI is the foreign market equivalent of VYM. It invests in stocks listed in both foreign developed and emerging markets.

The fixed-income sleeve uses iShares iBoxx & Investment Grade Corporate Bond ETF LQD to tilt toward coporate bonds with at least three years until maturity. These bonds tend to offer higher yields than the Aggregrate Index, albeit with greater risk.

Name	%
Vanguard High Dividend Yield ETF VYM	40
Vanguard International High Dividend Yield ETF VYMI	20
iShares iBoxx $ Investment Grade Corporate Bond ETF LQD	30
Vanguard Total Bond Market ETF BND	10