How America Saves 2017

Small business edition

2017 Vanguard Retirement Plan Access™
supplement to *How America Saves*

Vanguard®

Introduction

Defined contribution (DC) retirement plans are the centerpiece of the private-sector retirement system in the United States. More than 94 million Americans are covered by DC plans, with assets now in excess of $7.0 trillion.[1] Vanguard is at the forefront in the DC marketplace with more than $1 trillion in DC plan assets under management, as of March 31, 2017. In our full-service DC recordkeeping business alone, we serve more than 8,500 plan sponsors and more than 4.6 million participants.

Launched in 2011, Vanguard Retirement Plan Access™ (VRPA) is a comprehensive service for retirement plans with up to $20-plus million in assets. Through VRPA, we served 6,500 plan sponsors with 270,000 participants as of year-end 2016.

The Small Business Administration reports that small businesses represent 99.7% of all employer firms, and they employ half of all private-sector employees. Accordingly, to help small-business DC plan sponsors understand how their plans compare with other small-business plans, we are pleased to add this VRPA supplement to our annual series of *How America Saves* benchmarking reports. As an industry leader, Vanguard recognizes that it is important to have a detailed understanding of DC plans and the role they play in the U.S. retirement system. We believe this information can help you make more effective plan decisions and will thus serve as a valuable reference tool as you continue to develop your retirement programs. ★

1 U.S. Department of Labor, *Private Pension Plan Bulletin Historical Tables and Graphs*, September 2016; and Investment Company Institute, *Quarterly Retirement Market Data, Fourth Quarter 2016*, March 2017.

The benchmark population

The benchmark population includes all plans and participants for which VRPA provides recordkeeping (Figure 1). Most figures in this analysis compare data for two distinct VRPA populations: established plans and start-up plans. Start-up plans are plans that were begun within the past three years. Established plans are plans that were started more than three years ago.

The average VRPA plan had 42 participants and plan assets of $2.3 million. Established plans had four times more participants than start-up plans. As expected, start-up plans had fewer assets than established plans.

Plan design

DC plans with employee-elective deferrals can be grouped into four categories based on the type of employer contributions made to the plan: (1) plans with matching contributions, (2) plans with nonmatching employer contributions, (3) plans with both matching and nonmatching contributions, and (4) plans with no employer contributions at all. Nonmatching contributions are typically structured as a variable or fixed profit-sharing contribution.

In employee-contributory DC plans, employer contributions are typically a secondary source of plan funding. Both the type and size of employer contributions vary substantially across plans.

Eligibility

In 2016, 1 in 5 (21%) VRPA plans allowed employees to make voluntary contributions immediately after they joined their employer (Figure 2). At the other extreme, 41% of plan sponsors required eligible employees to have one year of service before they could make employee-elective contributions to their plans. Start-up plans were more likely to allow employees to make voluntary contributions immediately than established plans. Established plans were more likely to require employees to have one year of service before they could make employee-elective contributions to their plan.

Eligibility for employer-matching contributions was remarkably similar to eligibility for employee voluntary contributions. However, eligibility for nonmatching employer contributions had a longer waiting period. More than half of plan sponsors required a one-year waiting period for these contributions.

Figure 1. Population

Vanguard Retirement Plan Access defined contribution plans

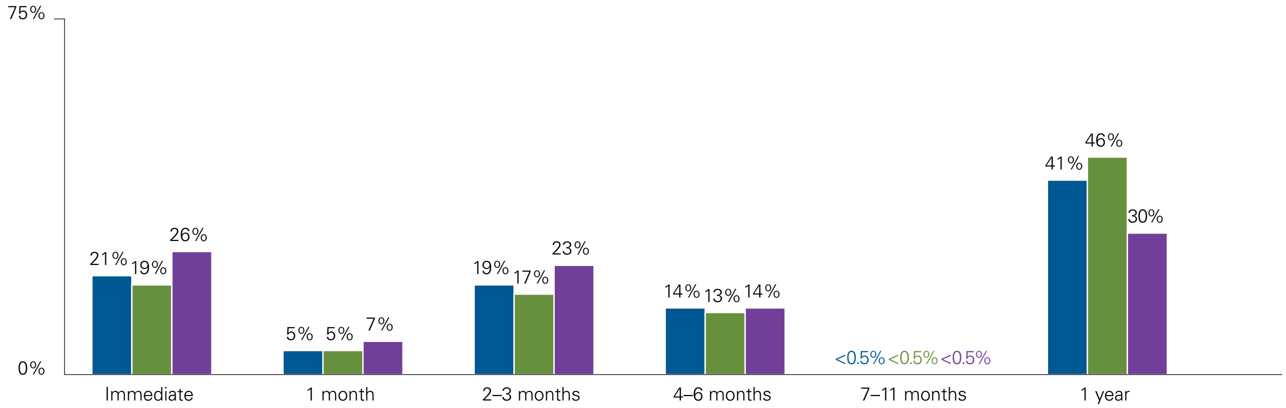
	2012	2013	2014	2015	2016		
	All	All	All	All	All	Established	Start-up
Number of plans	445	1,418	2,666	4,452	6,506	4,509	1,997
Number of participant accounts	16,436	61,746	125,136	199,242	273,045	223,886	49,159
Average number of plan participants	37	44	47	45	42	50	25
Median number of plan participants	17	20	21	20	19	25	11
Average plan assets	$1.9 million	$2.4 million	$2.5 million	$2.3 million	$2.3 million	$3.1 million	$500,000
Average participant age	43	43	43	43	43	44	40
Median participant age	42	42	42	42	42	43	37
Average participant tenure	7	7	7	7	7	7	4
Median participant tenure	5	4	4	4	4	4	2
Median eligible employee income	$62,000	$53,000	$47,000	$47,000	$49,000	$49,000	$47,000
Median participant income	$74,000	$67,000	$58,000	$59,000	$64,000	$64,000	$67,000
Median nonparticipant income	$42,000	$35,000	$29,000	$30,000	$30,000	$30,000	$23,000

