target revenue. If the ASF MassMutual receives from an underlying investment is less than MassMutual's target ASR, MassMutual will redeem shares or units from the underlying investment such that the amount of the revenue received from the underlying investment for administrative services and the reimbursement of the sales charge or units equals MassMutual's target revenue. As a result of this process, the reported performance and expenses of the unitized plan fund is based on but not identical to the performance and expenses reported for the underlying investment.

**Maximum Sales Charge/12b-1 Fee/Redemption Fee**

Maximum Sales Charges and Redemption Fees are waived for MassMutual retirement plan participants. In addition, 12b-1 Fees are a component of the Net and Gross Expense Ratio; they are not in addition to the overall expense ratio.

**Morningstar Rating™**

This load-adjustments, performance (returns) and risk together into one evaluation. To determine a fund's star rating for a given time period (three-, five-, or 10-years), the fund's risk-adjusted return is plotted on a bell curve: If the fund scores in the top 10% of its category, it receives 5 stars (Highest); if it falls in the next 22.5% it receives 4 stars (Above Average); a place in the middle 35% earns 3 stars (Average); those lower still, in the next 22.5%, receive 2 stars (Below Average); and the bottom 10% get only 1 star (Lowest). The Overall Morningstar Rating is a weighted average of the available three-, five-, and 10-year ratings.

**Morningstar Proprietary Statistics**

Some Morningstar proprietary calculations, including the Morningstar Rating, Morningstar Return, and Morningstar Risk may be calculated based on pre-inception returns. See the above pre-inception returns disclosure for more details.

**Investment Risk**

Money market investments are not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although these investments seek to preserve the value of your investment at $1.00 per share, they cannot guarantee that they will do so. The fund’s sponsor has no legal obligation to provide financial support to a money market option; and you should not expect that the sponsor will provide financial support to the fund at any time. You could lose money by investing in a money market option. The 7-day yield is a measure of performance in the interest rates of money market funds. To the extent total returns differ from the 7-day yield, the 7-day yield more accurately reflects the current earnings of the fund.

**High-yield bond investments** are generally subject to greater market fluctuations and risk of loss of income and principal than lower-yielding debt securities investments. Investments that track a benchmark index are professionally managed. How well the benchmark index is unmanaged and does not incur fees or expenses and cannot be purchased directly.

**Investment in stocks** may remain undervalued for extended periods of time, and the market may not recognize the intrinsic value of these securities. Investments in equity securities may experience price volatility due to their sensitivity to market fluctuations and dependence on future earnings expectations.

**International/global investment** can involve special risks, such as political changes and currency fluctuations. These risks are heightened in emerging markets. A significant percentage of the underlying investments in aggressive asset allocation portfolios investments have a higher than average risk exposure. Investors should consider their risk tolerance carefully before choosing such a strategy.

An investment with multiple underlying investments (which may include MM RetireSMART™ by JP Morgan and any other offered proprietary or non-proprietary asset-allocation, lifestyle (risk based), lifecycle (target date) or custom blended investments) may be subject to the expenses of those underlying investments in addition to those of the investment itself.

Investments may reside in the specialty category due to 1) allowable investment flexibility that precludes classification in standard asset categories and or 2) investment concentration in a limited group of securities or industries sectors. Investments in this category may be more volatile than less-flexible and/or less-concentrated investments and may be appropriate as only a minor component in an investor’s overall portfolio.

Participants with a large ownership interest in a company or employer stock investment may have the potential to manipulate the value of units of this investment option through the exercise of their transferable stock options. As a result, special transfer restrictions may apply. This type of investment option presents a higher degree of risk than diversified investment options under the plan because it invests in the securities of a single company.

Investments that invest more of their assets in a single issuer or industry sector (such as company stock or sector investments) may be more volatile than less-concentrated investments and other investments are not subject to this rule. This rule does not prohibit participants from transferring out of any investment at any time.

**Target Date (lifecycle)**

Generally these investment options are designed to be held beyond the presumed retirement date to offer a continuing investment option for the investor in retirement. The year in the investment option name refers to the approximate year investor in the option would plan to retire and likely would stop making new contributions to the investment option. However, investors may choose a date other than their retirement date at which to begin the more conservative or aggressive depending on their current risk tolerance.

They are designed for participants who plan to withdraw the value of their accounts gradually after retirement. Each of these options follows its own asset allocation path (“glide path”) to progressively reduce its exposure and become more conservative over time. Options may not reach their most conservative allocation until after their target date. Others may reach their most conservative allocation in their target date year. Investors should consider their own personal risk tolerance, circumstances and financial situation. These options should not be selected solely on a single factor such as age or retirement date. Please consult the prospectus (if applicable) pertaining to the options to determine if their glide path is consistent with your long-term financial plan. Target retirement date investment options’ stated asset allocation may be subject to change.

Investments in these options are not guaranteed and you may experience losses, including losses near, at, or after the target date. Additionally, there is no guarantee that the options will provide adequate income at and through retirement.

Investors should consider an investment’s objectives, risks, charges and expenses carefully before investing.

For this and other information, see a fact sheet (investment profile) or the prospectus, if applicable. You can obtain a prospectus (investment profile) from your plan sponsor or by visiting https://retire.massmutual.com. Read it carefully before investing.

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**Investment Objective & Strategy**

The investment seeks the highest total return over time consistent with an emphasis on both capital growth and income.

The fund invests in a diversified portfolio of other T. Rowe Price stock and bond funds that represent various asset classes and sectors. Its allocation between T. Rowe Price stock and bond funds will change over time in relation to its target retirement date. The fund is managed based on the specific retirement year (target date 2045) included in its name and assumes a retirement age of 65.

**Performance**

### Allocation of Assets

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<th>Years Until Retirement</th>
<th>% Allocation</th>
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<tbody>
<tr>
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<tr>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

** Fees and Expenses as of 02-13-20**

- Prospectus Net Expense Ratio: 0.71%
- Total Annual Operating Expense: 0.71%
- Maximum Sales Charge: —
- 12b-1 Fee: —
- Redemption Fee/Fee: —

**Operations and Management**

- Fund Inception Date: 05-31-95
- Portfolio Manager(s): Jerome A. Clark, CFA, Wyatt A. Lee, CFA
- Name of Issuer: T. Rowe Price
- Telephone: 800-638-5660
- Web Site: www.troweprice.com

**Benchmark Description:** Morningstar Lifetime Mod 2045 TR USD

The index measures the performance of a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a US investor who has a target maturity date of 2045. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility. This Index does not incorporate Environmental, Social, or Governance (ESG) criteria.

**Category Description:** Target-Date 2045

Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2041-2045) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

**Principal Risks as of 03-31-20**

Credit and Counterparty, Foreign Securities, Loss of Money, Not FDIC Insured, Interest Rate, Equity Securities, Restricted/Liquid Securities, Management, Target Date, Small Cap, Mid-Cap