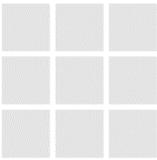




ENABLING BETTER RETIREMENT OUTCOMES THROUGH TARGET DATE INVESTMENT STRATEGY DESIGN

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PAPERS Spring Forum
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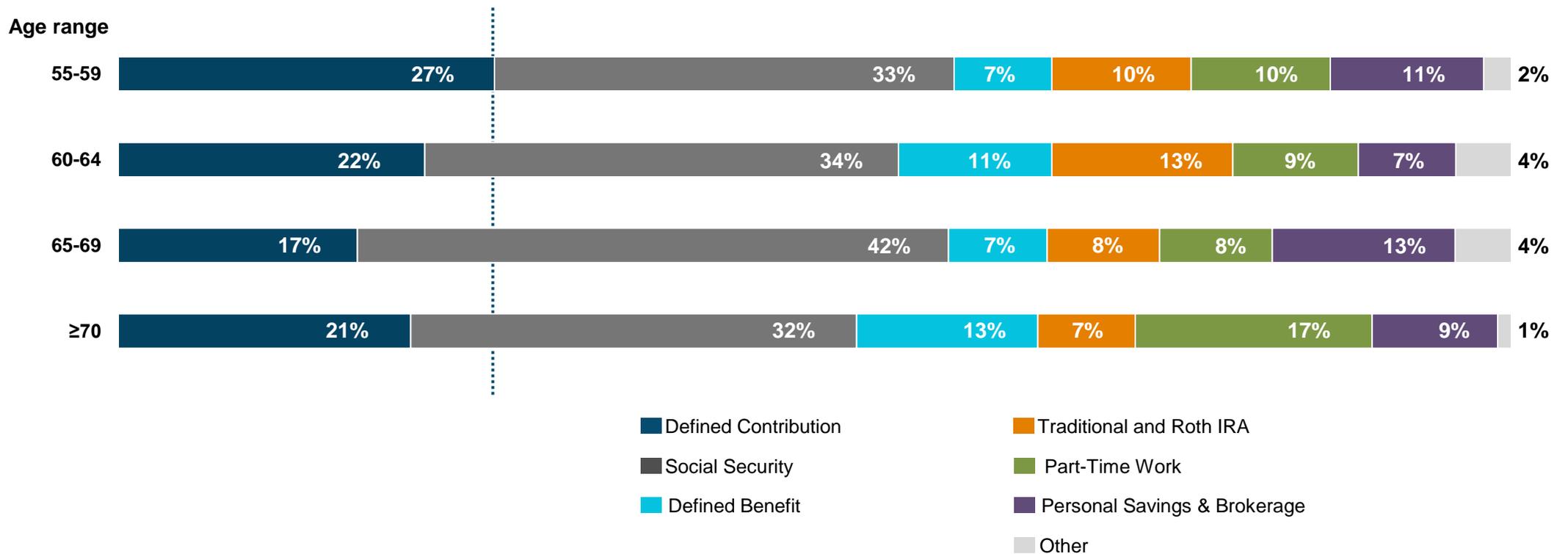
OUR FOCUS FOR TODAY

- The DC plan as the primary source of retirement income
- The goal of target date investments
- Where target date investments fit in the DC plan line-up
- Plan objectives and goals driving investment decisions
- The contributing factors to target date investment outcomes
- How all factors come together—a participant example
- Considerations for evaluating target date investments

U.S. DC Growing as Source of Retirement Income

Individuals aged 55–59 will source more of their retirement income from their DC plan compared with those 70 and older. This trend will only continue to increase with future generations.

How participants will source their income based on their age

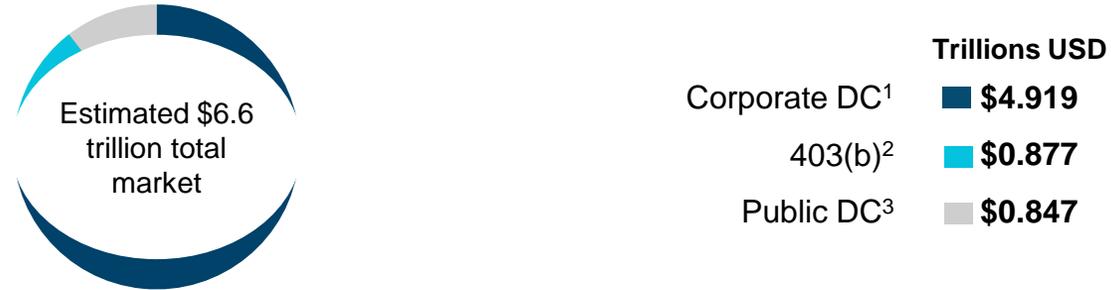


Source: Cerulli Associates, Evolution of the Retirement Investor 2015.