Source: Vanguard, 2017.

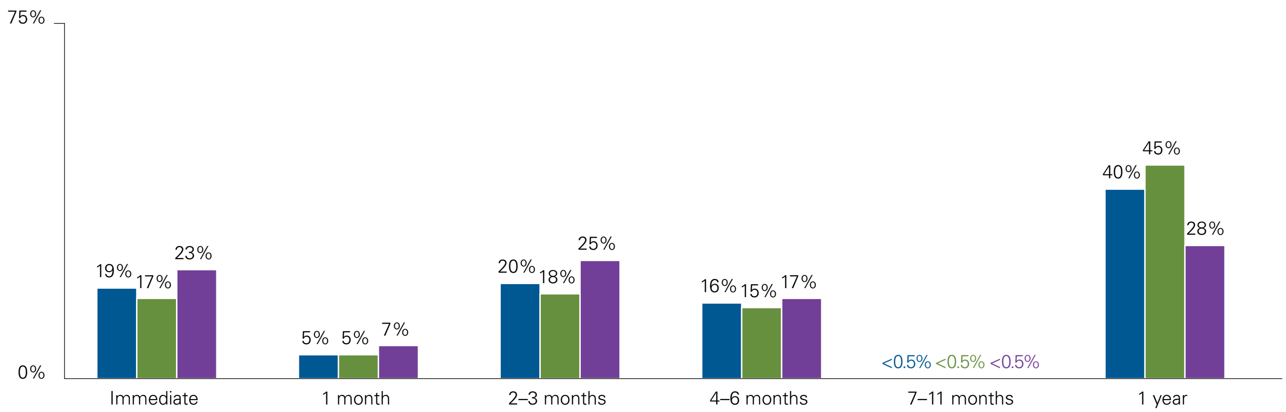
Figure 2.	Eligibility, 2016

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals

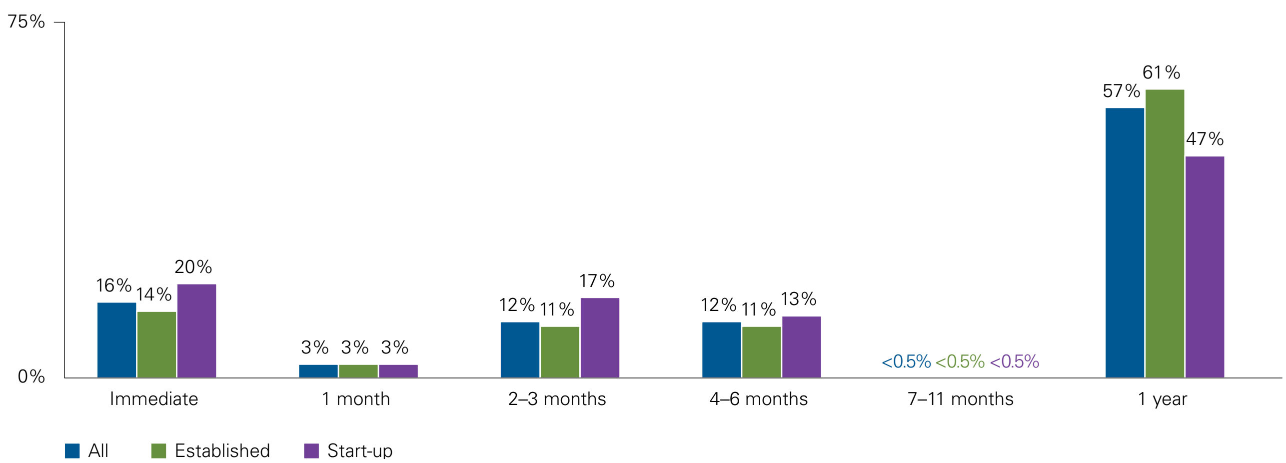
Employee-elective contributions



Employer-matching contributions



Employer nonmatching contribution



Source: Vanguard, 2017.

