

How our active management approach stacks up against passive portfolios

February 2024

Key Insights

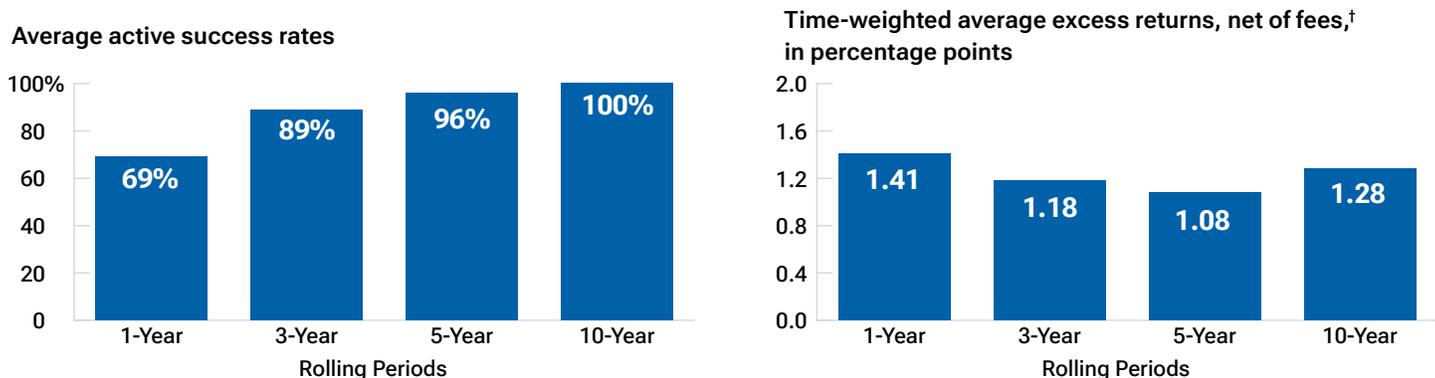
- We studied 11 of our Retirement Funds and found that all of them beat their passive competitors over various rolling periods from inception through December 31, 2023, net of fees.
- We compared the performance of each Retirement Fund with a custom composite index based on the performance of passive funds with comparable target dates.
- The custom composites were based on the oldest share class offered by each competing passive target date fund. The results were equally weighted by fund.
- Excess returns relative to the passive competitor indexes were positive, on average, across the 1-, 3-, 5-, and 10-year rolling time periods for the funds we examined.*

When selecting a target date fund, defined contribution plan sponsors and individual investors can choose from both passively managed strategies—those that invest in an underlying basket of index funds—and actively managed strategies, which seek to enhance returns through security selection and/or tactical asset allocation moves to exploit potential short-term market opportunities.

When considering active target date funds, investors may wonder if an active management approach justifies the higher management fees that such funds typically charge relative to their passive competitors.

Value added by T. Rowe Price's target date process

(Fig. 1) Relative to passive competitor indexes, fund inceptions through December 31, 2023



Past performance is not a reliable indicator of future performance.

Sources: T. Rowe Price and Morningstar (see Additional Disclosures). All data analysis by T. Rowe Price.

† Averages were time weighted based on the percentage of total rolling performance periods in each time frame provided by each Retirement Fund.

* Rolling 10-year results were not included for the Retirement 2060 Fund as the fund had no rolling 10-year performance results since inception as of December 31, 2023.

To demonstrate that T. Rowe Price's active management approach has created value for our clients, we recently examined the relative performance of 11 of our Retirement Funds (RFs). These 11 RFs held approximately 96% of the RF assets managed by the firm as of December 31, 2023. The focus of our study was on performance relative to the passive target date strategies offered by our competitors.¹

Study results

Relative to the passive competitor indexes, the value added by T. Rowe Price's active RFs was both strongly positive and relatively stable across different time frames (Figure 1). Performance for individual RFs also was strongly positive, especially over the longer term (Figures 2 and 3):

- All 10 of the RFs with 10-year track records included in the study outperformed their passive competitor indexes in 100% of rolling 10-year periods since inception.
- Eight of the 11 funds in the study outperformed their passive competitor index in 96% or more of rolling five-year periods since inception.
- All 11 RFs outperformed their passive competitor index in 80% or more of three-year rolling periods since inception.

¹ The performance of active target date funds reflects both the glide path mix and the value added or subtracted through security selection and/or tactical allocation. For more information on the T. Rowe Price funds used in this study, please visit troweprice.com.

