The Signature Research Process

Research methodology for mutual fund/ETF evaluation and selection

Northwestern Mutual Wealth Management Company (NMWMC) employs a quantitative and qualitative fund evaluation process that looks to identify funds that satisfy a number of criteria which we believe important in identifying high quality investment options for our clients. These include things like returns, risk, investment style, expense characteristics, as well as qualitative components that evaluate manager decisions, investment process and overall firm health. All investment guidance is based on a client's risk tolerance, time horizon and investment objectives. Our four-step process is described below.

Fund scoring system based on key tenants of manager selection People managing the fund The process they employ Performance of the strategy Price or expenses being charged Evaluation of Parent organization

Ongoing monitoring

Quantitative analysis

Seek to identify any concerns that require further qualitative analysis and ensure investment continues to meet the criteria for which it was selected.

Portfolio building

Qualitative analysis

"Bottom-up" process:

• Assess how well funds work together in a portfolio

- Look to identify funds that complement one another and work well in combination
- Determine correlation of managers and the impact to risk of the portfolio



I. Quantitative analysis

For actively managed mutual funds, the quantitative analysis follows a top-down process made up of two components:

- 1. Measurement of a fund's overall quality using a proprietary fund-scoring system. The fund-scoring system takes into account the five P's of manager selection; people, process, performance, price and parent company. It compares the fund with its category peer group. The fund is given a score based on its relative standing.
- 2. Quantitative screens to filter out funds that have less-than optimal traits. The screens are:
- Style consistency (domestic equity funds only). Proper asset-allocation has been found to be a primary driver of performance over time; a reasonable level of style purity is necessary in order for investors to rely on the funds to fill their expected diversification roles.
- Management tenure. It is difficult to fully evaluate managers and their ability to perform in varying market environments in short time periods. It is generally preferred to exclude funds that have fewer than three years of history. A fund with a short track record may be approved if its manager has a measurable, publicly available record elsewhere – stretching back at least three years.
- Expenses. Expenses can be a significant factor affecting a fund's returns. NMWMC considers it prudent to identify and eliminate funds whose expenses are markedly higher than their category's average.

From an investment strategy standpoint, passive investments such as traditional exchange-traded funds (ETFs) and index mutual funds are designed to track market indices. There are many varieties of ETFs and index mutual funds, tracking many types of indices. NMWMC further screens the ETFs available in the Signature Programs. The screening process includes evaluating how closely an ETF tracks to the index to which it purports to correspond. Additionally, NMWMC seeks funds representing a broader index that will correspond well to the client's asset allocation/diversified portfolio chosen through the fact-finding process. NMWMC also evaluates the size, daily liquidity, expenses and other important factors when selecting ETFs. Expenses of these vehicles are evaluated in the similar manner as actively managed mutual funds described above.

II. Qualitative review and analysis

Once the list of potential funds is narrowed via quantitative analysis, a qualitative review of each fund candidate is performed. This additional process is centered on scrutinizing the relevant style characteristics of the funds that have passed the quantitative screens, and understanding how the manager's performance has been achieved. Manager interviews are often a component of this analysis.

The many factors considered in this qualitative assessment are asset size, asset growth, portfolio turnover, portfolio composition and concentration, sector concentration, performance attribution, and style or market capitalization drift. The advisor or investment manager and its strength at an organizational level, including such factors as the adequacy of the research functions, the stability of portfolio manager assignments, and the strength of the firm's information and trading infrastructures, are also evaluated.

III. Portfolio building

In developing pre-selected portfolio allocations for programs such as Northwestern Mutual's Signature Portfolios solution, NMWMC Research works to ensure the funds chosen work well in combination. This "bottom-up" step combines the assessment of fund quality with an additional analysis of performance correlation, sector, and individual security overlap. This step is taken because managers who make overlapping bets on the same factors or sectors are more likely to have highly correlated performance and exposures to risk. Such high correlation defeats the purpose of asset allocation to take maximum advantage of the risk-reducing and potential performance-enhancing effects of diversification. In addition, NMWMC creates model portfolios comprised primarily of ETFs. The ETFs within the Market Index Portfolios are chosen by NMWMC based on a number of factors, including performance, expenses, assets under management, daily liquidity, diversification, risk, tracking error, and fit within the asset allocation models. NMWMC then blends the securities together to create diversified models. ETFs and other securities used in these portfolios are screened on an ongoing basis to ensure they have appropriate performance, risk, and expense measures relative to peers and benchmarks.