Vesting

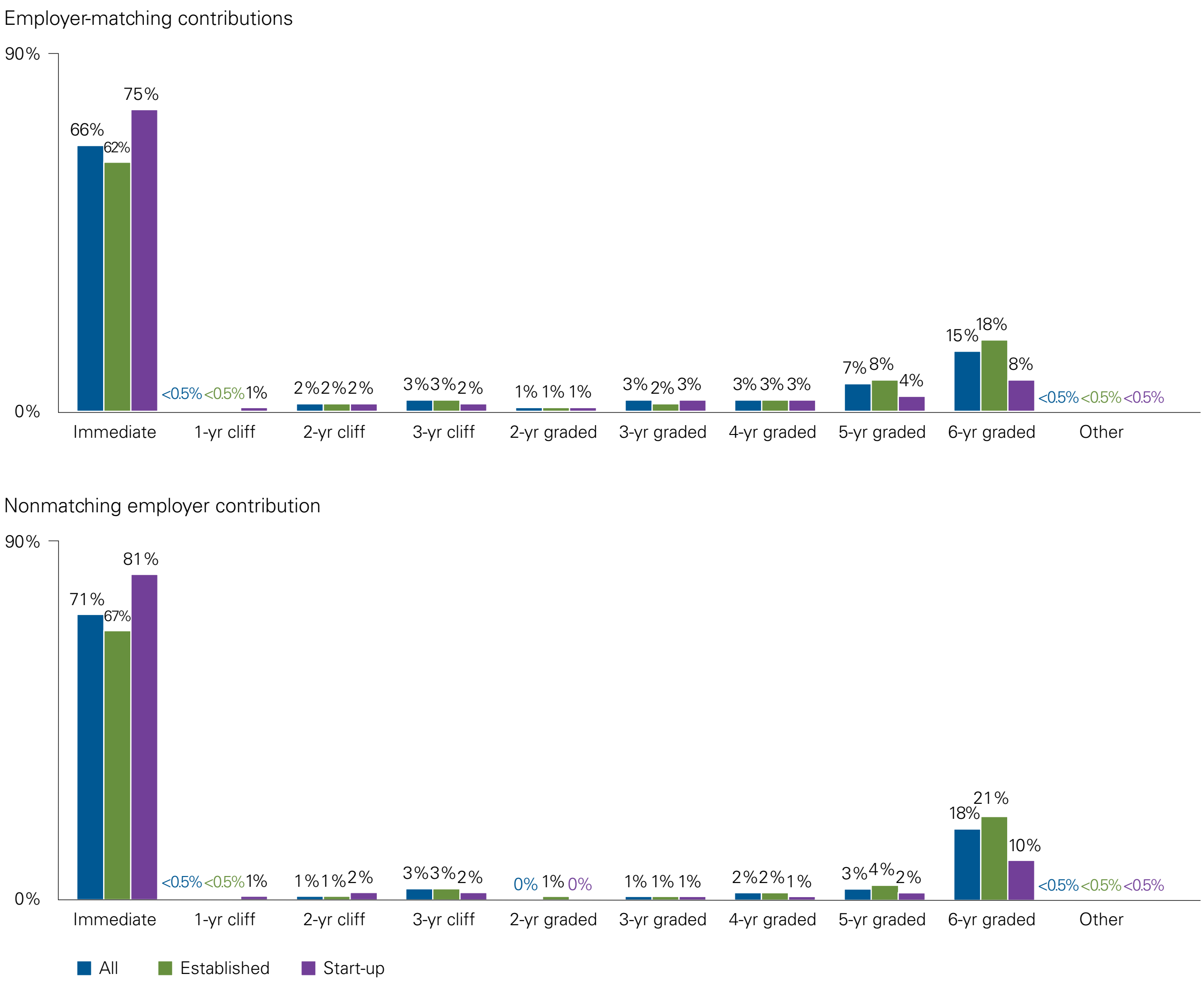
Voluntary employee contributions are immediately vested. Two-thirds of plan sponsors also immediately vested employer matching contributions (**Figure 3**). Seven in 10 employers also immediately vested nonmatching employer contributions.

Employer contributions

Forty-four percent of VRPA plans provided only a matching contribution in 2016 (**Figure 4**). Nine percent of plans provided both a matching and a nonmatching employer contribution. One in 5 plans provided only a nonmatching employer contribution. Finally, one-quarter of plans made no employer contributions of any kind in 2016.

Figure 3. Vesting

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals



Source: Vanguard, 2017.

Safe harbor designs

Two-thirds of VRPA plans with an employer contribution had adopted a safe harbor design (Figure 5). The most common was a safe harbor match with a value of 4% on up to the first 5% of employee contributions (42% of safe harbor plans).

