

T. Rowe Price’s active management approach has benefited our target date funds

February 2024

Key Insights

- T. Rowe Price examined 11 of our U.S. Retirement Funds with at least 10-year records to quantify the value added by our active management approach.*
- On average, the 11 funds outperformed their benchmarks in 96% of rolling five-year periods and in every rolling 10-year period since inception, net of fees.
- T. Rowe Price seeks to add value for clients at multiple levels, including glide path design, long-term diversification, and our active management approach.
- We believe our active management approach—including tactical allocation and active management of the underlying strategies—can enhance retirement outcomes.

(Fig. 1) Retirement Funds included in this performance study

Fund	Inception Date
Retirement 2005 Fund	2/27/2004
Retirement 2010 Fund	9/30/2002
Retirement 2015 Fund	2/27/2004
Retirement 2020 Fund	9/30/2002
Retirement 2025 Fund	2/27/2004
Retirement 2030 Fund	9/30/2002
Retirement 2035 Fund	2/27/2004
Retirement 2040 Fund	9/30/2002
Retirement 2045 Fund	5/31/2005
Retirement 2050 Fund	12/29/2006
Retirement 2055 Fund	12/29/2006

Source: T. Rowe Price.



Rolling periods

We measured performance over a large number of periods covering the full track record of each Retirement Fund instead of just looking at the most recent 5- or 10-year periods. Every calendar month marked the start of a new period—so an RF that launched on September 30, 2002, for example, has 196 rolling five-year periods included in the study.

Note that past performance data throughout this material are not reliable indicators of future performance.

* All funds are subject to market risk, including possible loss of principal. For more information on the T. Rowe Price funds used in this study, please visit troweprice.com/complete-target-date-study.



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Tactical Allocation

Managers of target date funds may seek to add value by adjusting the asset allocation to the underlying portfolios to try to take advantage of especially attractive valuations or other short-term market conditions.

Security Selection

Managers of active investment portfolios typically seek to add value by picking stocks, bonds, or other securities that they believe will outperform broad market indexes.

Total Implementation

The full value added by efforts to improve target date strategy returns through tactical allocation, security selection in the underlying funds, and structural design differences relative to the benchmark.

To demonstrate that T. Rowe Price's target date investment process historically has created value for our clients, we conducted a rigorous study of the performance of all of our Retirement Funds (RFs) that had at least 10-year track records as of December 31, 2023 (Figure 1). These 11 RFs held nearly all (approximately 96%) of the RF assets managed by the firm as of that date.¹

We examined fund performance at three different levels to quantify the following:

1. The value added by T. Rowe Price's tactical allocation process. Returns were calculated using each underlying fund's style-specific benchmark.²

2. The value added by T. Rowe Price's security selection. Excess returns—net of fees and other costs—were calculated for the underlying funds in each RF relative to each underlying fund's style benchmark. These fund-level returns were then aggregated to show the total excess returns achieved by each RF.

3. The full value added by T. Rowe Price's total implementation. RF returns were compared with a family of target date indexes created by Standard & Poor's, which reflect "consensus" strategic asset allocations and glide paths for the industry as a whole based on an annual survey of reported portfolio holdings.

For each level of fund performance, two measures were calculated:

- **Active success rates:** The percentage of total rolling periods in which the RF added value at the performance level being measured.
- **Excess returns:** The value added by each RF at the performance level being measured. Excess returns were calculated for each rolling period and then averaged across all the periods in each time frame.

T. Rowe Price believes strongly that longer time horizons provide the most meaningful measures of target date implementation, as they smooth out the effects of shorter-term factors that can produce a distorted picture of relative performance. Accordingly, our analysis focused primarily on performance over rolling 5- and 10-year periods, rolled monthly.³

To provide a summary of the effectiveness of T. Rowe Price's target date process, we also calculated performance averages for all 11 RFs across all three levels of our analysis (tactical allocation, security selection, and total implementation). To account for the differing longevity of each RF, these averages were time weighted—the results are based on the percentage of the total performance periods in each time frame provided by each RF.



Glide path

How the strategic allocations in a target date fund change over time. A fund far from its target date typically will feature higher equity allocations. A fund close to its target date typically will increase the weight to bonds or other less volatile investments.