Active success rates vs. equally weighted passive competitor indexes

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

Fund	Rolling Periods			
	1-Year	3-Year	5-Year	10-Year
Retirement 2010 Fund	69%	84%	87%	100%
Retirement 2015 Fund	67	83	90	100
Retirement 2020 Fund	71	87	89	100
Retirement 2025 Fund	70	85	96	100
Retirement 2030 Fund	71	88	98	100
Retirement 2035 Fund	68	92	99	100
Retirement 2040 Fund	74	95	100	100
Retirement 2045 Fund	69	91	100	100
Retirement 2050 Fund	68	96	100	100
Retirement 2055 Fund	68	95	100	100
Retirement 2060 Fund	62	90	96	N/A
Percent of Funds With Positive Active Success Rates	100%	100%	100%	100%

Sources: T. Rowe Price and Morningstar (see Additional Disclosures). All data analysis by T. Rowe Price.



Rolling periods

We measured performance over a variety of periods covering the full track record of each RF, instead of just looking at the most recent 1-, 3-, 5-, and 10-year periods. Every calendar month marked the start of a new rolling period—so an RF that launched on September 30, 2002, for example, had 196 rolling five-year periods included in the study.



Active success rates

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.



Excess returns

A measure of fund performance relative to a comparison benchmark, such as the passive competitor indexes used in this study. Excess return can be either positive or negative and typically is annualized over different time periods. The annualized return is what the investor could have earned if the rate of return during the period being measured had been maintained for one full year.

Excess returns vs. equally weighted passive competitor indexes, net of fees

(Fig. 3) % points, fund inceptions through December 31, 2023

Fund	Rolling Periods			
	1-Year	3-Year	5-Year	10-Year
Retirement 2010 Fund	1.77	1.41	1.31	1.97
Retirement 2015 Fund	1.27	1.05	1.03	1.03
Retirement 2020 Fund	1.99	1.56	1.34	1.68
Retirement 2025 Fund	1.64	1.34	1.26	1.18
Retirement 2030 Fund	1.96	1.57	1.32	1.60
Retirement 2035 Fund	1.30	1.04	1.00	0.99
Retirement 2040 Fund	1.49	1.27	1.11	1.28
Retirement 2045 Fund	1.01	0.85	0.86	0.84
Retirement 2050 Fund	0.89	0.89	0.83	0.83
Retirement 2055 Fund	0.74	0.72	0.65	0.64
Retirement 2060 Fund	0.54	0.55	0.47	N/A

Sources: T. Rowe Price and Morningstar (see Additional Disclosures). All data analysis by T. Rowe Price.

- Annualized excess returns relative to the passive competitor indexes were consistently positive, on average, across all time frames for all RFs.

Study methodology

To represent the passive alternatives to T. Rowe Price's actively managed target date strategies, we used a series of composite performance indexes consisting of passively managed target date funds identified by Morningstar, a leading mutual fund data provider, in its annual Target-Date Strategy Landscape report. These indexes included passive funds offered by major target date providers, such as The Vanguard Group, Fidelity Investments, BlackRock, Inc., and State Street Corporation.²

The comparison index for each T. Rowe Price RF included the passive funds in the Morningstar universe with the same target date as the RF. The returns on these indexes were based on an equally weighted average of the oldest share class offered by each competing passive fund. The asset weights for all of these funds as of December 31, 2023, can be found in Figure A3 in the appendix.

While they are in the same category, there may be material differences among target date funds, including fees, expenses, and the portfolio mix of stocks, bonds, and other assets. Target date funds typically change their asset class allocations over time according to a predetermined glide path. Security selection within the underlying investments that make up those allocations can vary greatly between fund families and may have a material impact on fund performance.

RF relative performance was measured across rolling 1-, 3-, 5-, and 10-year periods (rolled monthly) from each fund's inception date through December 31, 2023. Thus, the older the RF, the more rolling performance periods it had in each time frame studied.

Two performance measures were calculated for each RF:

- **Active success rate:** The percentage of total rolling periods in which the RF outperformed its passive competitor index. A positive success rate for a fund was defined as achieving a higher return than the relevant passive competitor index in more than 50% of all periods included in the study.
- **Excess return:** The return for each RF relative to its passive competitor index, averaged across all rolling performance periods in a given time frame.