Eleven percent of VRPA plans provided a safe harbor match with a value greater than 4% on up to the first 6% of employee contributions. Nearly half of VRPA plans adopted a safe harbor nonelective employer contribution with a 3% value or higher.

Figure 4. Types of employer contributions, 2016

Vanguard Retirement Plan Access defined contribution plans

	All	Established	Start-up
Matching contribution only	44%	44%	44%
Nonmatching contribution only	22	23	20
Both matching and other nonmatching contributions	9	10	5
	75	77	69
No employer contribution	25	23	31

Source: Vanguard, 2017.

Figure 5. Safe harbor designs, 2016

Vanguard Retirement Plan Access defined contribution plans with employer contributions

	All	Established	Start-up
Percentage of plans with employer contributions with safe harbor designs	66%	63%	74%
Type of safe harbor contribution			
Automatic enrollment plans with a 3.5% employer match value	<0.5%	<0.5%	<0.5%
Employer match with a 4% value	42	41	44
Employer match with a value >4%	11	11	12
Nonelective employer contribution with a 3% value	20	19	24
Nonelective employer contribution with a value >3%	27	29	20

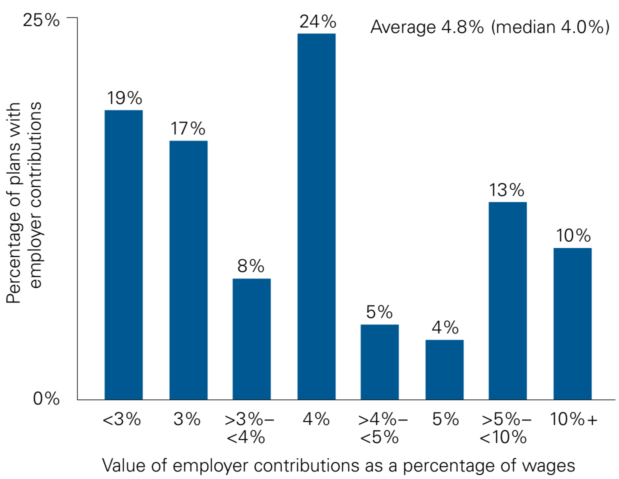
Source: Vanguard, 2017.

Total employer contributions

As noted previously, three-quarters of VRPA plans provided either an employer match or nonelective contribution, or both, in 2016. The average value of the total employer contribution was 4.8% in 2016, and the median value was 4.0% (**Figure 6**). However, the value of employer contributions varies significantly from plan to plan. These contributions varied from less than 3% of wages for 1 in 5 plans, to 10% of wages or more for 1 in 10 plans. The most common employer contribution had a value of 4% of wages.

Figure 6. Total employer contributions, 2016

Vanguard Retirement Plan Access defined contribution plans with employer contributions



Source: Vanguard, 2017.

Automatic enrollment design

Automatic enrollment plan design reframes the savings decision. Instead of making a positive election to join the plan, employees are automatically enrolled and must take action to opt out. Automatic enrollment or autopilot designs are an important plan design feature that can increase plan participation and plan deferral rates. With an autopilot design, individuals are automatically enrolled in the plan, their deferral rates are automatically increased each year, and their contributions are automatically invested in a qualified default investment alternative (QDIA).

As of December 2016, 15% of VRPA plans permitting employee-elective deferrals had adopted automatic enrollment (**Figure 7**). Six in 10 of these plans automatically enroll participants at a 3% contribution rate. More than one-third of these plans automatically increase the contribution rate annually. Nearly all of these plans use a target-date or other balanced investment strategy as the default fund, with 97% choosing a target-date fund as the default.

Participation rates

A plan's participation rate—the percentage of eligible employees who choose to make employee-elective contributions—remains the broadest metric for gauging 401(k) plan performance. The most common measure of participation rates is calculated by taking the average of participation rates among a group of plans. We refer to this as the plan-weighted participation rate. In 2016, VRPA's plan-weighted participation rate was 71% (**Figure 8**).

A second measure of participation rates considers all employees in VRPA plans as if they were in a single plan. We refer to this as the participant-weighted participation rate. Across the universe of VRPA participants, 6 in 10 eligible employees are enrolled in their employer's voluntary savings program.

Plans with automatic enrollment have higher participation rates than plans with voluntary enrollment. The participant-weighted participation rate is 44% higher in plans with automatic enrollment.

