

TDF adoption in 2019

- In 2019, 62% of Vanguard participants in defined contribution (DC) plans were invested in a professionally managed account option, including 54% who were invested in a single target-date fund (TDF). Use of TDFs in DC plans continued to grow. At year-end 2019, 94% of plans offered a TDF, more than three-quarters of all participants had a position in the funds, and the funds accounted for 37% of plans' assets and more than half of total plan contributions.

Introduction

TDFs continue to grow in importance in DC plan investment menus.¹ The funds replace the complex task of portfolio construction with a simplified choice—the choice of an expected date of retirement—and provide automatic age-based rebalancing over time. They are likely to appeal to less-sophisticated or less-engaged investors looking for a streamlined portfolio choice, as well as to sponsors seeking a default investment for automatic enrollment. TDFs are an eligible qualified default investment alternative (QDIA) under the Pension Protection Act of 2006 (PPA).²

In 2019, 62% of Vanguard participants were invested in a “professionally managed allocation”—in other words, their entire account balances were invested in a single TDF, a single target-risk or traditional balanced fund, or a managed account advisory service (**Figure 1, page 2**). Driving this development is the growing use of TDFs. Fifty-four percent of participants were invested in a single TDF in 2019—a percentage that has more than doubled over the past ten years. Among new plan entrants (those entering the plan for the first time), 83% of participants were invested in a single TDF (**Figure 2, page 2**).

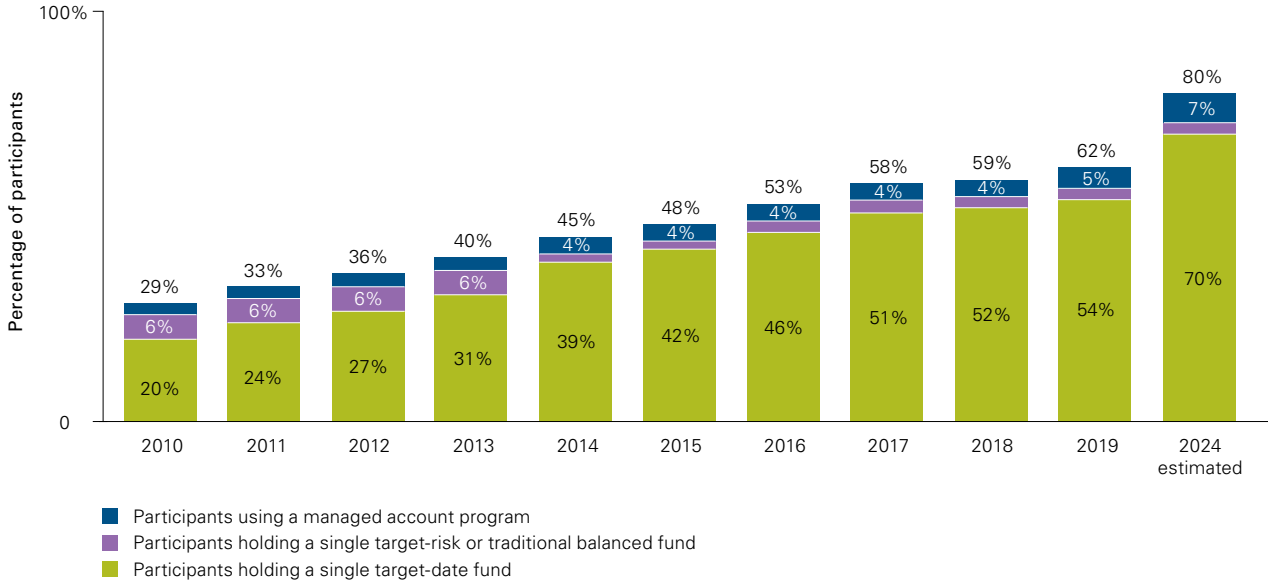
Because of the growing use of target-date options, we anticipate that 8 in 10 participants will be invested in a professionally managed option by 2024.

¹ Our analysis is based on data from plans for which Vanguard provided direct recordkeeping services. We analyzed 5.0 million participants in 1,800 DC plans.

² QDIAs include target-date funds, other balanced funds, and managed account advisory services.