Active success rate

The active success rate records the percentage of times a fund beat its designated benchmark, net of fees and trading costs, over a specified time period (e.g., 10 years). Think of this as a measure of how often a client might look at his or her monthly statement and find that a fund has outperformed for that time period.

¹ Two Retirement Funds with relatively distant target dates (2060 and 2065) were excluded from the study because of their relatively short performance track records.

² For each vintage, each underlying fund's actual weight was multiplied by its style-specific benchmark return to generate positioning inclusive of tactical allocation changes. These positions were then subtracted from each respective underlying fund's fixed strategic asset allocation weight and multiplied by the style-specific benchmark return. The result is the difference between actual positioning, including tactical decisions and implementation, versus strategic asset allocation positioning.

³ Performance results over rolling 1- and 3-year periods for the 11 funds included in our analysis can be found at [troweprice.com/complete-target-date-study](https://www.troweprice.com/complete-target-date-study).

Study results

By and large, the time-weighted averages reflect the same results as for the individual Retirement Funds: The total value added by T. Rowe Price's implementation and the contributions made by tactical asset allocation and security selection were all positive and relatively stable across different time periods (Figures 2 and 3).

Individual performance results for the 11 RFs in our study also were strongly positive across both 5- and 10-year time frames:

— **Tactical asset allocation:** The performance contribution from tactical allocation was positive in at least 86% of rolling 10-year periods for all 11 RFs. Active

success rates also were strongly positive across five-year rolling periods (averaging 83%). Annualized value added was positive across all time frames (Figure 4).

— **Security selection:** Active success rates were positive in 76% or more of all rolling 10-year periods for nine of the 11 RFs and positive in at least 78% of rolling 5-year periods for eight of the 11 RFs. Annualized value added was positive across 5- and 10-year time frames for all RFs (Figure 5).

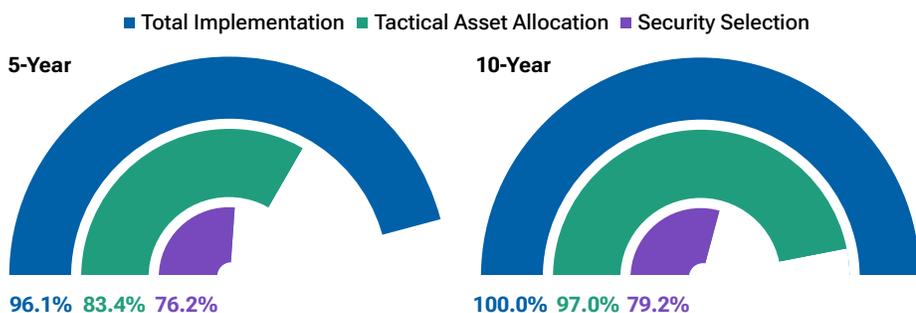
— **Total implementation:** Active success rates were positive in 100% of rolling 10-year periods for every RF and averaged 96% across five-year rolling time periods. Annualized value added was consistently positive across all time frames for all funds (Figure 6).

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Annualized value added was consistently positive across all time frames for all funds.

Time-weighted average active success rates for T. Rowe Price Retirement Funds

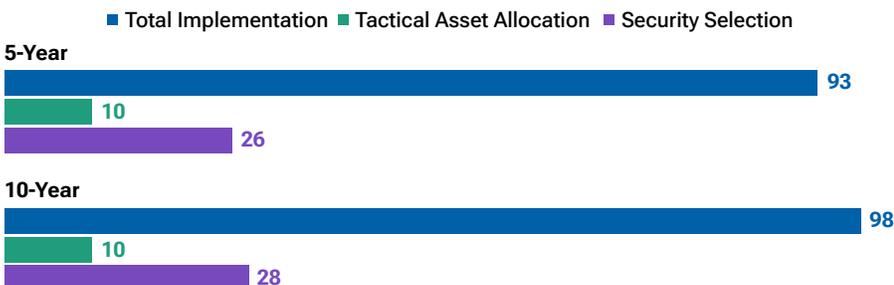
(Fig. 2) Fund inceptions through December 31, 2023



Sources: Bloomberg Finance L.P., MSCI, Standard & Poor's, FTSE/Russell, Morningstar, J.P. Morgan, Credit Suisse, Chicago Board of Options Exchange (see Additional Disclosures), and T. Rowe Price. Data analysis by T. Rowe Price.