Figure 7. Automatic enrollment design

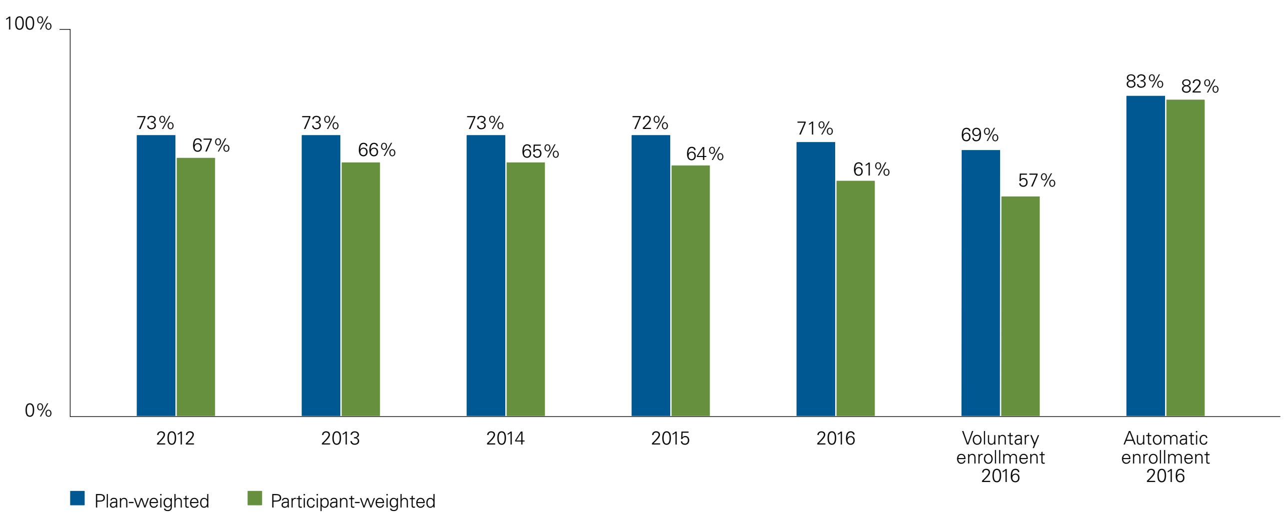
Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals

	2012	2013	2014	2015	2016		
	All	All	All	All	All	Established	Start-up
Automatic enrollment adoption							
Number plans (n)	65	261	479	697	977	687	290
Percentage of plans	15%	19%	18%	16%	15%	15%	15%
Default automatic enrollment rate							
1 percent	3%	2%	3%	3%	3%	3%	3%
2 percent	8	10	9	9	7	8	6
3 percent	72	65	62	59	57	58	55
4 percent	8	7	9	9	9	9	8
5 percent	6	11	10	10	11	10	14
6 percent or more	3	5	7	10	13	12	14
Default automatic enrollment rate							
1 percent	54%	40%	37%	35%	37%	37%	36%
2 percent	1	1	1	1	1	1	1
3 percent	0	0	0	<0.5	<0.5	<0.5	0
Not offered	45	59	62	64	62	62	63
Default fund							
Target-date fund	95%	95%	95%	96%	97%	96%	98%
Other balanced fund	3	4	4	3	2	3	1
Model portfolio	2	<0.5	1	1	1	1	1
Money market or stable value fund	0	<0.5	<0.5	<0.5	<0.5	<0.5	0

Source: Vanguard, 2017.

Figure 8. Participation rates

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals



Source: Vanguard, 2017.

Participation rates by employee demographics
Participation rates vary considerably by employee demographics (Figure 9). Income is one of the primary determinants of plan participation rates. Only 39% of eligible employees with income of less than $30,000 contributed to their employer's DC plan in 2016, while 85% of employees with income of more than $100,000 elected to participate. Even among the highest-paid employees, 15% of eligible workers still failed to take advantage of their employer's DC plan.

Participation rates were lowest for employees younger than 25. Only 38% of employees younger than 25 made deferrals to their employer's plan in 2016, while about 7 in 10 eligible employees between ages 45 and 64 saved for retirement in their employer's plan. Tenure had a significant influence on plan participation. In 2016, only about half of employees with less than two years on the job participated in their employer's plan, while 8 in 10 employees with tenure of ten years or more participated.

Figure 9. Participation rates by participant demographics

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals

	2012	2013	2014	2015	2016		
	All	All	All	All	All	Voluntary enrollment	Automatic enrollment
All	67%	66%	65%	64%	61%	57%	82%
Income							
<$30,000	51%	49%	49%	45%	39%	33%	72%
$30,000–$49,999	64	66	66	64	62	57	85
$50,000–$74,999	76	76	77	71	74	70	89
$75,000–$99,999	81	82	82	80	79	77	91
$100,000+	87	87	86	86	85	83	92
Age							
<25	46%	46%	48%	45%	38%	26%	73%
25–34	63	63	63	61	58	51	81
35–44	67	67	66	65	63	59	83
45–54	73	70	69	69	67	64	84
55–64	75	72	70	71	70	68	86
65+	66	62	60	60	60	57	78
Gender							
Male	67%	66%	67%	65%	63%	59%	82%
Female	68	66	64	63	61	57	82
Job tenure (years)							
0–1	56%	57%	58%	55%	47%	36%	76%
2–3	59	62	61	62	62	57	87
4–6	69	66	65	66	69	66	92
7–9	77	72	70	70	72	69	94
10+	81	80	78	78	79	78	93

Source: Vanguard, 2017.