Figure 1. Participants with professionally managed allocations

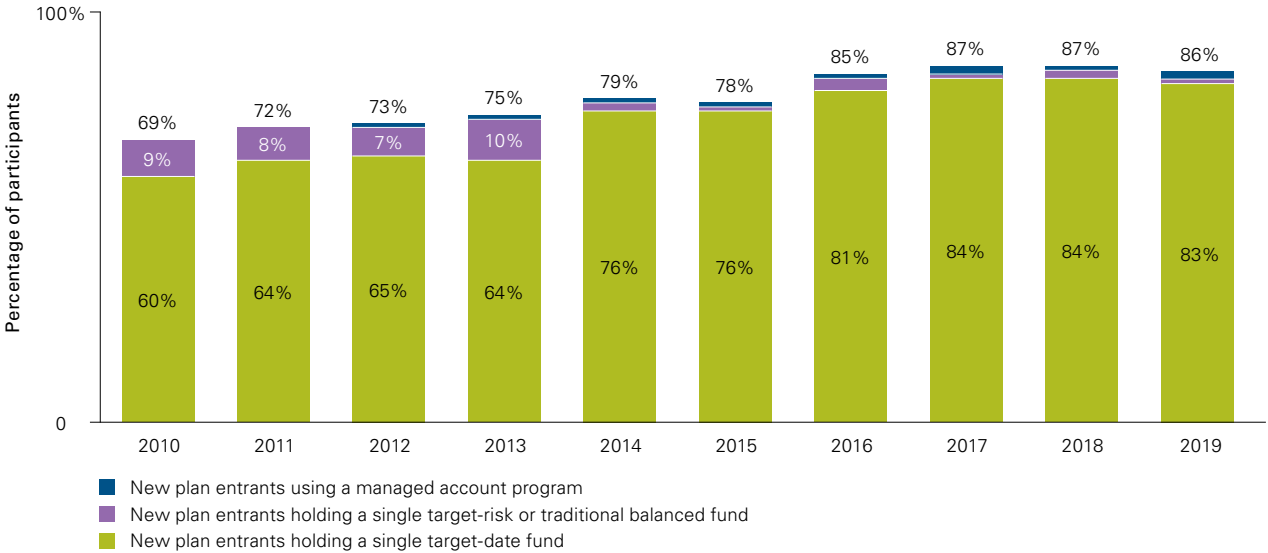
Vanguard defined contribution plans



Source: Vanguard, 2020.

Figure 2. New plan entrants with professionally managed allocations

Vanguard defined contribution plans



Source: Vanguard, 2020.

Figure 3. Plan use of target-date funds

Vanguard defined contribution plans

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Percentage of plans offering TDFs	79%	82%	84%	86%	88%	90%	92%	92%	93%	94%
Percentage of assets in TDFs	12%	14%	17%	19%	23%	26%	28%	33%	35%	37%
Percentage of contributions in TDFs	22%	27%	31%	34%	41%	46%	49%	54%	57%	59%
Percentage of participants using TDFs	42%	47%	51%	55%	64%	69%	72%	75%	77%	78%

Source: Vanguard, 2020.

Target-date fund adoption

TDF adoption by Vanguard plan sponsors grew from 79% of plans in 2010 to 94% of plans in 2019 (**Figure 3**). TDFs accounted for more than one-third of total Vanguard DC plan assets and more than half of total DC plan contributions in 2019.

Plan design and target-date funds

Automatic enrollment—and the choice of the TDF series as a default investment—is a major factor in the rise of TDFs. By year-end 2019, half of Vanguard plans had adopted automatic enrollment, with half automatically enrolling both already eligible nonparticipants and newly eligible participants.³ Adoption of automatic enrollment by Vanguard plan sponsors has almost doubled since 2010. Among plans with more than 1,000 participants, more than two-thirds had adopted the feature by 2019. Among all Vanguard participants, 6 in 10 were in plans with automatic enrollment.

Whether or not they used automatic enrollment, 91% of all Vanguard plans had selected a target-date or balanced fund as a default investment by year-end (**Figure 4**). Eighty-six percent of plans had specifically designated a QDIA, which offers plan sponsors additional fiduciary protection. Typically, these are plans using automatic enrollment or making employer contributions other than a match (such as a nonelective profit-sharing contribution). Among plans designating a QDIA, 97% of the QDIAs were target-date options and 3% were balanced funds. Ninety-eight percent of plans with automatic enrollment are using TDFs as their default fund.