Time-weighted average annualized value added (in basis points) for T. Rowe Price Retirement Funds

(Fig. 3) Fund inceptions through December 31, 2023



Sources: Bloomberg Finance L.P., MSCI, Standard & Poor's, FTSE/Russell, Morningstar, J.P. Morgan, Credit Suisse, Chicago Board of Options Exchange (see Additional Disclosures), and T. Rowe Price. Data analysis by T. Rowe Price.

100%

Positive active success rates for total implementation for all 11 RFs over 10-year rolling periods.

Active success rates and average value added by tactical allocation

(Fig. 4) Fund inceptions through December 31, 2023

Fund	Active success rates		Average annualized value added (basis points)	
	Rolling Periods		Rolling Periods	
	5-Year	10-Year	5-Year	10-Year
Retirement 2005 Fund	82%	100%	12	13
Retirement 2010 Fund	86	100	14	14
Retirement 2015 Fund	85	100	13	13
Retirement 2020 Fund	85	99	13	13
Retirement 2025 Fund	85	99	10	11
Retirement 2030 Fund	86	100	11	11
Retirement 2035 Fund	84	100	8	9
Retirement 2040 Fund	85	97	8	8
Retirement 2045 Fund	82	95	6	7
Retirement 2050 Fund	77	91	6	6
Retirement 2055 Fund	78	86	6	5

Source: T. Rowe Price.

Active success rates and average value added by security selection

(Fig. 5) Fund inceptions through December 31, 2023

Fund	Active success rates		Average annualized value added (basis points)	
	Rolling Periods		Rolling Periods	
	5-Year	10-Year	5-Year	10-Year
Retirement 2005 Fund	46%	58%	9	6
Retirement 2010 Fund	49	67	8	10
Retirement 2015 Fund	70	76	16	15
Retirement 2020 Fund	78	83	21	24
Retirement 2025 Fund	85	84	29	29
Retirement 2030 Fund	83	88	31	36
Retirement 2035 Fund	86	87	38	39
Retirement 2040 Fund	84	88	36	41
Retirement 2045 Fund	87	83	38	39
Retirement 2050 Fund	85	79	33	35
Retirement 2055 Fund	85	79	33	35

Sources: Bloomberg Finance L.P., MSCI, Standard & Poor's, FTSE/Russell, Morningstar, J.P. Morgan, Credit Suisse, Chicago Board of Options Exchange (see Additional Disclosures), and T. Rowe Price. Data analysis by T. Rowe Price.

Active success rates and average value added by total implementation

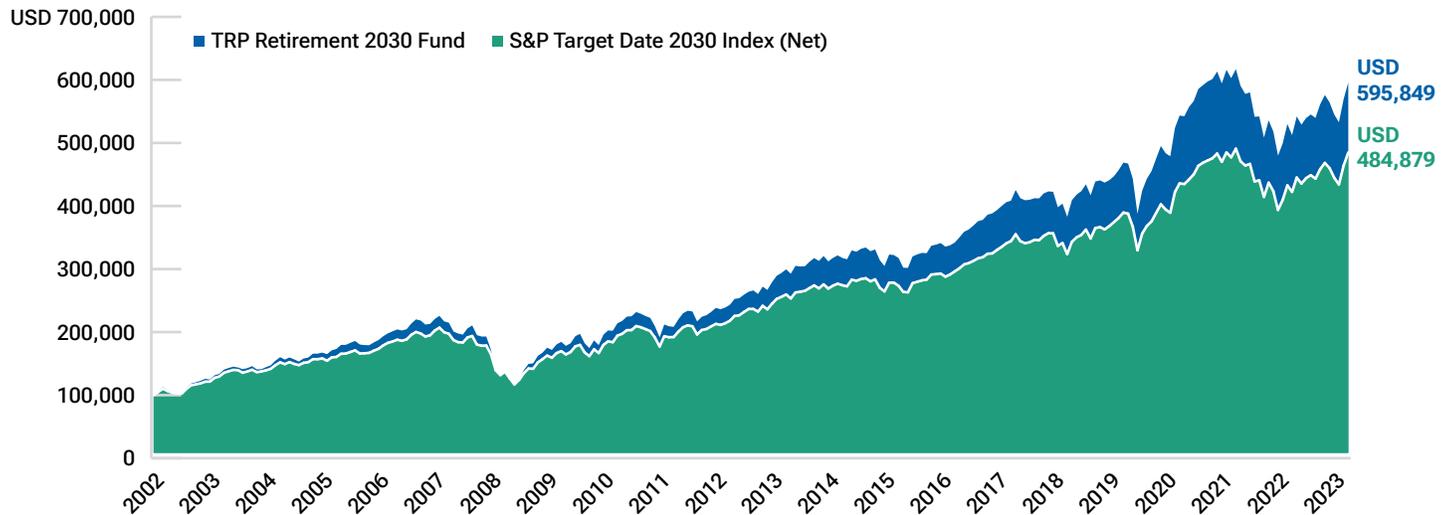
(Fig. 6) Fund inceptions through December 31, 2023

