BlackRock

MANAGED PORTFOLIO STRATEGIES

1Q 2024

BlackRock MML Long Horizon 40/60 Model

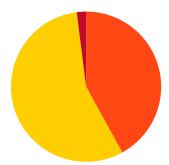
The Long-Horizon Multi-Manager Model strategies are a suite of investment options with varying allocations to equities and fixed income.

These strategies seek to deliver long-term results by combining a low-turnover approach with a limited number of equity and fixed income mutual funds.

The strategies are managed by Michael Gates, CFA Head of U.S. Model Portfolio Solutions.

Each strategy can be implemented within a separate account managed by your advisor to help achieve a range of personal goals.

Current Allocation



| Allocations | % |
|--------------|-------|
| Equity | 42.0% |
| Fixed Income | 56.0% |
| Cash | 2.0% |

| Holdings | Portfolio Weight (%) |
|---|----------------------|
| Equity | |
| MassMutual Select Blue Chip Growth I | 12.0% |
| BlackRock Sustainable Advantage Large Cap Core Fund | 10.0% |
| MassMutual Select Overseas I | 8.0% |
| BlackRock Advantage Large Cap Value Fund K | 7.0% |
| BlackRock Emerging Markets Fund K | 3.0% |
| BlackRock Technology Opportunities Fund K | 2.0% |
| Fixed Income | |
| BlackRock Core Bond Fund K | 19.0% |
| MassMutual Select Strategic Bond I | 19.0% |
| BlackRock Strategic Income Opportunities Fund K | 11.0% |
| BlackRock U.S. Government Bond Fund K | 7.0% |
| Cash | |
| Cash | 2.0% |

Investment Strategy

The Long Horizon Multi-Manager Models are all-in-one, core portfolios that span a broad risk spectrum, represented by 5 riskprofiles (ranging from Conservative to Aggressive). These models seek to achieve optimal risk-adjusted returns over the long-term with annual rebalancing. The models are constructed in a scalable and costefficient way using both proprietary and non-proprietary mutual funds. These funds may pay fees and expenses to BlackRock or third party provider. The principal risks of the strategy are equity risk, fixed income risk, foreign/international market risk and derivative risk general. More detailed information on this strategy is available upon request.

MML Distributors, LLC (MMLD) 1295 State St., Springfield, MA 01111 is the Principal Underwriter for the MassMutual Funds, Member SIPC (www.SIPC.org) and FINRA (www.FINRA.org). Investment advisory services provided to the Funds by MML Investment Advisers, LLC (MML Investment Advisers). This model is offered through investment adviser representatives of MML Investors Services, LLC, (MMLIS). 1295 State Street, Springfield, MA 01111-0001. MMLD, MML Investment Advisers and MMLIS are all subsidiaries of Massachusetts Mutual Life Insurance Company (MassMutual), Springfield, MA 01111-0001. Since this model offers funds underwritten and advised by MMLIS' affiliates, MMLIS' affiliates benefit when clients of MMLIS invest in this model.

Investing involves risk. Asset allocation strategies do not assure a profit and may protect against loss. References to specific securities and their issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities.

This information is not personalized investment advice or an investment recommendation by BlackRock, and is intended for use only by a third party investment advisory firm in connection with its management of its own clients' accounts. BlackRock does not have investment discretion over, or place trade orders for, any portfolio or account derived from this information. Performance of any portfolio or account derived from this information may vary materially from the performance shown herein. There is no guarantee that any investment strategy illustrated will be successful or achieve any particular level of results. Please review the disclosures at the end of this document and consult your financial advisor for more information.

^{*}Prior to 5/1/21, the fund was the MassMutual Select Overseas Fund

^{**}Prior to 5/1/21, the fund was the MassMutual Select Strategic Bond Fund

| Quarterly Composite Performance (% Returns) | | | | |
|---|-----------------|-------------------|------------|--|
| | Composite (Net) | Composite (Gross) | Benchmark* | |
| YTD | 2.83 | 3.62 | 3.23 | |
| 3/31/2024 | 2.83 | 3.62 | 3.23 | |
| 12/31/2023 | 8.43 | 9.26 | 8.51 | |
| 9/30/2023 | -4.29 | -3.56 | -2.95 | |
| 6/30/2023 | 2.38 | 3.16 | 2.42 | |

Gross Weighted Average Expense Ratio 0.67%

Net Weighted Average Expense Ratio 0.62%

| Average Annual Total Composite Returns (%) | | | | |
|--|-----------------|-------------------|------------|--|
| | Composite (Net) | Composite (Gross) | Benchmark* | |
| 1 Year | 9.25 | 12.63 | 11.34 | |
| 3 Year | -1.06 | 2.00 | 2.11 | |
| 5 Year | | | | |
| 10 Year | - | | | |
| Since Inception ¹ | 0.62 | 3.73 | 3.13 | |

The difference between gross and net expense ratios are due to contractual and/or voluntary waivers on underlying funds, if applicable. Any applicable waiver will be terminable based upon each fund's respective prospectus notice period. BlackRock may agree to voluntarily waive certain fees and expenses, which the adviser may discontinue at any time without notice. Please see the respective prospectus's for contractual waiver end dates.

Important Notes

¹The inception of this strategy is 9/1/2020.