Figure 4. Default fund designations, 2019

Vanguard defined contribution plans

	QDIA plans	Non-QDIA plans	All plans
Among all plans			
Target-date fund	83%	4%	87%
Balanced fund	3%	1%	4%
	86%	5%	91%
Money market or stable value		6%	6%
Total plans designating default	86%	11%	97%
Among plans designating a QDIA			
Target-date fund	97%		
Balanced fund	3%		
Total plans designating QDIA	100%		

Source: Vanguard, 2020.

³ For an in-depth analysis of automatic enrollment, see Clark, Jeffrey W. and Jean A. Young, *Automatic Enrollment: The Power of the Default*, February 2018, Vanguard research, institutional.vanguard.com.

Participant use of target-date funds

By year-end 2019, nearly all Vanguard participants (98%) were in plans offering TDFs (Figure 5). Eight in 10 participants whose plans offered TDFs had an investment in them. Among participants investing in TDFs, 60% of account balances on average were invested in these funds. Participants holding TDFs directed 81% of their 2019 total contributions to TDFs.

Participants invest in TDFs in one of two ways. “Pure investors” are those who hold only a single TDF. They accounted for 69% of all target-date investors in 2019. Of this total, about 6 in 10 joined their plan under automatic enrollment, where they typically were enrolled in a single fund by default, and about 4 in 10 joined their plan through voluntary enrollment, where they typically actively chose a single TDF. Our research shows that pure target-date investors are more likely to be younger, lower-wage, shorter-tenured participants with lower 401(k) account balances than other investors. Sixty-three percent of single-TDF investors were younger than 45.

The remaining target-date investors are “mixed investors.” They hold a TDF in combination with other investments (or, rarely, hold multiple TDFs). In 2019, 31% of all target-date investors were mixed investors. Mixed target-date investors appear very much like non-target-date investors in terms of their demographic and portfolio characteristics.

Our research indicates that about half of mixed investors arise because of plan sponsor action, including employer contributions in company stock, nonelective contributions to the plan’s default fund, recordkeeping corrections applied to the plan’s default fund, or mapping of assets from an existing investment option to a target-date default because of a plan menu change.

The remaining mixed investors intentionally construct a portfolio of both target-date and non-target-date strategies. Many of them are pursuing what appear to be reasonable diversification strategies, although they do not fit within the “all-in-one” portfolio approach of target-date funds. Vanguard survey results show that most target-date investors understand the basic risk and return features of TDFs. Large percentages of participants report that they held other assets to make their portfolio allocation more conservative, more aggressive, or more customized. Forty percent cited diversification as a reason for holding additional investments along with a TDF.

Equity allocation extremes

Increased TDF adoption by sponsors and participants is reshaping participant portfolios. One of the benefits of TDFs is that they eliminate extreme equity allocations. “Do-it-yourself” participants tend to hold greater extremes in equity exposure (Figure 6). About 2 in 10 do-it-yourself investors hold extreme portfolios (no equities or only equities). Investors using professional management avoid extreme positions because professionally managed options include both equity and fixed income asset classes. Do-it-yourself investors exhibit less variation in equity exposure by age, while single-TDF investors’ equity exposures do vary by age.

Among pure target-date investors, the vast majority have equity allocations ranging from 51% to 90% of their portfolios. A large group of pure target-date investors has equity allocations in the 81% to 90% range. This phenomenon reflects two facts: (1) automatic enrollment in TDFs typically applies to newly eligible plan participants, who are disproportionately younger than 45; and (2) in voluntary enrollment plans, a single TDF is a popular strategy among new hires as well.

Figure 5. Participant use of target-date funds

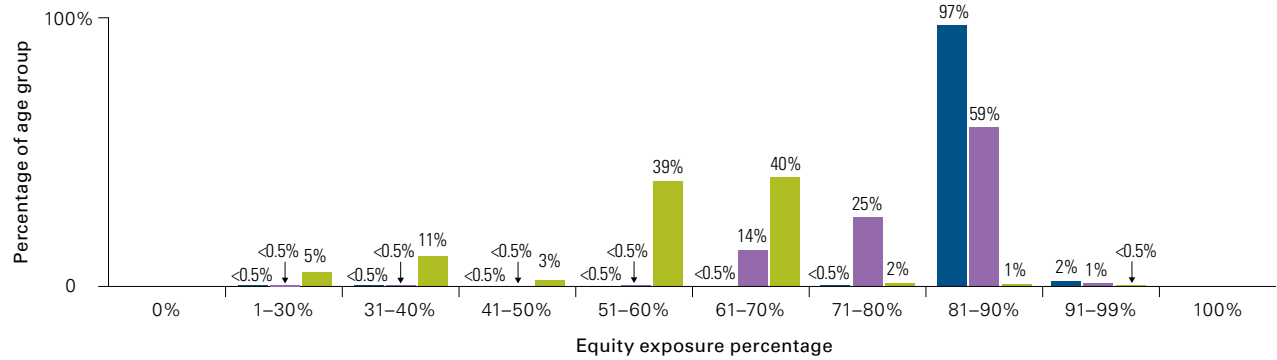
Vanguard defined contribution plan participants using target-date funds

