Factor-Based Strategies

The fundamental objective of passive equity investing is to replicate the performance of the market portfolio. Using the CAPM framework, this means seeking a beta exposure of 1.0 with no attempt to pursue alpha. The beta in this model can be described as the market factor, but passive equity investors can seek exposure to other factors.

Smart beta strategies are passive in nature, but they apply "tilts" by over- or under-weighting exposure to certain factors that are expected to outperform under various market conditions. Investors can use factor-based indexing vehicles composed of subsets of stocks that best match their preferred exposure to a given factor or set of factors. The types of equities used to achieve exposure to various factors are summarized below.

Factor	Equity profile
Growth	Companies with above-average income growth and high P/E ratios
Value	Mature companies with stable incomes, low P/E and P/B ratios, high dividend yields
Size	Tilt toward smaller market capitalization stocks
Yield	Focus on high dividend-yielding stocks
Momentum	Stocks with above-average recent price performance
Quality	Companies with consistent earnings/dividend growth, high cash flow, low debt
Volatility	Low volatility stocks to reduce downside risk

Although it is a passive approach, factor-based investing does require a degree of active decision making with respect to the timing and degree of factor exposure. Ultimately, like active strategies, the goal of passive factor-based investing is to improve on the risk/return performance of a purely passive market-cap-weighted approach. However, factor-based indexing vehicles are not actively managed on an ongoing basis. Once established, factor-based portfolios can be managed with a passive rules-based approach. In other words, the active element of factor-based equity investing takes place up front, but not continuously.

Strategy Categories

Passive factor-based investment strategies can be classified into three categories: return-oriented, risk-oriented, and diversification-oriented. There are specific strategies within each of these categories.

Return-oriented strategies emphasize different elements of equity returns.

- **Dividend yield** strategies may focus on high dividend yields or dividend growth rate.
- **Momentum** strategies hold stocks that have generated excess returns relative to a benchmark over a specified period.
- **Fundamentally-weighted** strategies are based on the idea that the performance of a market-cap-weighted portfolio is skewed toward overvalued stocks. This approach is implemented by weighting stocks according to a composite of fundamental metrics, such as revenue, cash flow, and book value.

Risk-oriented strategies are designed to reduce downside volatility. The main advantage of these strategies is their objective is both easily understandable and desirable. However, portfolios are based on historical relationships, which may not continue to hold.

- **Volatility weighting** strategies hold benchmark constituents in weights based on the inverse of their price volatility.
- **Minimum variance** strategies are implemented using mean–variance optimization techniques with constraints that prevents portfolios from becoming overly concentrated in specific sectors or individual stocks.

Diversification-oriented strategies seek to protect investors against the risks associated with concentrated exposures.

- **Equal weighting** strategies use a simple and intuitive $1/n$ weighting method, where n is the number of securities held.
- **Maximum diversification** strategies optimize portfolio holdings based on each stock's weighted-average share of total volatility.

Risks and Limitations of Factor-Based Equity Investing

- Concentration risk: Factor strategies are typically executed by taking concentrate exposures, which leaves investors vulnerability when these factors are out of favor.
- Overcrowding: Because factor-based strategies can be easily replicated, there is a risk of overcrowding that can erode the advantages of this approach to investing.
- Higher costs: Factor-based strategies involve higher management fees and trading commissions, which can lead to lower net returns compared to a pure passive indexing approach. However, the overall costs are generally low compared to active equity investing.
- Tracking error: Factor-based strategies often use multiple benchmark indexes, which creates tracking error relative to a broad market-cap-weighted index.