*Benchmark Description: The benchmark index shown is 28% MSCI ACWI Index, 12% MSCI USA Index, 58% Bloomberg Barclays U.S. Universal Index, 2% ICE BofAML US T-Bill 0-3 Month and is rebalanced monthly. Prior to 06/30/2021 the benchmark was 60% BBG Barclays US Universal Index, 28% MSCI All Country World (Net Total Return), 12% MSCI Developed - US Net TR Index

The performance results from inception to the end of the most recent calendar year represents the performance of one fully discretionary, unconstrained, proprietary separate account managed in this style for one month that did not pay any fees. Indices are unmanaged and used for illustrative purposes only and are not intended to be indicative of any fund or the managed portfolio strategy's performance. It is not possible to invest directly in an index.

Investing involves risk, including possible loss of principal.

The two main risks related to fixed-income investing are interest rate risk and credit risk. Typically, when interest rates rise, there is a corresponding decline in bond values. Credit risk refers to the possibility that the bond issuer will not be able to make principal and interest payments. Non investment-grade debt securities (high-yield/junk bonds) may be subject to greater market fluctuations, risk of default or loss of income and principal than higher-rated securities. International investing involves risks, including risks related to foreign currency, limited liquidity, less government regulation and the possibility of substantial volatility due to adverse political, economic or other developments. These risks often are heightened for investments in emerging/ developing markets or in concentrations of single countries. Small-capitalization companies may be less stable and more susceptible to adverse developments, and their securities may be more volatile and less liquid than larger capitalization companies. Investments that are concentrated in specific industries, sectors, markets or asset classes and the general securities market. Derivatives entail risks relating to liquidity, leverage and credit that may reduce returns and increase volatility.

BlackRock claims compliance with GIPS. GIPS is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. For a complete list and description of BlackRock composites and/or a presentations contact GroupGlobalGIPS@Blackrock.com.

Past performance does not guarantee or indicate future results. The performance shown does not reflect the performance of actual client accounts based on the managed portfolio strategies that are managed by an Advisor utilizing BlackRock's non-discretionary investment recommendations. Although it is generally contemplated that the Advisor will implement BlackRock's investment recommendations in client accounts, the performance of such accounts may differ from the performance shown for a variety of reasons, including but not limited to: the Advisor, and not BlackRock, is responsible for implementing trades in the accounts; differences in market conditions; client-imposed investment restrictions; the timing of client investments and withdrawals, cash flows into or out of such accounts; fees payable by such accounts; and/or other factors. Composite and benchmark/index performance results reflect realized and unrealized appreciation and the reinvestment of dividends, interest, and/or capital gains. Taxes have not been deducted. Gross composite returns do not reflect actual performance because they do not reflect the deduction of any fees or expenses. Such fees that a client may incur in the management of their investment advisory account may reduce the client's return. The "net of fees" performance figures reflect the deduction of an investment advisory fee but do not reflect the deduction of custodial fees, platform fees or brokerage commissions. All periods longer than one year are annualized. Net composite returns reflect the deduction of an annual fee of 3.00% typically deducted quarterly. Due to the compounding effect of these fees, annual net composite returns may be lower than stated gross returns less stated annual fee. Index returns do not reflect transaction costs or the deduction of fees and it is not possible to invest directly in an index.

The BlackRock Model Portfolios are provided for illustrative and educational purposes only, do not constitute research, personalized investment advice or a fiduciary investment recommendation from BlackRock to any client of a third party financial advisor (each, a "Financial Advisor"), and are intended for use only by such a third party Financial Advisor with other information, as a resource to help build a portfolio or as an input in the development of investment advice from such Financial Advisor to its own clients and shall not be the sole or primary basis for such Financial Advisor's recommendation and/or decision. Such Financial Advisors are responsible for making their own independent fiduciary judgment as to how to use the BlackRock Model Portfolios and/or whether to implement any trades for their clients. BlackRock does not have investment discretion over, or place trade orders for, any portfolios or accounts derived from the BlackRock Model Portfolios. BlackRock is not responsible for determining the appropriateness or suitability of the BlackRock Model Portfolios or any of the securities included therein for any client of a Financial Advisor. Information and other marketing materials provided by BlackRock concerning the BlackRock Model Portfolios including holdings, performance, and other characteristics may vary materially from any portfolios or accounts derived from the BlackRock Model Portfolios. There is no guarantee that any investment strategy will be successful or achieve any particular level of results. The BlackRock Model Portfolios themselves are not funds. The BlackRock Model Portfolios, and data are subject to change.

The BlackRock model portfolios include investments in shares of funds. Clients will indirectly bear fund expenses in respect of portfolio assets allocated to funds, in addition to any fees payable associated with any applicable advisory or wrap program. BlackRock intends to allocate all or a significant percentage of the BlackRock model portfolios to funds for which it and/or its affiliates serve as investment manager and/or are compensated for services provided to the funds ("BlackRock Affiliated Funds which it and/or its affiliated Funds with ligher fees over BlackRock Affiliated Funds with lower fees. The fees that BlackRock and its affiliates receive from investments in the BlackRock Affiliated Funds constitute BlackRock's compensation with respect to the BlackRock model portfolios. This may result in BlackRock model portfolios that achieve a level of performance less favorable to the model portfolios, or reflect higher fees, than otherwise would be the case if BlackRock did not allocate to BlackRock Affiliated Funds.

©2024 BlackRock, Inc. All Rights Reserved. BLACKROCK is a trademark of BlackRock, Inc. All other trademarks are those of their respective owners.