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Percentage offered TDFs	86%	87%	88%	90%	97%	98%	97%	97%	97%	98%
Percentage using TDFs when offered	48%	54%	58%	61%	66%	70%	74%	77%	79%	80%
Percentage of account balances in TDFs	41%	43%	46%	48%	50%	51%	53%	57%	58%	60%
Percentage of contributions in TDFs	67%	71%	72%	74%	75%	76%	78%	80%	81%	81%
Percentage with 100% of assets in TDFs	49%	53%	56%	58%	62%	63%	66%	69%	70%	71%
Percentage with 100% of contributions in TDFs	64%	69%	69%	71%	69%	73%	76%	79%	80%	79%
Percentage holding a single TDF	48%	52%	54%	56%	60%	62%	65%	68%	68%	69%

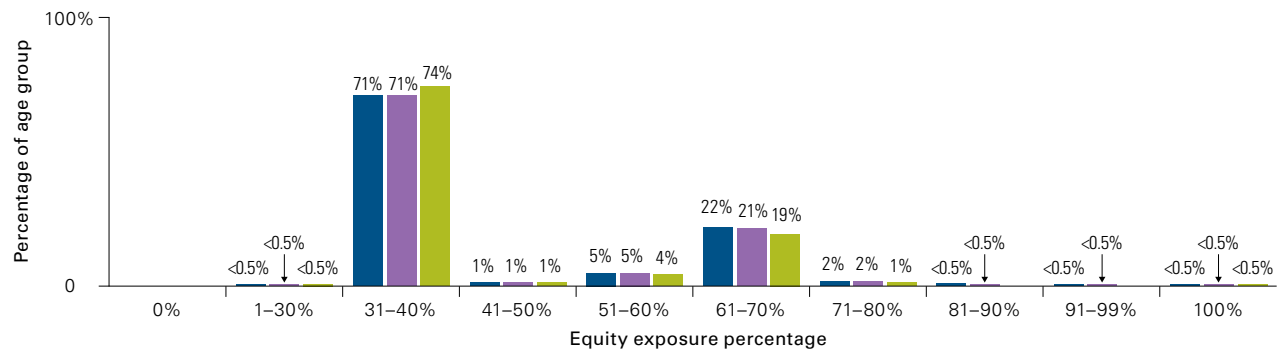
Source: Vanguard, 2020.

Figure 6. Distribution of equity exposure by investor type, 2019
Vanguard defined contribution plan participants

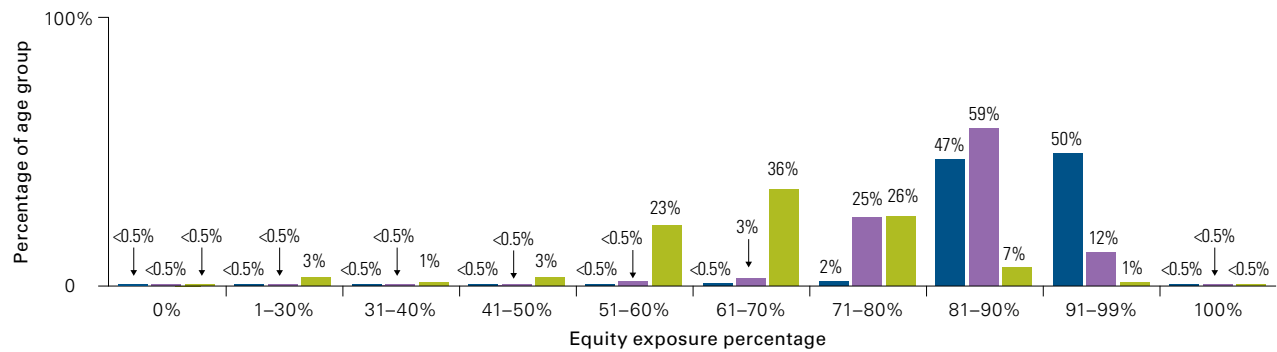
A. Single target-date participants (54% of all participants)