U.S. DC Market Overview

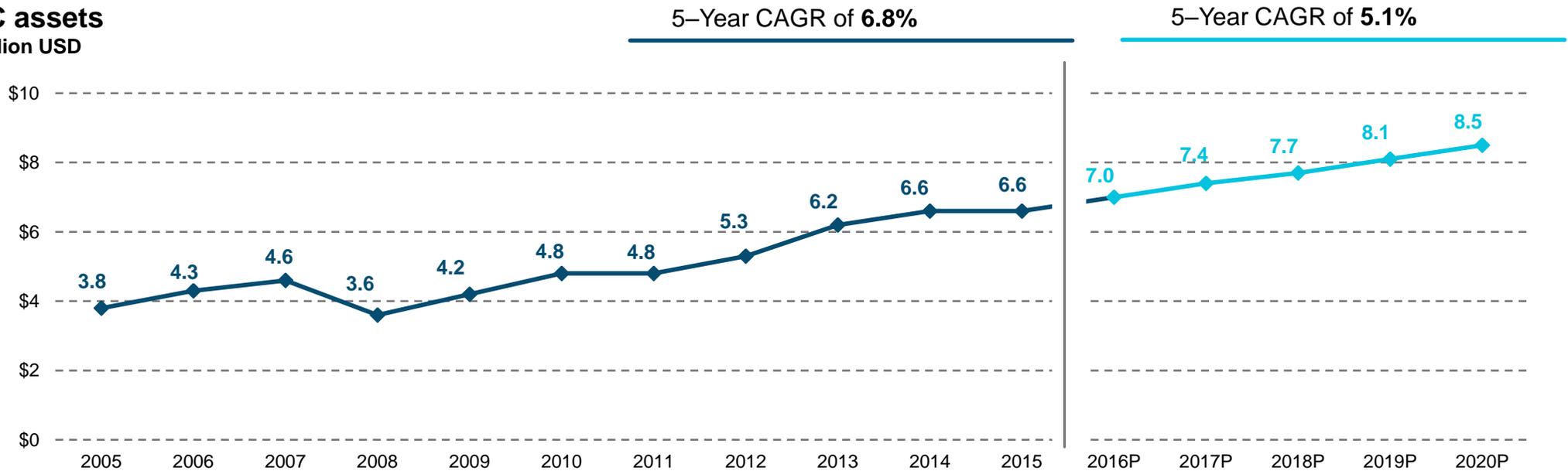
DC market assets total nearly \$7 trillion and are expected to reach \$8.5 trillion by 2020.

DC markets



DC assets

Trillion USD

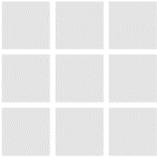


¹ The Corporate DC market is comprised of corporate 401(k) at \$4,387B and corporate other at \$532B as of 2015.

² The 403(b) market is comprised of healthcare at \$222B, higher education at \$391B, K-12 at \$119B and other at \$146 billion as of 2015.

³ The Public DC market is comprised of the Federal Thrift Savings market at \$443B, the 457 market at \$277B and the 401(a) market at \$127B as of 2015.

Source: Cerulli 2016 U.S. Retirement Markets.



TARGET DATE CAPABILITIES DESIGNED TO ACHIEVE SPECIFIC GOALS



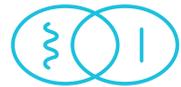
Glide path approaches

Robust glide path designs based on assumptions regarding plan goals, investment objectives and participant demographics



Asset class diversification

Deep and **broad investment capabilities** to allow for **global diversification** across a range of equity and fixed income asset classes, sectors and regions



Active, passive or a mix

Ability to combine **active and passive management** to achieve desired balance relative to return, diversification, fee, and tracking error targets



Investment vehicles

Comprehensive range of investment vehicles ranging from mutual funds to collective trusts



