Enhancing the T. Rowe Price Glide Paths

Higher equity allocations reflect changes in retirement investing.

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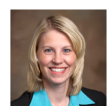

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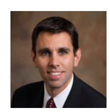

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KEY INSIGHTS

- We believe that retirement outcomes can be improved by modestly increasing equity allocations at the longer and shorter ends of T. Rowe Price glide paths.
- Our research suggests modestly higher equity levels potentially can improve consumption replacement without materially raising balance variability near retirement.
- We are not changing equity allocations in the years immediately before and at retirement, when investors appear to be most sensitive to market volatility.

The T. Rowe Price approach to target date investing has long reflected our view that retirement investors need adequate exposure to growth-oriented assets. Trends in target date investing—and our continued focus on improving our methodology since we launched our first target date strategies in 2002—have only strengthened this belief.

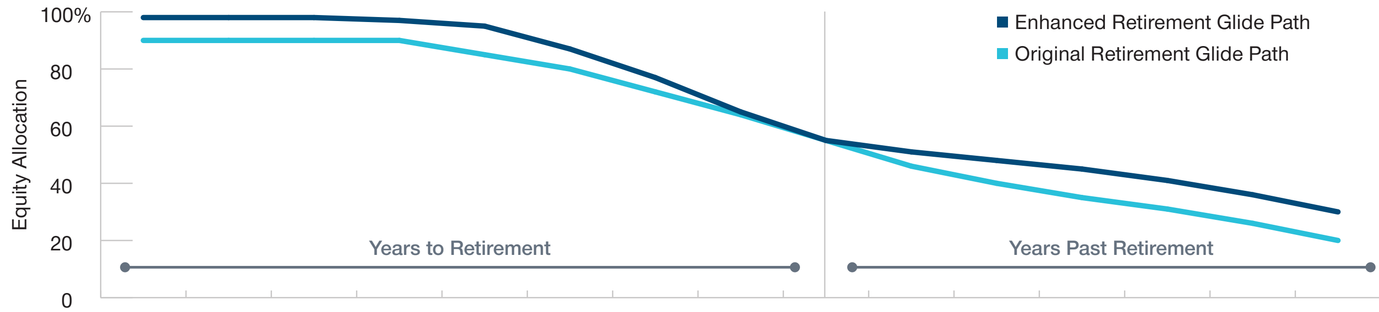
Accordingly, T. Rowe Price is moving to increase equity exposure modestly at the shorter and longer ends of our glide paths[1] while leaving equity allocations unchanged in the years immediately before and after retirement. These changes will be phased in over a two-year period and currently are expected to be completed in the second quarter of 2022.

- The changes to the Retirement Glide Path will raise the equity allocation at the beginning of the glide path to 98% from the current 90%, will hold the allocation at 98% equity until 30 years from retirement (rather than the current 25 years), and will raise the equity allocation at the back end of the glide path to 30% from the current 20%. The equity allocation at retirement will remain at the current 55% (Figure 1).
- The initial equity allocation in the Target Glide Path will be raised to 98% from the current 90% and will remain at 98% until 35 years from retirement rather than immediately starting to roll down as it does currently. The equity allocation at the back end will rise to 30% from the current 20%. The equity allocation at retirement will remain at its current 42.5% (Figure 2).

[1] Glide paths act as a guide for a target date fund's bond and equity allocations, determining how the strategic allocations in a target date fund will change over time. The glide path will adjust to become more conservative over time.

Increased Exposure to Growth Potential in the Retirement Glide Path

(Fig. 1) Equity allocations before and after enhancements



Years	40	35	30	25	20	15	10	5	0	5	10	15	20	25	30
Enhanced	98%	98%	98%	97%	95%	87%	77%	65%	55%	51%	48%	45%	41%	36%	30%
Original	90%	90%	90%	90%	85%	80%	72%	64%	55%	46%	40%	35%	31%	26%	20%
Difference (% Points)	+8.0	+8.0	+8.0	+7.0	+10.0	+7.0	+5.0	+1.0	0.0	+5.0	+8.0	+10.0	+10.0	+10.0	+10.0