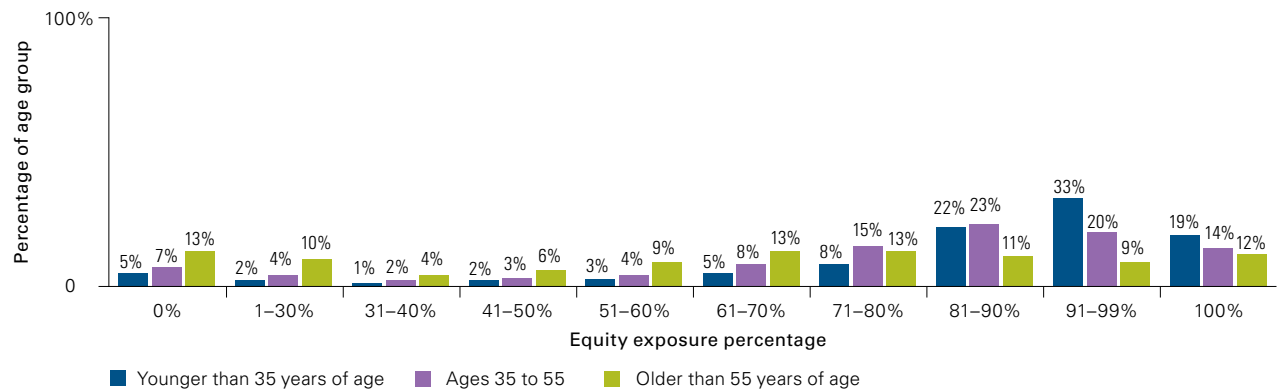
B. Single balanced fund participants (3% of all participants)



C. Managed account participants (5% of all participants)



D. All other participants (38% of all participants)



Source: Vanguard, 2020.

Dispersion of outcomes

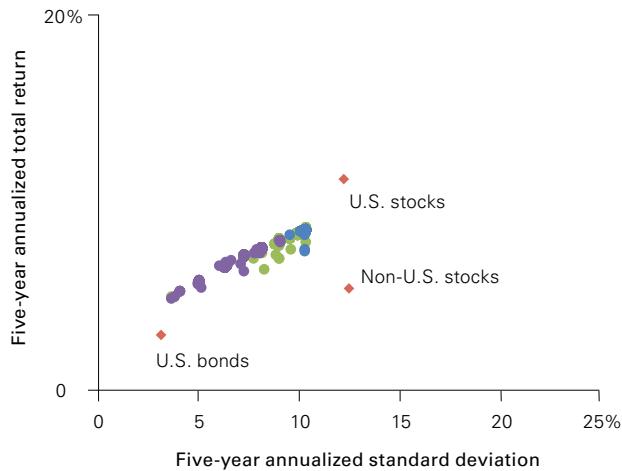
During the five-year period ended 2019, outcomes for single target-date investors were distributed among major market indexes (Figure 7, Panel A). They were slightly upward sloping, reflecting a positive equity risk premium. These results are consistent with the fact that most of the target-date portfolios in our sample are a specific combination of indexed U.S. equities, international equities, U.S. bonds, and international bonds. In the target-date scatter plot, younger participants (represented by blue dots and in long-dated portfolios) are to the right of the chart; older participants (represented by purple dots and in near-dated portfolios) are to the left.

The results for single balanced fund investors reflect the fact that most balanced funds have similar equity allocations, typically around 35% to 65% of assets (Figure 7, Panel B). Managed account investors are more dispersed, reflecting the customized nature of managed account advice (Figure 7, Panel C). The greatest dispersion of risk/return outcomes is among participants making their own investment choices (Figure 7, Panel D). Over time, because of the growing use of professionally managed allocations in DC plans, this population is expected to decline.