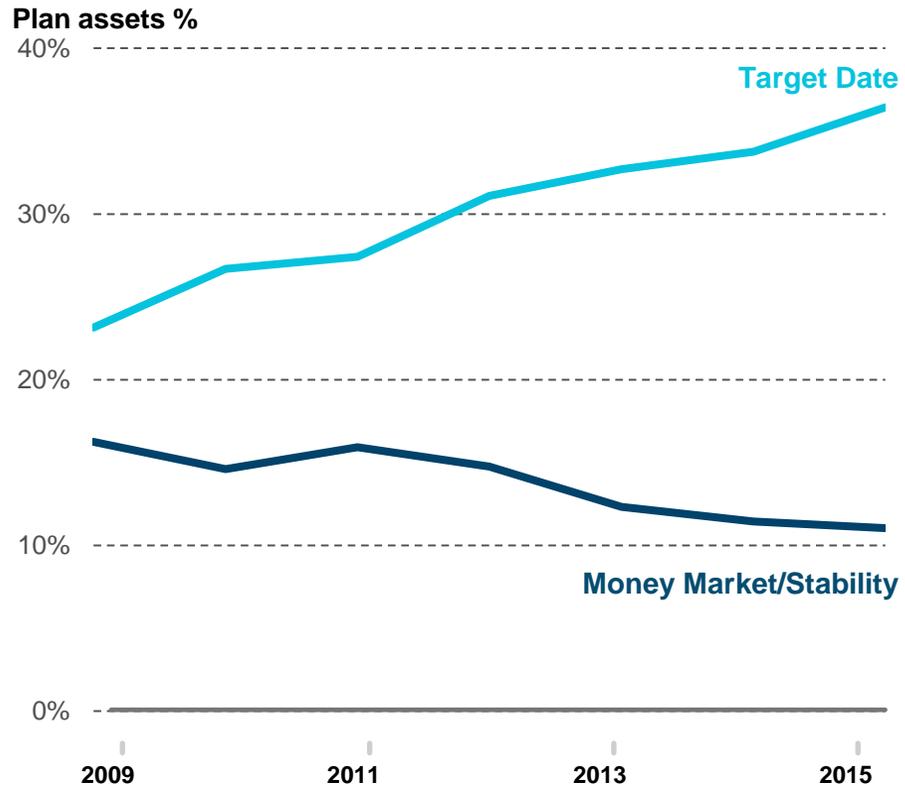
Packaging approaches

Fully **bundled to customized** solutions

IMPACT OF TARGET DATE FUNDS

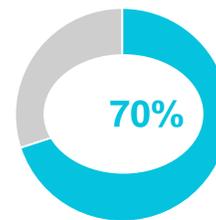
The rise in TDs as a QDIA has resulted in movement toward more diversified portfolios and a positive impact on generational behavior.

Percentage of plan assets¹



Target Date use as single investment

Participants **100%** invested in TD investments have increased **27 percentage points** since 2011²



Of millennials (age 20–29), **70%** use Target Date investments²

¹ Source: T. Rowe Price Retirement Plan Services, based on OMNI Plans.

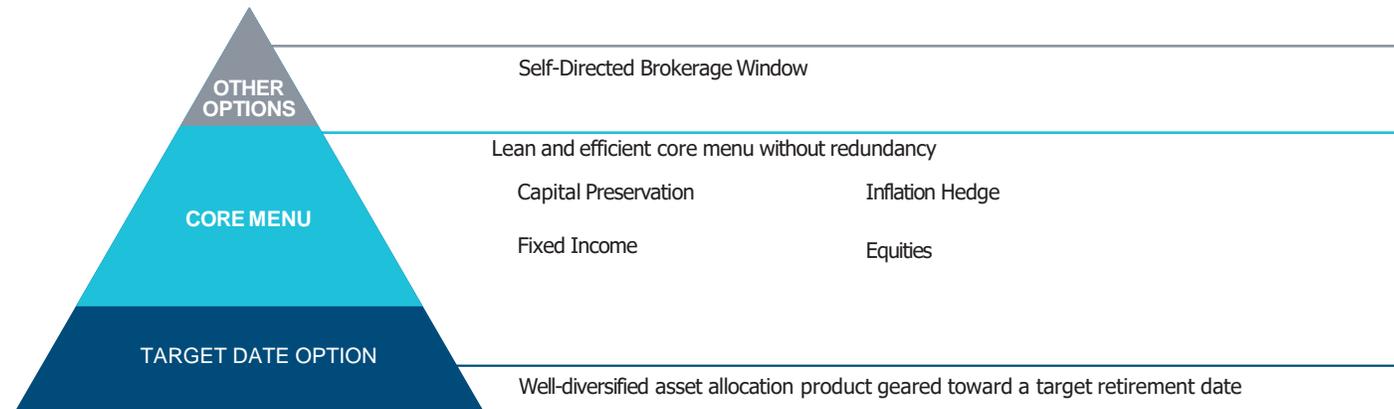
² Source: T. Rowe Price Reference Point 2016.

³ Source: Callan DC Index, First Quarter 2016.

WHERE TARGET DATES FIT INTO THE INVESTMENT LINE-UP

- ✓ Target Date Funds often serve as the Qualified Default Investment Alternative (QDIA).
- ✓ They satisfy the need for a single diversified investment option.
- ✓ They allow participants access to diversified portfolios in which professional managers make strategic and tactical asset allocation, and they also provide broad diversification and periodic rebalancing.
- ✓ They aid in limiting naïve diversification across every fund in the plan line-up

SAMPLE INVESTMENT LINE-UP



PLAN SPONSOR GOALS AND OBJECTIVES FOR THE DC PLAN INFORM TARGET DATE INVESTMENT DECISIONS

LEGACY INDUSTRY FOCUS TENDS TO SEPARATE THE RETIREMENT JOURNEY

Savings

Decumulation

AN OBJECTIVES BASED PHILOSOPHY OFFERS A MORE COMPLETE PICTURE

Retirement Lifecycle

DID YOU KNOW...