Impact of automatic enrollment on plan participation
Employees subjected to an automatic enrollment feature have an overall participation rate of 82%, compared with a participation rate of only 57% for employees hired under plans with voluntary enrollment.

Plans with automatic enrollment have higher participation rates across all demographic variables. For individuals earning less than $30,000 in plans with automatic enrollment, the participation rate is more than double that of plans with voluntary enrollment.

Participation rates also vary by industry group (Figure 10). Employees in the architectural, engineering, and related services and the law firms groups had the highest participation rate, with about 8 in 10 workers participating in their employer's plan. Employees in the media, entertainment, and leisure group had the lowest participation rate at 35%.

Figure 10. Participation rates by industry sector, 2016

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals

	Plan-weighted	Participant-weighted	Voluntary enrollment	Automatic enrollment
Overall	71%	61%	57%	82%
Industry group				
Architectural, engineering, and related services	80%	79%	76%	88%
Law firms	78	79	78	84
Finance, insurance, and real estate	77	76	74	84
Technology	73	73	67	87
Business, professional, and nonprofit	73	63	57	86
Wholesale and retail trade	68	63	57	80
Manufacturing	69	62	60	72
Ambulatory health care	71	61	59	71
Agriculture, mining, and construction	66	60	55	84
Transportation, utilities, and communications	62	52	50	74
Education and health	63	43	37	90
Media, entertainment, and leisure	60	35	30	81

Source: Vanguard, 2017.

Contributions

Employee deferrals

In a typical DC plan, employees are the main source of funding, while employer contributions play a secondary role. Thus, the level of participant deferrals is a critical determinant of whether the DC plan will generate an adequate level of savings for retirement. VRPA deferral rates are drawn from recordkeeping data and exclude eligible employees not contributing to their plans.

VRPA participants saved 6.9% of their income, on average, in their employer's plan in 2016 (**Figure 11**). The median participant deferral rate was 5.0%, meaning that half of participants were saving above this rate and half were saving below it. Plans with voluntary enrollment have average deferral rates that are 28% higher and median deferral rates that are 29% higher than plans with automatic enrollment.

Deferral rates by participant demographics

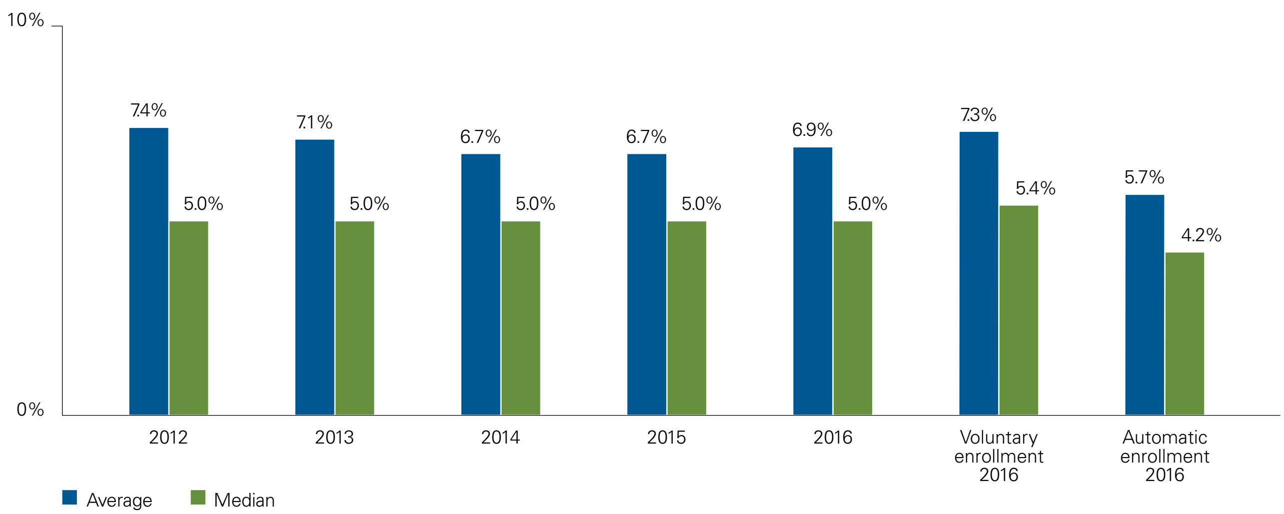
As with plan participation rates, participant demographics have a strong influence on deferral rates (**Figure 12**). Income is the primary determinant of deferral rates, which generally rise with income, but then decline as highly paid participants reach either the statutory maximum contribution level or plan-imposed caps on contributions related to nondiscrimination testing. The statutory maximum contribution was $18,000 ($24,000 for participants 50 and older), and a highly compensated employee was one who earned $120,000 or more in 2015 (based on the prior year for 2016).