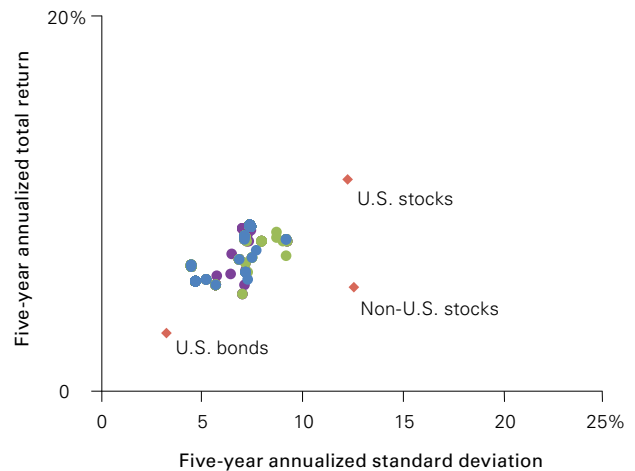
Figure 7. Risk and return characteristics 2015–2019

Defined contribution plan participants for the five-year period ended December 31, 2019

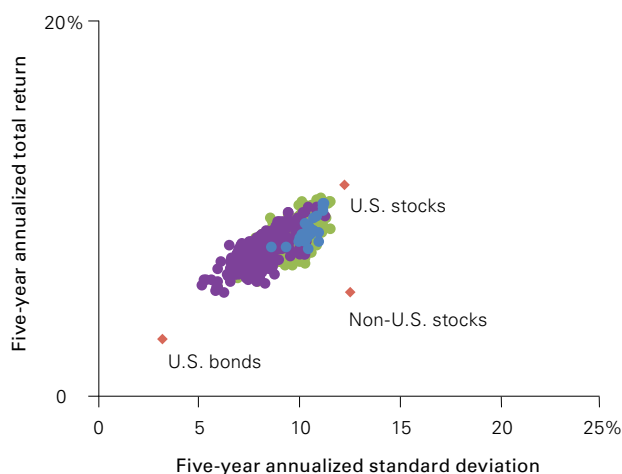
A. Single target-date participants



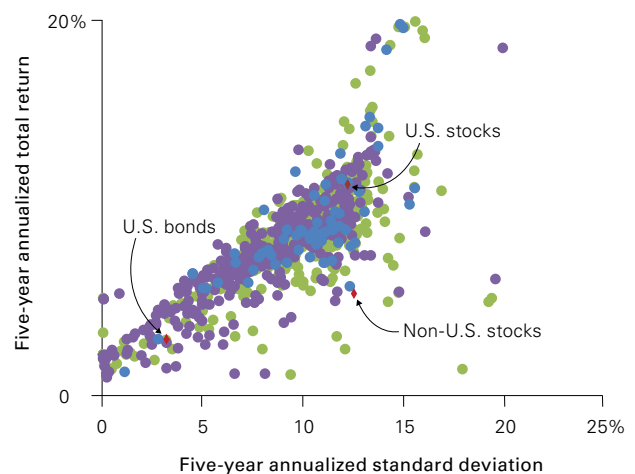
B. Single balanced fund participants



C. Managed account participants



D. All other participants



● Younger than 35 years of age ● Ages 35 to 55 ● Older than 55 years of age

Note: Each panel includes 1,000 random sample of participant accounts drawn from respective samples. Each panel excludes 1/2% top and 1/2% bottom outliers for both risk and return, for a net sample of 980 observations in each panel.

Source: Vanguard, 2020.