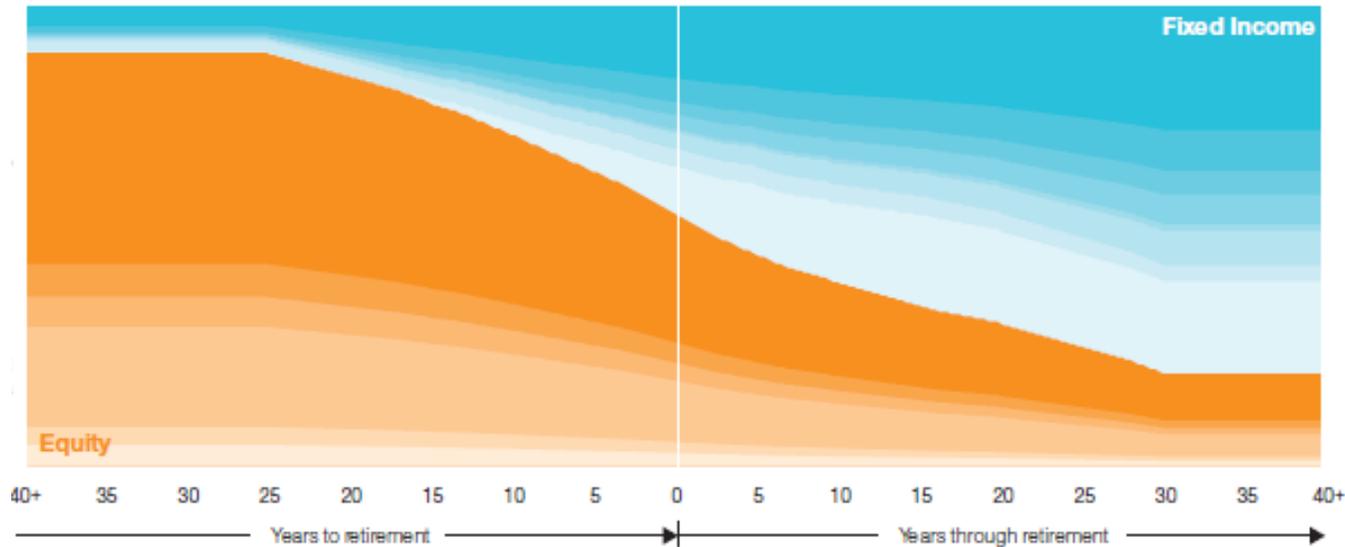
- **69%** of sponsors say it's a **priority to keep assets in plan at retirement** (40% remains a priority, 29% state it's become more of a priority)
- **65%** of sponsors say it's a **priority to ensure participants can achieve their highest retirement income opportunity** (e.g., higher balance in retirement)
- **42%** of sponsors' **top concern is longevity risk**
- **47%** of sponsors indicate they are most likely to use glide path management that **pursues growth over the life of the target date to and through retirement to manage longevity risk**

What are your views?
How do they inform your objectives?

This research was sponsored by T. Rowe Price and conducted by P&I Content Solutions, a division of Pensions & Investments, in January and February 2018. The respondents were drawn from P&I's Research Advisory Panel, a group of tax-exempt investors who serve as an important source of market intelligence for P&I and its partners, as well as a sample of P&I's regular audience and financial advisers. The respondents represent 337 U.S. and Canadian institutions. Statistical analysis was conducted by Signet Research Inc.

FACTORS CONTRIBUTING TO TARGET DATE PERFORMANCE OUTCOMES

GLIDE PATH DESIGN



- Glide Path Design:
 - Glide path designs happens at the intersection of financial and behavior economics.
 - A glide path represents how the asset allocation will change over time for the participant and factors in assumptions regarding goal importance, time preferences, risk aversion, and demographics.

FACTORS CONTRIBUTING TO TARGET DATE PERFORMANCE OUTCOMES (continued)

UNDERLYING ASSET CLASS EXPOSURES

Underlying Asset Class Exposures:

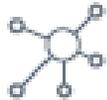
- What underlying asset classes (equities, fixed income, etc.) are included in the glide path
- How the investments will be compiled (target allocation weights and spend of risk/reward fee budget)

Sector Representation

Core	
Diversifier	High Yield
Diversifier	Emerging Markets
Diversifier	Long Treasuries
Inflation Focused	
Large-Cap	Growth Core Value
Mid-Cap	Growth Value
Small-Cap	Growth Core Value
Developed Int'l Markets	Growth Core Value
Emerging Markets	
Real Assets Equity	

FACTORS CONTRIBUTING TO TARGET DATE PERFORMANCE OUTCOMES (continued)

INVESTMENT MANAGEMENT TECHNIQUES



Broadly diversified portfolios

We employ broad diversification across a range of return and risk factors, helping to diversify unrewarded idiosyncratic risk.



Global opportunity set

We believe in building portfolios that reflect the global investment opportunity set.



Low-correlation asset classes

The inclusion of less correlated sectors, such as Real Assets and Emerging Markets, seeks to improve the long-term risk return profile of our portfolios.