To provide a high-level summary of the relative effectiveness of T. Rowe Price's target date process, we also calculated performance averages covering the 11 RFs in the study (Figure 1). These

“ We believe the value added by our target date implementation can meaningfully enhance retirement outcomes for investors.

averages were time weighted based on the percentage of the total rolling performance periods in each time frame provided by each RF.

Retirement Funds excluded from the study

Two T. Rowe Price Retirement Funds—the Retirement 2005 Fund and the Retirement 2065 Fund—were excluded from this study. The Retirement 2005 Fund had a limited number of passive peer constituents in the Morningstar universe. The Retirement 2065 Fund inceptioned on October 13, 2020, and, thus, had a relatively limited performance track record. The Retirement 2060 Fund, which began operations in June 2014, was included in the study but had no 10-year performance periods as of December 31, 2023.

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 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.³

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.⁴ Significantly, many of our analysts go on to become portfolio managers, which we believe creates a strong foundation on behalf of our clients.

² More details on the study methodology can be found in the appendix. For a list of the funds included in the study and their inception dates, please see Figure A1 in the appendix. The number of rolling performance periods in each time frame for each fund are shown in Figure A2 in the appendix.

³ 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.

⁴ As of December 31, 2023.

Important Information

Standardized Performance

Annualized total returns for periods ended December 31, 2023

Fund (Inception Date)	Ticker	Gross Expense Ratio*	1 Year	3 Years	5 Years	10 Years
Retirement 2010 Fund (NAV) (9/30/2002)	TRRAX	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)	TRRGX	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)	TRRBX	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)	TRRHX	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)	TRRCX	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)	TRRJX	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)	TRRDY	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)	TRRKX	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)	TRRMX	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)	TRRNX	0.64	20.82	4.60	11.21	8.22
S&P Target Date 2055 Index			19.62	5.91	10.98	7.99
Retirement 2060 Fund (NAV) (6/23/2014) [†]	TRRLX	0.64	20.82	4.62	11.20	—
S&P Target Date 2060 Index			19.74	5.89	11.04	—

[†] Annualized return since inception: 7.99%.

* Expense ratios are as of the most recent prospectus.

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

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Appendix

The relative performances of 11 T. Rowe Price Retirement Funds (RFs) (Figure A1) were examined across 1-, 3-, 5-, and 10-year rolling periods (rolled monthly) from RF inception through December 31, 2023. Because inception dates—and, thus, fund longevity—differed, the number of rolling performance periods also varied for each RF. The total rolling periods in each time frame for each RF are shown in Figure A2.

Returns for each T. Rowe Price RF were compared with the returns on an equally weighted index of competing passive target date funds. This average was calculated based on the net asset value (NAV) performance of the oldest share class offered by each competing passive fund.

How the passive competitor indexes were constructed

The target date funds included in the competitor indexes were those defined as passive by Morningstar as part of its most recent annual Target-Date Strategy Landscape report.⁵ Only funds that were open and available to investors as of December 31, 2023,

⁵ Morningstar, Inc. (see Additional Disclosures), 2023 Target-Date Strategy Landscape, March 2023.

Retirement Funds included in this performance study (Fig. A1)

Fund	Inception Date
Retirement 2010 Fund	9/30/02
Retirement 2015 Fund	2/27/04
Retirement 2020 Fund	9/30/02
Retirement 2025 Fund	2/27/04
Retirement 2030 Fund	9/30/02
Retirement 2035 Fund	2/27/04
Retirement 2040 Fund	9/30/02
Retirement 2045 Fund	5/31/05
Retirement 2050 Fund	12/29/06
Retirement 2055 Fund	12/29/06
Retirement 2060 Fund	6/23/14

Source: T. Rowe Price.

were included in the passive competitor indexes. To the extent this created survivorship bias in the index returns, it is highly likely that it worked in favor of passive performance.

For each RF, an index was constructed of competing passive funds that shared the same target date. This index incorporated the oldest share classes offered by the competing funds, and the returns were equally weighted at the beginning of each performance period. The competing funds and their weights in the passive competitor indexes are shown in Figure A3.

Returns for the RFs and the passive competitors were based on daily NAVs and thus reflected the subtraction of management fees and other investment costs from both sets of funds.

As of December 31, 2023, the Morningstar passive competitor universe used in this study consisted of 12 fund families offering 112 passive funds. Our competitor indexes included only those funds with the same target dates as the RFs in the study. Relatively few competing funds existed over some performance periods, particularly for older RFs.