Target-date fund selection

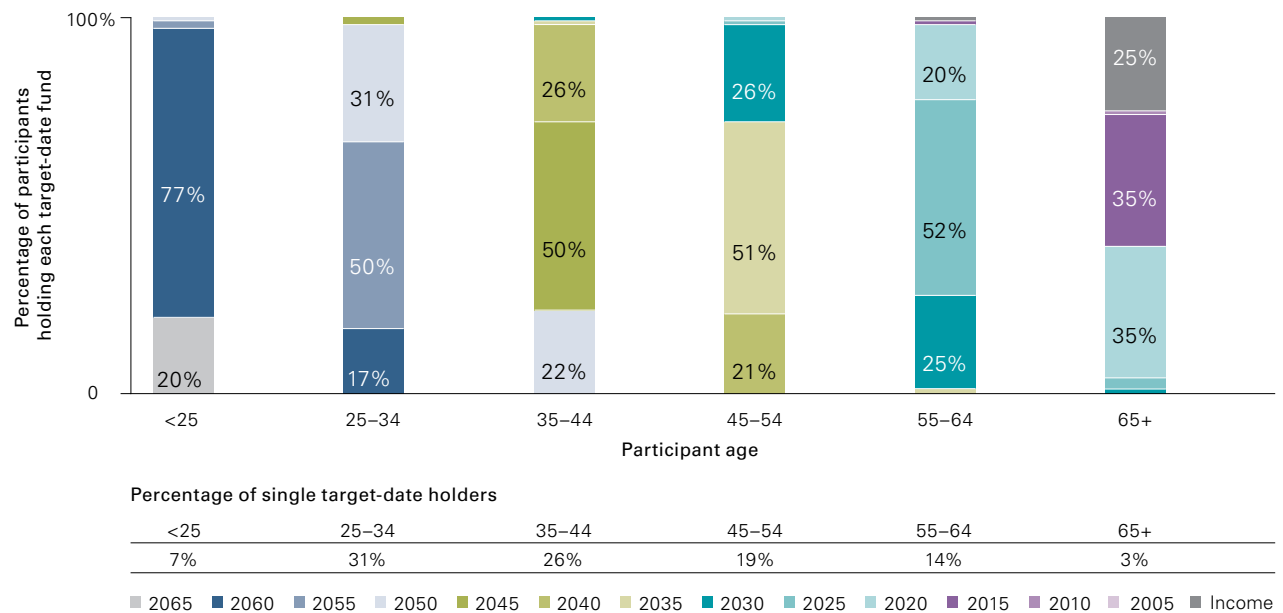
Single-TDF investors appear to select, or are defaulted into, a TDF with an appropriate target date (**Figure 8**). Eight in 10 participants under age 25 are invested in a 2060 TDF, and most of the remaining participants use a 2065 TDF. Similarly, more than half of participants ages 55 to 64 are invested in a 2025 TDF, with most of the remaining participants using either the 2020 or 2030 TDF.

Account balances

Average and median account balances for single-TDF investors and balanced fund investors are about 40% of the assets accumulated by all participants (**Figure 9**). As noted above, our research shows that these investors are more likely to be younger, lower-wage, shorter-tenured participants. Managed account investors have balances that are higher, reflecting longer tenure and longer plan participation.

Figure 8. Target-date fund utilization by age, 2019

Vanguard defined contribution plan participants holding a single target-date fund (54% of all participants)



Source: Vanguard, 2020.

Figure 9. Account balance by investor type, 2019

Vanguard defined contribution plan participants

	Percentage of participants	Account balance	
		Average	Median
Professionally managed allocations			
Single target-date investors	54%	\$41,596	\$10,913
Single balanced fund investors	3%	\$41,025	\$9,853
Managed account investors	5%	\$166,510	\$78,710
All other investors	38%	\$195,634	\$80,132
Total	100%	\$ 106,478	\$ 25,775

Source: Vanguard, 2020.

Implications

TDFs continue to reshape investment patterns in DC plans in fundamental ways. Three factors are driving their growing use by plan sponsors and participants: their simplified approach to investment decision-making and portfolio construction, the growing use of automatic enrollment, and their designation as a QDIA under the PPA.

By design, the funds lead to a disciplined approach to portfolio risk-taking, with risk levels falling as a participant ages. They also help remedy the problem of extreme allocations found among many DC plan participants. For these reasons, their adoption is likely to continue to rise in the coming years.

Connect with Vanguard® > [vanguard.com](https://www.vanguard.com)

Vanguard research authors:

Jeffrey W. Clark

Galina Young

Jean A. Young

Vanguard research >

Vanguard Investment Strategy Group

All investing is subject to risk, including the possible loss of the money you invest.

Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year (the target date) when an investor in the fund would retire and leave the workforce. The fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in the target-date fund is not guaranteed at any time, including on or after the target date.

Vanguard is responsible only for selecting the underlying funds and periodically rebalancing the holdings of target-date investments. The asset allocations Vanguard has selected for the Target Retirement Funds are based on our investment experience and are geared to the average investor. Regularly check the asset mix of the option you choose to ensure it is appropriate for your current situation.



Vanguard Research

P.O. Box 2600
Valley Forge, PA 19482-2600

© 2020 The Vanguard Group, Inc.
All rights reserved.
Vanguard Marketing Corporation, Distributor.

TDFADOPT 022020