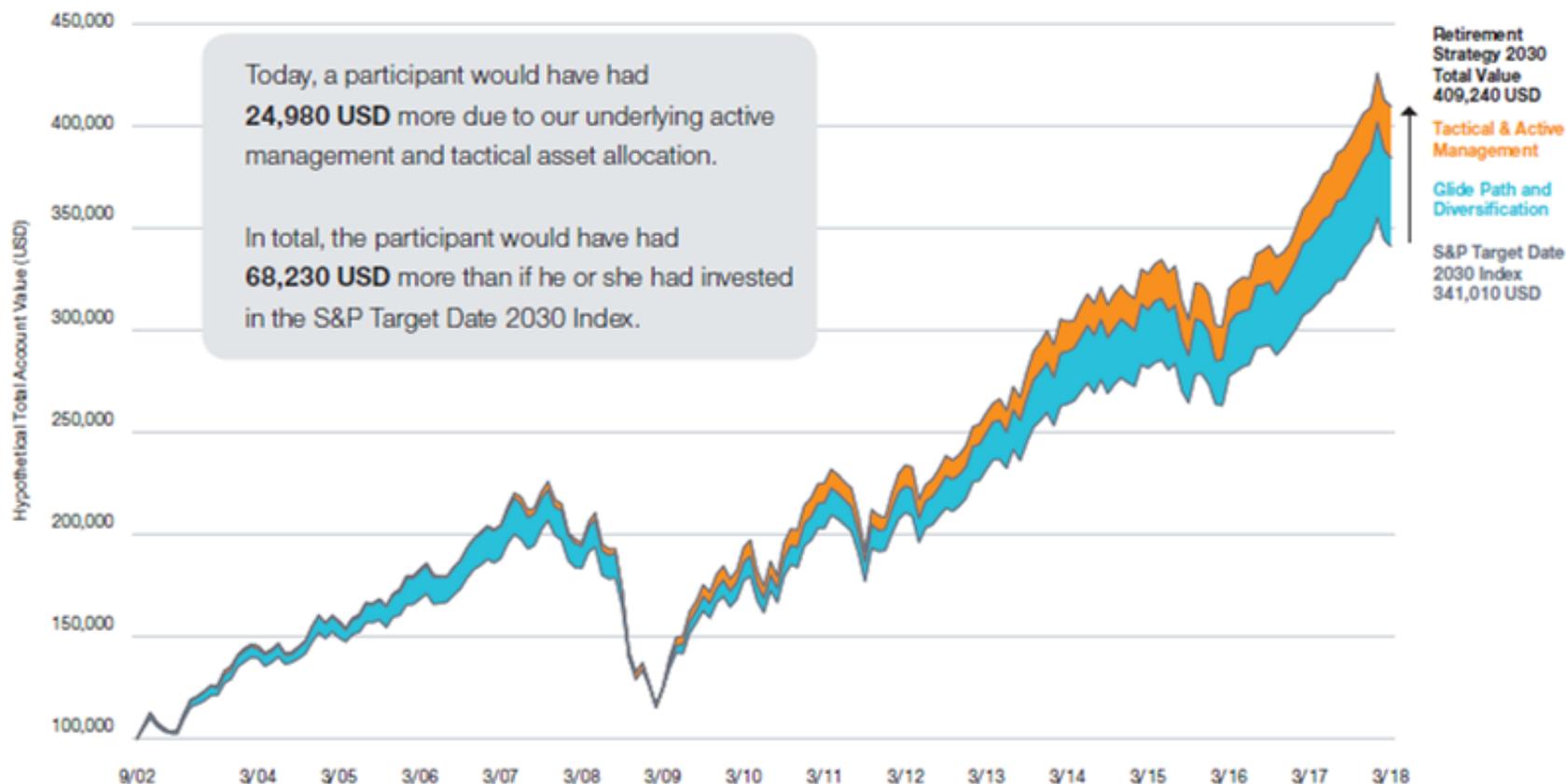
- Investment Management Techniques:
 - What types of investment strategies (capitalization; styles; active; index or a combination of both) are leveraged in the underlying investments?

WHAT IT ALL ADDS UP TO FOR PARTICIPANTS

Adding in the incremental value we create through our underlying active management and tactical asset allocation, we can now look at the total value we delivered over the S&P Target Date Index.

As of March 31, 2018

CUMULATIVE GROWTH OF 100,000 USD—RETIREMENT 2030 VS. S&P TARGET DATE 2030 INDEX

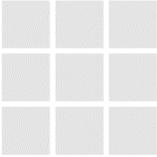


Current performance may be higher or lower than the quoted past performance, which cannot guarantee future results. Share price, principal value, and return will vary, and you may have a gain or loss when you sell your shares.

To obtain the most recent month-end performance, please call 1-800-638-7890 or go to troweprice.com.

Call 1-800-638-7890 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.

Figures include changes in principal value, reinvested dividends, and capital gain distributions. The most recent mix of underlying indices as of March 31, 2018, can be found on page 56.



CONSIDERATIONS FOR EVALUATING TARGET DATE INVESTMENTS

- ✓ Plan sponsors should take the opportunity to develop key beliefs that will inform how they assess TDF approaches available in the marketplace.
- ✓ Sponsors should apply a prudent and diligent process to the tasks of assessing and monitoring TDF offerings.
- ✓ Selection and monitoring of the TDFs should be based on alignment to plan objectives.
- ✓ Cost is only one of several factors that sponsors need to consider when assessing TDF investments and should be considered within a value-for-cost proposition.
- ✓ Sponsors should carefully document all aspects of the TDF investment process.

IN SUMMARY...