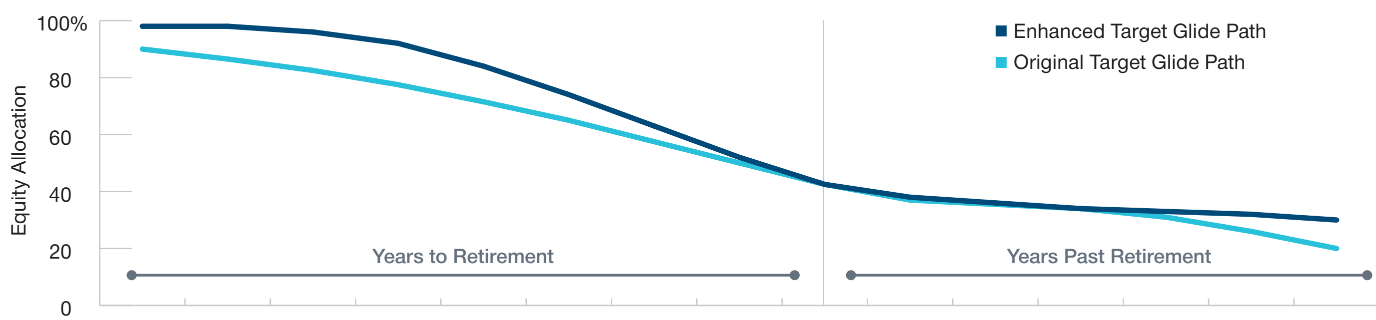
Source: T. Rowe Price.

We will implement these enhancements gradually to limit the equity increases across our funds. Equity levels in funds that are currently close to their target dates—and so most susceptible to market risk—will not be increased. These include the 2020, 2025, and 2030 vintages of the Retirement Funds and the 2005 through 2030 vintages of the Target Funds.

Our research suggests that the modest increases in equity exposure that we are making in our glide paths potentially can improve post-retirement consumption replacement[2] without materially affecting balance variability around retirement,

Increased Exposure to Growth Potential in the Target Glide Path

(Fig. 2) Equity allocations before and after enhancements



Years	40	35	30	25	20	15	10	5	0	5	10	15	20	25	30
Enhanced	98.0%	98.0%	96.0%	92.0%	84.0%	74.0%	63.0%	52.0%	42.5%	38.0%	36.0%	34.0%	33.0%	32.0%	30.0%
Original	90.0%	86.5%	82.5%	77.5%	71.5%	65.0%	57.5%	50.0%	42.5%	37.0%	35.5%	34.0%	31.0%	26.0%	20.0%
Difference (% Points)	+8.0	+11.5	+13.5	+14.5	+12.5	+9.0	+5.5	+2.0	0.0	+1.0	+0.5	0.0	+2.0	+6.0	+10.0

Source: T. Rowe Price.

[2] The objective of funding a given standard of living during retirement, conventionally defined as the replacement of pre-retirement income net of pre-retirement savings.

“...today’s retirement investors are likely to need income streams that last longer than their currently anticipated time horizons.

which is when investors typically are most sensitive to such fluctuations. However, there is no assurance that the results of these analyses will be repeated or that they indicate future outcomes of the enhanced glide paths.

Addressing Today’s Retirement Challenges

The daunting reality today is that many investors face powerful headwinds to achieving a comfortable retirement. As the retirement landscape shifts away from defined benefit pensions, future retirees will need to rely ever more on other income sources, such as their individual retirement accounts (IRAs) or defined contribution plans.

Life expectancies also have risen over the past 20 years, so today’s retirement investors are likely to need income streams that last longer than their currently anticipated time horizons.

- According to the Centers for Disease Control and Prevention (CDC), the conditional average life expectancy of U.S. individuals age 65 increased by nearly two years between 2000 and 2017, from 82.5 years to 84.35 years.[3]
- CDC data also indicate that there is a relatively high probability of individuals living into their 90s, meaning they’ll need to support consumption for multiple decades.[4]

It is widely understood that many retirement investors are chronically underfunded—they simply aren’t saving enough to meet their expected retirement needs.

The demographic and behavioral trends described above have only reinforced our view that achieving adequate portfolio growth is critical for most retirement investors. We also believe that the potential benefits of a growth-oriented strategy are likely to outweigh the potential negative impacts of large market declines close to or soon after retirement.

Historically, the compounding of the equity risk premium—the additional return on stocks relative to bonds—has led to meaningful differences in investment outcomes. Although equities have been more volatile than bond and other fixed income assets over shorter periods, the higher long-term returns associated with equities typically have facilitated wealth accumulation over the long term.

T. Rowe Price’s Glide-Path Approach

Over the past two decades, T. Rowe Price has made a substantial investment in the design and assessment of our target date glide paths. We seek a deep understanding of market conditions and investor behavior and how those elements may interact.