Fund	Active success rates		Average annualized value added (basis points)	
	Rolling Periods		Rolling Periods	
	5-Year	10-Year	5-Year	10-Year
Retirement 2005 Fund	97%	100%	110	117
Retirement 2010 Fund	93	100	91	98
Retirement 2015 Fund	96	100	89	96
Retirement 2020 Fund	93	100	98	105
Retirement 2025 Fund	94	100	98	106
Retirement 2030 Fund	95	100	102	112
Retirement 2035 Fund	98	100	101	108
Retirement 2040 Fund	97	100	96	105
Retirement 2045 Fund	99	100	101	98
Retirement 2050 Fund	98	100	83	80
Retirement 2055 Fund	96	100	56	57

Sources: Standard & Poor's (see Additional Disclosures) and T. Rowe Price. Data analysis by T. Rowe Price.

Example of the benefits of T. Rowe Price's active management approach

(Fig. 7) Portfolio growth potential relative to the S&P Target Date 2030 Index



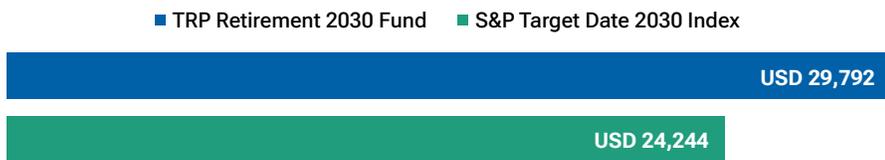
September 30, 2002, through December 31, 2023.

Sources: Standard & Poor's (see Additional Disclosures) and T. Rowe Price. Data analysis by T. Rowe Price.

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Potential postretirement annual spending amounts

(Fig. 8) Income from a USD 100,000 investment*



September 30, 2002, through December 31, 2023

* Assumes no further portfolio growth after retirement.

Sources: Standard & Poor's (see Additional Disclosures) and T. Rowe Price.

Data analysis by T. Rowe Price.

Benefits for investors

The excess returns historically achieved by T. Rowe Price's Retirement Funds may seem modest compared with the absolute returns that investors typically have been able to achieve on diversified asset portfolios over longer periods. However, compounded over time, even a small improvement in returns can make a significant difference in ending portfolio values.

Take, for example, the experience of the T. Rowe Price Retirement 2030 Fund. From its inception on September 30, 2002, through December 31, 2023, the fund outperformed the S&P Target Date 2030 Index by 1.05 percentage points, annualized. If an investor had invested USD 100,000 in the Retirement 2030 Fund at inception, by the end of 2023 their portfolio could have been worth almost USD 111,000 more than the same amount invested in a hypothetical portfolio that earned the same return as the S&P Target Date 2030 Index (Figure 7).

A USD 111,000 difference in ending portfolio values could be significant for some retirement investors. In our example, the investor who invested in

the Retirement 2030 Fund would be able to withdraw an additional USD 5,548 per year over a 20-year retirement time horizon compared with the investor who invested in a hypothetical portfolio that tracked the performance of the S&P Target Date 2030 Index—assuming no further portfolio growth after retirement (Figure 8). For some retirees, that USD 5,548 difference could have a meaningful impact on living standards.

Our approach to active management

T. Rowe Price's target date process seeks to improve outcomes for our target date clients at multiple levels—via glide path design, long-term diversification, tactical asset allocation, and our active management approach. We believe the value added by our target date implementation can meaningfully enhance retirement outcomes for investors.