Considerations

Define the Role of the Plan and the Role of the TDF

- Primary or supplemental retirement vehicle
- Accumulate up to retirement
- Enable participants to manage into retirement
- Retain or distribute assets
- Paternalistic mind-set

Factor in Participant Demographics and Behaviors

- Participant engagement
- Age profile of workforce
- Savings habits

Develop Views of Key Investment Drivers

- Risk/reward targets
- Risk views: market vs. longevity vs. inflation
- Views on market efficiency and value for fee
- Diversification: asset class exposure

Understand the Committee's Expertise and Oversight Capabilities

- Governance capacity and time allocation
- Dedicated investment capabilities
- Desire for direct involvement or to leverage partners

Evaluate Other Implementation Factors

- Vehicle access
- Scale and buying power
- Value-for-fee proposition
- Leverage other asset pools
- Partner capabilities

Impact

- Plan objectives
- Alignment of TDF offering to plan objectives
- Plan design features
- Glide-path design, pre- and post-retirement

- Use of active, passive, or a mix
- Underlying investment strategy diversification
- Asset class diversification
- Retirement income offering

- Bundled vs. custom
- Time and expertise needed by committee
- Required partnership needs

- Use of active, passive, or a mix
- Vehicle choice



APPENDIX

EVALUATING THE UNIVERSE OF TARGET DATE OPTIONS

We believe the evaluation process should start with strategic issues that impact the overall design of the plan and the core construction of the TD solution – from glide path to asset class diversification.

Strategic considerations



Define the Role of the Plan and the Role of the TD

Primary or supplemental retirement vehicle

Accumulate up to retirement

Retain or distribute assets

Enable participants to manage into retirement

Paternalistic mind-set



Factor in Participant Demographics and Behaviors

Age profile of workforce

Savings habits

Participant engagement



Develop Views of Key Investment Drivers

Risk views: market vs. longevity vs. inflation

Views on market efficiency and value-for-cost

Diversification: asset class exposure

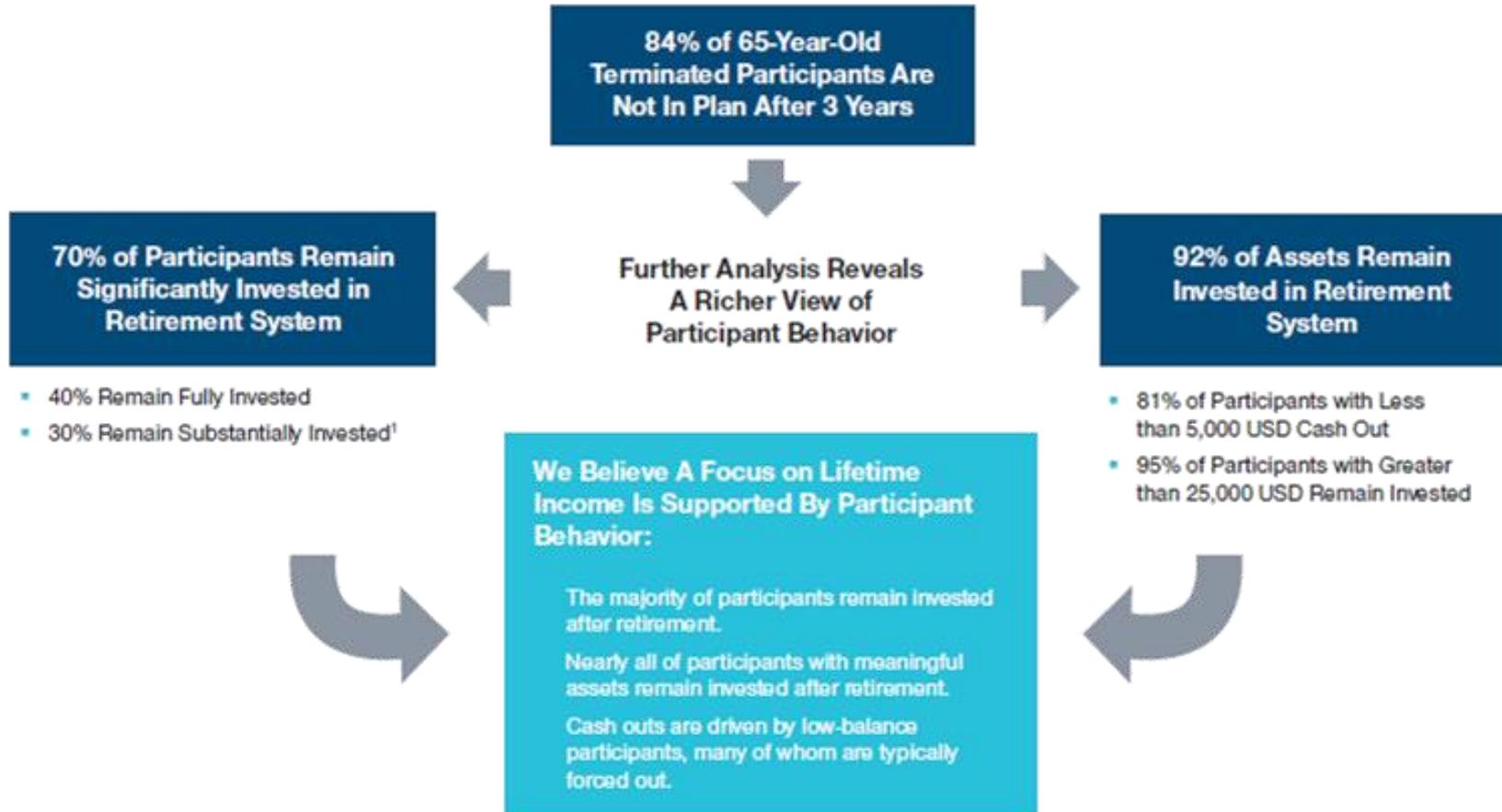
Risk/reward targets

Impact

- Plan objectives
- Plan design features
- Alignment of TD offering to plan objectives
- Glide path design, pre- and post-retirement
- Use of active, passive, or a mix
- Asset class diversification
- Underlying investment strategy diversification
- Drawdown solutions