In 2016, participants with incomes between $30,000 and $49,999 had deferral rates averaging 5.5%, while participants earning $75,000 to $99,999 had deferral rates of 7.6%—a savings rate that is about 40% higher. Deferral rates were 8.0% for participants earning $100,000 or more. Participants in the VRPA population earning less than $30,000 have higher deferral rates averaging 6.8%. However, a minority of these participants (3%) have very high deferral rates. When we exclude participants deferring more than 50%, then participants earning less than $30,000 had deferral rates averaging 5.5%.

Age is another important variable influencing savings. In 2016, deferral rates were lowest for participants younger than 25. This group saved only 4.9% of income. Deferral rates for participants ages 55 to 64 were nearly 80% higher, averaging 8.7%. Deferral rates also rose directly with employee tenure.

Figure 11. Deferral rates

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals



Source: Vanguard, 2017.

Impact of automatic enrollment

Plan design, specifically the predominant use of a 3% default deferral rate, means participants enrolled in plans through automatic enrollment are saving less. Participants joining a plan under an automatic enrollment feature have an average deferral rate of 5.7%, compared with 7.3% for participants joining plans under voluntary enrollment—a deferral rate that is 22% lower. This is especially remarkable in light of the fact that participants earning less than $30,000 save nearly twice as much, on average, under voluntary enrollment designs. This suggests that higher default deferral rates would be amenable to plan participants in automatic enrollment designs.

Our research on automatic enrollment indicates that "quit rates" do not deteriorate when higher default percentages are used to enroll employees.[2]

Figure 12. Deferral rates by participant demographics

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals

	2012	2013	2014	2015	2016		
	All	All	All	All	All	Voluntary enrollment	Automatic enrollment
All	7.4%	7.1%	6.7%	6.7%	6.9%	7.3%	5.7%
Income							
<$30,000	9.0%	7.5%	6.3%	5.9%	6.8%	8.3%	4.5%
$30,000–$49,999	6.0	6.4	5.4	5.4	5.5	5.9	4.5
$50,000–$74,999	7.0	6.9	6.6	6.5	6.5	6.8	5.6
$75,000–$99,999	7.6	7.7	7.7	7.6	7.6	7.9	6.7
$100,000+	7.7	7.7	7.8	8.0	8.0	8.1	7.6
Age							
<25	5.3%	4.8%	4.8%	4.6%	4.9%	5.6%	4.1%
25–34	6.2	5.7	5.5	5.5	5.7	6.0	4.9
35–44	6.9	6.7	6.3	6.2	6.4	6.6	5.8
45–54	7.7	7.6	7.1	7.2	7.3	7.6	6.5
55–64	9.5	9.2	8.5	8.6	8.7	8.9	7.6
65+	11.1	11.0	10.5	10.5	10.4	10.5	9.4
Gender							
Male	7.3%	7.3%	6.7%	6.7%	6.9%	7.3%	5.8%
Female	7.5	6.9	6.6	6.6	6.8	7.2	5.6
Job tenure (years)							
0–1	6.6%	6.2%	5.5%	5.3%	5.6%	6.5%	4.7%
2–3	6.5	6.5	6.3	6.5	6.5	6.8	5.9
4–6	7.2	7.0	6.9	6.9	6.9	7.0	6.7
7–9	7.9	7.7	7.1	7.2	7.4	7.4	7.2
10+	8.7	8.5	8.1	8.4	8.3	8.2	8.6

Source: Vanguard, 2017.

2 For an in-depth analysis of automatic enrollment, see Jeffrey W. Clark, Stephen P. Utkus, and Jean A. Young, 2015, *Automatic enrollment: The power of the default*, Vanguard research, institutional.vanguard.com.

Deferral rates also vary—by about 40%—by industry group (Figure 13). Participants in the architectural, engineering, and related services and the law firms groups had the highest average and median deferral rates in 2016. Participants in the education and health and the media, entertainment, and leisure groups had the lowest deferral rates.

Maximum contributors

During 2016, only 12% of participants saved the statutory maximum dollar amount of $18,000 ($24,000 for participants age 50 or older) (Figure 14). Participants who contributed the maximum dollar amount tended to have higher incomes, were older, had longer tenures with their current employer, and had accumulated substantially higher account balances. Nearly 1 in 5 participants were saving 10% or more from their income.

Catch-up contributions

Nearly all VRPA plans offered catch-up contributions in 2016. Only 17% of age-50-and-older participants eligible for catch-up contributions took advantage of this feature in 2016. The characteristics of participants making catch-up contributions are similar to those of participants making the maximum contribution to their plan. They tended to have higher incomes and had accumulated substantially higher account balances.