The first step in our design process is to define the glide-path objective. This is informed by the relative focus that retirement investors place on trade-offs between key goals, such as sustaining consumption versus avoiding portfolio volatility, or funding income needs over a lengthy retirement versus achieving a defined level of wealth at the time of retirement.

T. Rowe Price currently offers two different glide paths in our target date funds because we recognize that different investors may have different objectives. The primary objective of the Retirement Glide Path is to help support lifetime income for investors over a lengthy retirement. The primary objective of the Target Glide Path is to seek to limit balance variability around retirement, with a secondary focus on supporting income during retirement.

[3] Averaged across both men and women. CDC, *National Vital Statistics Reports*, Vol 68, No. 7, June 2019. On the Web at: https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_07-508.pdf.
[4] CDC, *National Vital Statistics Reports*, June 2019.

We believe an effective approach to life-cycle investing must rely upon a deep understanding of both markets and investors....

Although the two glide paths take slightly different approaches, both are built with the view that an adequate retirement strategy must have some focus on income replacement. Enhancements we have made to our glide-path design in recent years have made it possible for us to analyze investor demographics and behavior in more granular detail, which, in turn, has allowed us to better capture the diversity of characteristics and preferences among retirement investors.

Key Factors in Glide-Path Design

We believe an effective approach to life-cycle investing must rely upon a deep understanding of both markets and investors, reflecting how those elements potentially can evolve and interact over time. The first step is to understand the primary factors that can influence glide-path design:

Capital Markets: These are the assumptions about future investment returns that are informed by variables such as economic growth, inflation, and interest rates. We incorporate these factors into a model that seeks to estimate their potential impact on different asset classes.

Demographics: These assumptions include variables such as earnings, savings rates, employer matching contributions, projected Social Security benefits, and assumptions about life expectancy.

Behavioral Preferences: Our model also incorporates a range of behavioral preferences, such as investor attitudes toward risk, balance depletion, planning horizons, and investment goals.

We have made multiple improvements to our design framework in recent years, and these improvements collectively have enabled us to apply our insights consistently across the range of glide-path problems that we seek to solve.

Finally, T. Rowe Price's lengthy history as an investment manager and the depth of our asset allocation research both provide critical balance as we seek to ensure that our process is capturing the potential benefits of our insights. We believe this feedback loop is essential to building and maintaining a robust glide-path construction process.

Conclusions

T. Rowe Price has long believed that retirement investors need adequate exposure to equities and other growth-seeking assets as they seek to support their anticipated income needs over what could be a lengthy retirement. Recent demographic and behavioral trends—as well as multiple improvements in our design framework—have given us greater confidence that modestly increasing equity exposure at certain points in the investment life cycle potentially can improve post-retirement consumption replacement without materially affecting balance variability around retirement.

Reflecting these findings, we are raising equity allocations at the longer and shorter ends of our Retirement Glide Path and our Target Glide Path while leaving equity exposure unchanged in the years immediately before and after retirement.

Over the long term, we believe the enhancements could be beneficial for most retirement investors. Younger investors will have multiple decades to benefit from potential compounding of the equity risk premium and to recover from episodes of market volatility. For investors already into retirement, the modest nature of the changes in absolute terms should help mitigate the impact of short-term market downturns.

Target Date Investing Risks: The principal value of the Retirement Funds and Target Funds (collectively, the "target date funds") is not guaranteed at any time, including at or after the target date, which is the approximate year an investor plans to retire (assumed to be age 65) and likely stop making new investments in the fund. If an investor plans to retire significantly earlier or later than age 65, the funds may not be an appropriate investment even if the investor is retiring on or near the target date. The target date funds' allocations among a broad range of underlying T. Rowe Price stock and bond funds will change over time. The Retirement Funds emphasize potential capital appreciation during the early phases of retirement asset accumulation, balance the need for appreciation with the need for income as retirement approaches, and focus on supporting an income stream over a long-term retirement withdrawal horizon. The Target Funds emphasize asset accumulation prior to retirement, balance the need for reduced market risk and income as retirement approaches, and focus on supporting an income stream over a moderate postretirement withdrawal horizon. The target date funds are not designed for a lump-sum redemption at the target date and do not guarantee a particular level of income. The key difference between the Retirement Funds and the Target Funds is the overall allocation to equity; although they each maintain significant allocations to equities both prior to and after the target date, the Retirement Funds maintain a higher equity allocation, which can result in greater volatility over shorter time horizons.

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