Source: T. Rowe Price

PARTICIPANT BEHAVIOR IN RETIREMENT SUPPORTS A FOCUS ON LIFETIME INCOME



¹ 91% of assets remain in retirement system; 9% cash out.

Based on T. Rowe Price Retirement Plan Service participants with a balance as of December 31, 2008, who terminated in 2009 and were 65 years of age or older at time of termination. Installment activity was excluded. Distributions in the sample occurred between January, 2009 and December, 2012. Each participant's total assets are based on the sum of the total rollover and cash out activities through December 31, 2012 and the In-Plan balance on December 31, 2012. Total rollover and cash-out activities are sum of all rollover and cash-out activities, respectively, at the time of distribution through December 31, 2012. Individuals remaining in the retirement system includes all individuals with an in-plan balance after three years, or those that rolled over assets into another retirement account.

HOW ALL FACTORS COME TOGETHER—A PARTICIPANT EXAMPLE

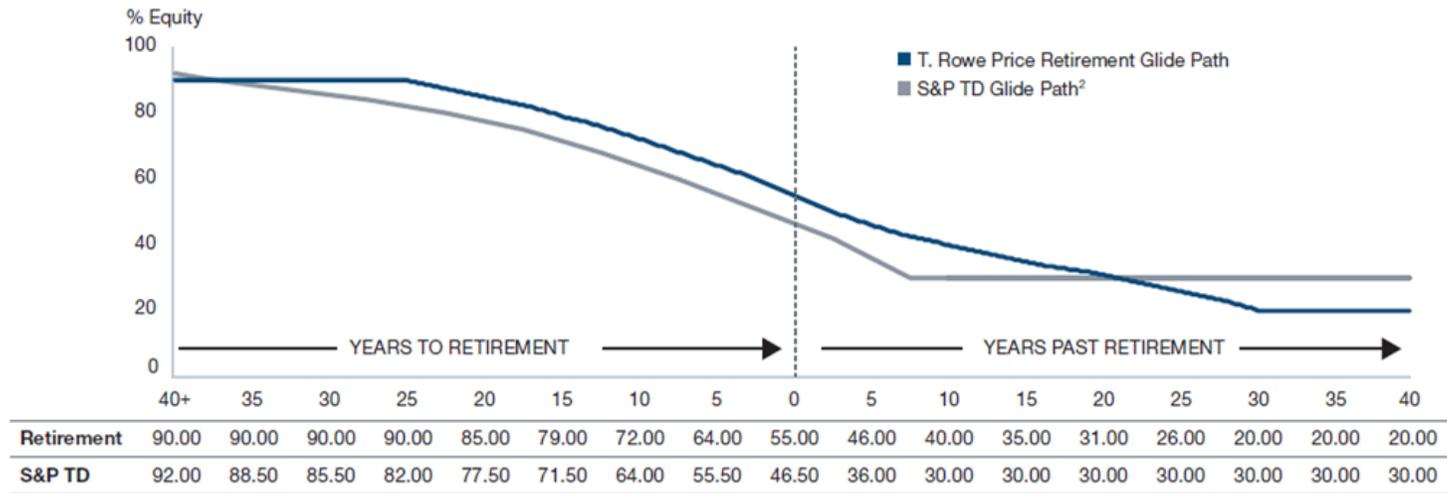
This hypothetical example shows how our glide path design can help address the longer-term risk of participants outliving their assets.



Consider a hypothetical participant who:

- Requires 90,000 USD/year in retirement income, and is concerned about outliving her savings
- Starts saving at age 25 for 40 years at a 9% contribution rate

Let's take a look at how our robust glide path design addresses her concerns—better than the average glide path on three key metrics.



Assumptions:

- Analysis assumes salary starts at 30,000 USD per year (adjusted for inflation annually¹) and a forty-year accumulation period at a 9% contribution rate.
- Participant utilizes the same glide path in distribution phase that was used during accumulation phase.
- Participant requires a post-retirement inflation-adjusted income requirement of 90,000 USD starting at age 65.

¹ Salary (30,000 USD) is adjusted annually by the percent change in the Consumer Price Index for All Urban Consumers (CPI-U), not seasonally adjusted.

² S&P Target Date Index.

Sources: S&P, T. Rowe Price. All numbers have been rounded.