Bottom-up fundamental research is at the core of how we manage the underlying strategies in our target date funds. That means that over 525 of our investment

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professionals go out in the field to uncover opportunities. They study them firsthand. And use those insights to help give our clients an investment edge.⁴

Our target date managers, backed by our committee of asset allocation experts from across multi-asset, equity, and fixed income, seek to get ahead of change by identifying attractive near-term asset valuations and using prudent tactical allocation adjustments to take advantage of those potential opportunities.

Experience has been a critical component of our success as well. We've managed investments through all kinds of markets, and our professionals average 23 years in the industry and 17 years with T. Rowe Price.⁵ Significantly, many of our analysts go on to become portfolio managers, which we believe creates a strong foundation on behalf of our clients.

⁴ Investment staff as of December 31, 2023. Includes 138 portfolio managers, 26 associate portfolio managers, 196 investment analysts, 60 associate analysts, 42 specialty analysts, 35 traders, 13 strategists, and 21 senior managers.

⁵ As of December 31, 2023.

Important Information

Standardized Performance

Annualized total returns for periods ended December 31, 2023

Fund (Inception Date)	Gross Expense Ratio ¹	1-Year	3-Years	5-Years	10-Years
Retirement 2005 Fund (NAV) (2/27/2004)	0.49%	11.94%	1.46%	5.98%	4.73%
S&P Target Date Retirement Income Index		10.35	1.00	4.90	3.98
Retirement 2010 Fund (NAV) (9/30/2002)	0.49	12.46	1.70	6.45	5.08
S&P Target Date 2010 Index		10.78	1.49	5.61	4.50
Retirement 2015 Fund (NAV) (2/27/2004)	0.50	12.97	2.03	7.02	5.54
S&P Target Date 2015 Index		11.38	1.86	6.10	4.94
Retirement 2020 Fund (NAV) (9/30/2002)	0.53	13.45	2.27	7.64	6.04
S&P Target Date 2020 Index		12.32	2.12	6.47	5.28
Retirement 2025 Fund (NAV) (2/27/2004)	0.54	14.57	2.63	8.44	6.59
S&P Target Date 2025 Index		12.99	2.80	7.42	5.85
Retirement 2030 Fund (NAV) (9/30/2002)	0.57	16.30	3.11	9.25	7.12
S&P Target Date 2030 Index		14.80	3.61	8.42	6.44
Retirement 2035 Fund (NAV) (2/27/2004)	0.59	18.08	3.66	10.03	7.57
S&P Target Date 2035 Index		16.63	4.45	9.44	7.04
Retirement 2040 Fund (NAV) (9/30/2002)	0.60	19.53	4.11	10.69	7.96
S&P Target Date 2040 Index		18.16	5.16	10.22	7.49
Retirement 2045 Fund (NAV) (5/31/2005)	0.62	20.46	4.53	11.18	8.21
S&P Target Date 2045 Index		19.14	5.62	10.68	7.76
Retirement 2050 Fund (NAV) (12/29/2006)	0.63	20.78	4.64	11.25	8.25
S&P Target Date 2050 Index		19.59	5.84	10.92	7.92
Retirement 2055 Fund (NAV) (12/29/2006)	0.64	20.82	4.60	11.21	8.22
S&P Target Date 2055 Index		19.62	5.91	10.98	7.99

¹ Expense ratios are as of the most recent prospectus.

Sources: Standard & Poor's (see Additional Disclosures) and T. Rowe Price.

Current performance may be higher or lower than the quoted past performance, which cannot guarantee future results.

Share price, principal value, and return will vary, and you may have a gain or loss when you sell your shares. Average annual total return figures include changes in principal value, reinvested dividends, and capital gain distributions. To obtain the most recent month-end performance, please visit our website or contact a T. Rowe Price representative at 1-800-225-5132.

T. Rowe Price identifies and actively invests in opportunities to help people thrive in an evolving world, bringing our dynamic perspective and meaningful partnership to clients so they can feel more confident.

Additional Disclosure

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Call 1-800-225-5132 to request a prospectus or summary prospectus; each includes investment objectives, risks, fees, expenses, and other information that you should read and consider carefully before investing.

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