IV. Ongoing monitoring

Ongoing monitoring of chosen investments (and in the context of Signature Portfolios, their correlation with the other funds in the portfolio) is essential.

NMWMC uses several additional screens for this purpose, designed to provide early warning of possible style drift and/ or performance concerns, as well as to alert NMWMC to funds that require further qualitative analysis. Some of the items to be monitored include changes in sector, style and/or general asset allocation (equity funds only), performance variance vs. peer group, median market capitalization of the portfolio (equity funds only), portfolio concentration (equity funds only), regional or country exposure (primarily international equity funds), duration/maturity (fixed income funds only), or credit quality (fixed income funds only).

Based on this comprehensive and objective, ongoing process of choosing and monitoring securities, Signature advisory clients can feel confident in using the funds and portfolios recommended by NMWMC in implementing an investment strategy. Northwestern Mutual is the marketing name for The Northwestern Mutual Life Insurance Company (NM), Milwaukee, WI (life and disability insurance, annuities, and life insurance with long-term care benefits) and its subsidiaries. Northwestern Mutual Investment Services, LLC (NMIS) (securities), subsidiary of NM, registered investment adviser, broker-dealer, member FINRA and SIPC. Northwestern Mutual Wealth Management Company[®] (NMWMC), Milwaukee, WI, (fiduciary and fee-based financial planning services) subsidiary of NM, limited purpose federal savings bank. The Northwestern Mutual Signature Portfolios program is offered by NMWMC.

You should carefully consider the investment objectives, risks, expenses, and charges of the investment company before you invest. Your financial advisor can provide you with a fund prospectus that will contain the information noted within this brochure, and other important information that you should read carefully before you invest or send money.

Please remember that all investments carry some level of risk, including the potential loss of principal invested. Although stocks have historically outperformed bonds, they also have historically been more volatile. Investors should carefully consider their ability to invest during volatile periods in the market.

Exchange traded funds (ETFs) are subject to risks similar to those of stocks. Investment returns will fluctuate and are subject to market volatility, so that an investor's shares, when redeemed or sold, may be worth more or less than their original cost. ETFs are traded on the secondary market, like stocks. As a result, shares of an exchange traded fund may trade at a premium or discount to the fund's actual net asset value, particularly during periods of market volatility. The performance of an exchange traded fund may vary from the market index it attempts to replicate due to market volatility, transaction costs, valuation differences, differences between the assets held in the exchange traded fund's portfolio relative to the market index, and other factors.

With fixed income securities and bonds, when interest rates rise, the price of the assets you own declines, which could negatively affect overall performance. Bond prices correlate inversely with interest rates and this effect is usually more pronounced for longer-term bonds making their prices more volatile. At maturity, the issuer of the bond is obligated to return the principal (original investment) to the investor. Bond funds (mutual funds and ETFs) continuously replace the bonds they hold as they mature and thus do not usually have maturity dates, and are not obligated to return principal. High yield bonds present greater credit risk than bonds of higher quality. Bond investors should carefully consider risks such as interest rate risk, credit risk, liquidity risk, securities lending risk, repurchase and reverse repurchase transaction risk. Currently, interest rates are at unprecedented historically low levels. A significant rise in interest rates in a short period of time would cause losses in the market value of any bonds or bond funds that you own.

Investment results are not guaranteed. No investment strategy can guarantee a profit or protect against a loss of principal. Indexes are unmanaged and cannot be invested in directly. Investment products are not insured by the FDIC, are not deposits or other obligations of or guaranteed by NMWMC, NMIS, or its affiliates and are subject to investment risks, including possible loss of the principal amount invested. Russell Funds available in the Signature Choice and Signature Portfolios programs do not undergo the initial and on-going quantitative and qualitative screens applied to all other mutual funds and ETFs available in those programs. Morningstar provides advice to NMWMC regarding certain, but not all, mutual funds in the Signature Portfolios programs. Morningstar Investment Management is a registered investment advisor and wholly owned subsidiary of Morningstar, Inc. Morningstar Investment Management, LLC provides fund selection and investment monitoring and analysis services to NMWMC, but is not serving in the capacity of investment advisor to individual investors. Morningstar is not affiliated with NMWMC or its affiliates.