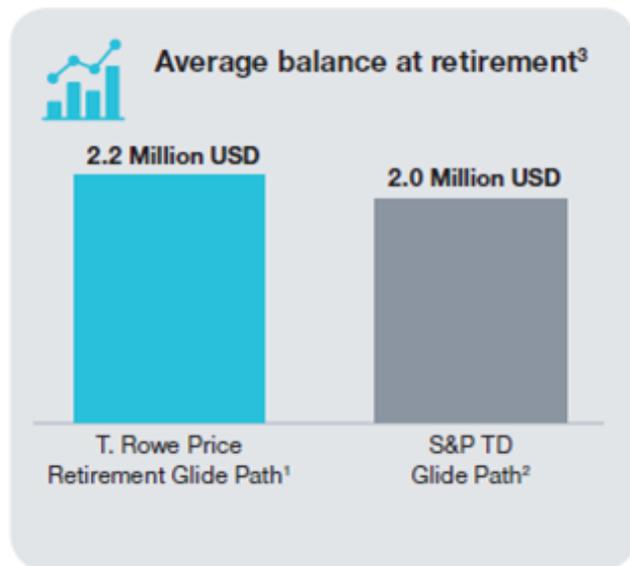
All examples are for illustrative purposes only and do not represent the performance of a particular investment. It is not possible to invest directly in an index.

A CLOSER LOOK AT THE OUTCOMES FROM A PARTICIPANT'S PERSPECTIVE

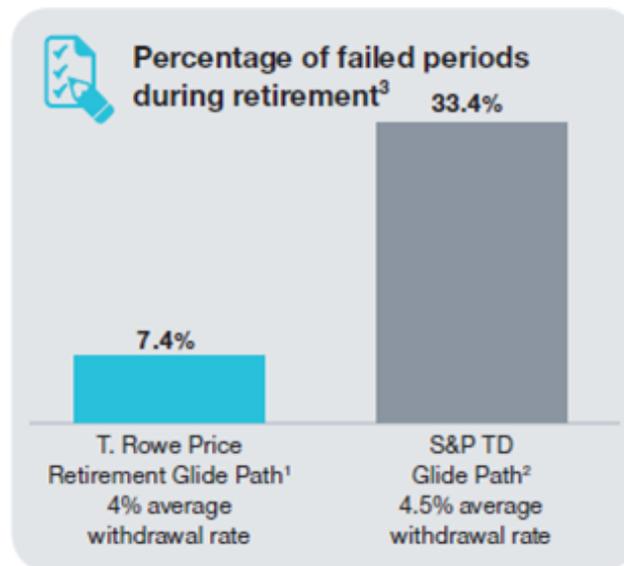
Over the life of a participant, glide path designs have a significant impact on retirement outcomes:



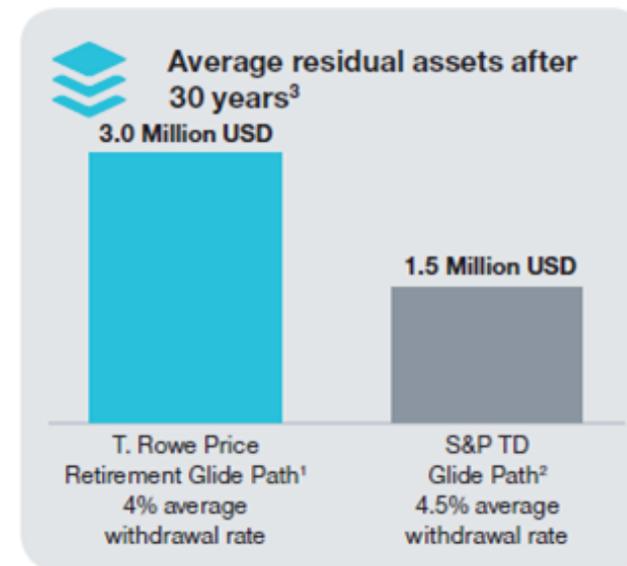
Starting Salary	YEARS SAVED	CONTRIBUTION RATE	RETIREMENT INCOME REQUIREMENT
30K USD	40 years	9%	90K USD/year for 30 years



- After 40 years, she would have saved, on average, approximately 10% more with the T. Rowe Price approach.



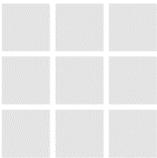
- She only would have needed, on average, to withdraw 4% with T. Rowe Price versus 4.5% with the S&P in order to meet her 90K USD/year goal.
- Without the T. Rowe Price approach, she would, on average, be approximately 4x less likely to have enough assets to withdraw the 90K USD over a 30-year period.



- After 30 years, she would have had, on average, approximately 50% more in residual assets with T. Rowe Price, giving her a cushion for unexpected expenses in retirement, like health care costs.

Failure to accurately project actual market conditions, inflation, and salary growth rates may result in over- or understatement of projected balances and/or failed periods during retirement. The failure to take into account Social Security benefits, and IRS or plan contribution limits may also result in over- or understatements of projected balances and/or failed periods during retirement.

Past performance is no guarantee of future results. The results shown on this page are based on index returns and are not indicative of any T. Rowe Price investment. Investors cannot invest directly in an index. Results do not reflect any fees or expenses. If fees had been included, results would have been lower.



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