Rolling performance periods in each time frame (Fig. A2) Fund inceptions through December 31, 2023

Fund	Time Frames			
	1-Year	3-Year	5-Year	10-Year
Retirement 2010 Fund	244	220	196	135
Retirement 2015 Fund	227	203	179	119
Retirement 2020 Fund	244	220	196	135
Retirement 2025 Fund	227	203	179	119
Retirement 2030 Fund	244	220	196	135
Retirement 2035 Fund	227	203	179	119
Retirement 2040 Fund	244	220	196	135
Retirement 2045 Fund	212	188	164	104
Retirement 2050 Fund	193	169	145	85
Retirement 2055 Fund	154	130	106	46
Retirement 2060 Fund	103	79	55	0

Source: T. Rowe Price.

Fund weights in passive competitor indexes

(Fig. A3) Based on equal weights for the competing funds in each target year index as of December 31, 2023

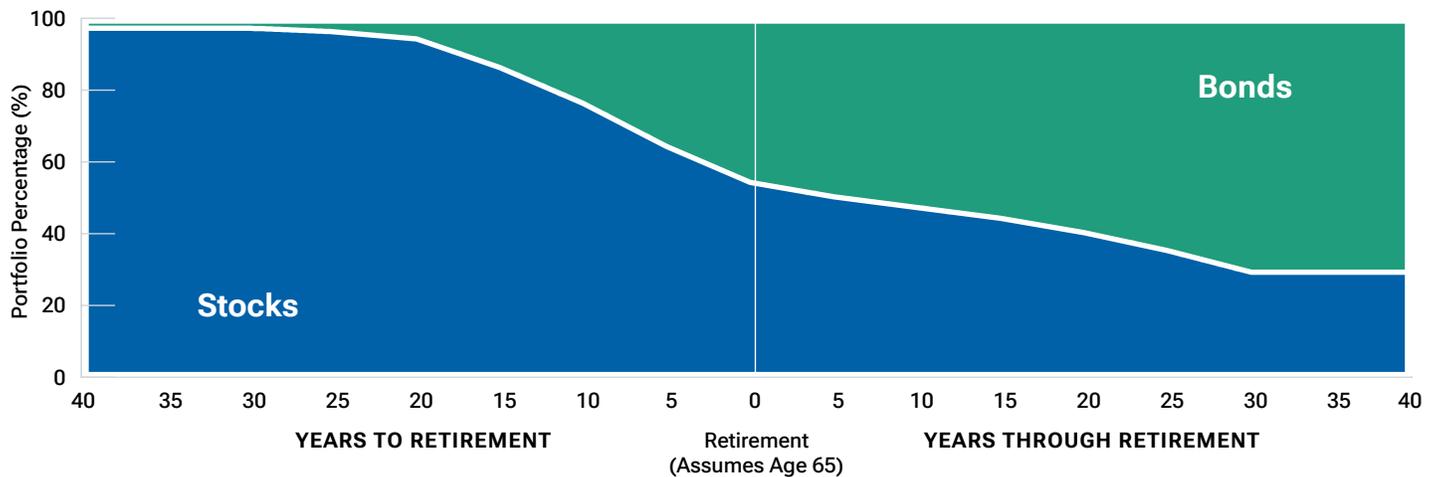
Target Date Offerings	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
1290 Retirement	—	—	12.5%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	—
BlackRock LifePath® ESG Index	—	—	—	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1%
BlackRock LifePath® Index	—	—	—	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
Fidelity Freedom® Index	25.0%	20.0%	12.5	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
JHancock Lifetime Blend Portfolio Series	25.0	20.0	12.5	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
Nationwide Destination	—	—	—	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
Schwab Target Index	25.0	20.0	12.5	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
State Street Target Retirement	—	—	12.5	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
TIAA-CREF Lifecycle Index	25.0	20.0	12.5	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
ClearTrack	—	20.0	12.5	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
Vanguard Target Retirement	—	—	12.5	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
Voya Index Solution	—	—	—	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
Total*	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Funds Included in Category	4	5	8	12	11						

*Weights may not total to 100% due to rounding.

Sources: Morningstar (see Additional Disclosures) and T. Rowe Price. All data analysis by T. Rowe Price.

Glide path for T. Rowe Price Retirement Funds

(Fig. A4) Change in equity and fixed income exposure over time



Source: T. Rowe Price.

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