Figure 13. Deferral rates by industry sector, 2016

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals

	Average	Median	Voluntary enrollment average	Automatic enrollment average
Overall	6.9%	5.0%	7.3%	5.7%
Industry group				
Architectural, engineering, and related services	8.2%	6.0%	8.7%	7.0%
Law firms	8.2	6.0	8.4	6.9
Technology	7.6	6.0	8.0	7.0
Finance, insurance, and real estate	6.9	5.5	7.3	5.7
Business, professional, and nonprofit	7.2	5.1	7.8	5.8
Ambulatory health care	7.7	5.0	8.1	5.0
Agriculture, mining, and construction	6.7	5.0	7.0	6.0
Manufacturing	6.1	5.0	6.5	4.7
Transportation, utilities, and communications	5.7	4.9	5.8	4.6
Wholesale and retail trade	5.9	4.8	6.5	4.7
Media, entertainment, and leisure	5.9	4.3	6.2	4.8
Education and health	6.3	4.2	6.7	5.1

Source: Vanguard, 2017.

Roth contributions

At year-end 2016, the Roth feature was offered by 8 in 10 VRPA plans and had been adopted by 15% of participants in plans offering the feature.

After-tax contributions

After-tax employee-elective deferrals are available to participants in only 3% of VRPA plans. In 2016, less than 0.5% of participants offered the after-tax deferral feature took advantage of it.

Figure 14. Other employee contribution data

Vanguard Retirement Plan Access defined contribution plans permitting employee-elective deferrals

	2012	2013	2014	2015	2016		
	All	All	All	All	All	Established	Start-up
Percentage of participants reaching 402(g) limit	11%	12%	11%	12%	12%	12%	11%
Percentage of participants deferring more than 10%	20	19	18	18	19	18	19
Percentage of plans offering catch-up	99%	99%	>99.5%	>99.5%	>99.5%	>99.5%	>99.5%
Percentage of participants using catch-up if offered	17	17	18	18	17	17	17
Percentage of plans offering Roth	76%	73%	75%	76%	78%	76%	83%
Percentage of participants using Roth if offered	12	13	14	14	15	14	17
Percentage of plans offering traditional after-tax	2%	3%	2%	3%	3%	3%	1%
Percentage of participants using traditional after-tax if offered	0	<0.5	1	1	<0.5	<0.5	2

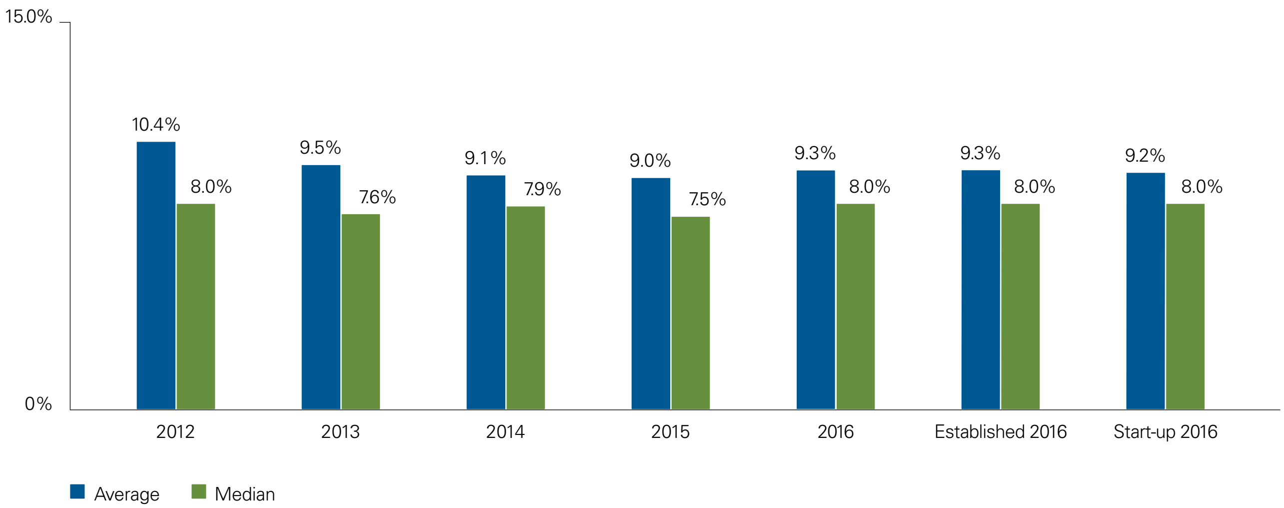
Source: Vanguard, 2017.

Aggregate contributions

Taking into account both employee and employer contributions, the average total participant contribution rate in 2016 was 9.3% and the median was 8.0% (**Figure 15**). Established and start-up plans had similar aggregate contribution levels.

Figure 15. Aggregate participant and employer contribution rates

Vanguard Retirement Plan Access defined contribution plans



Source: Vanguard, 2017.

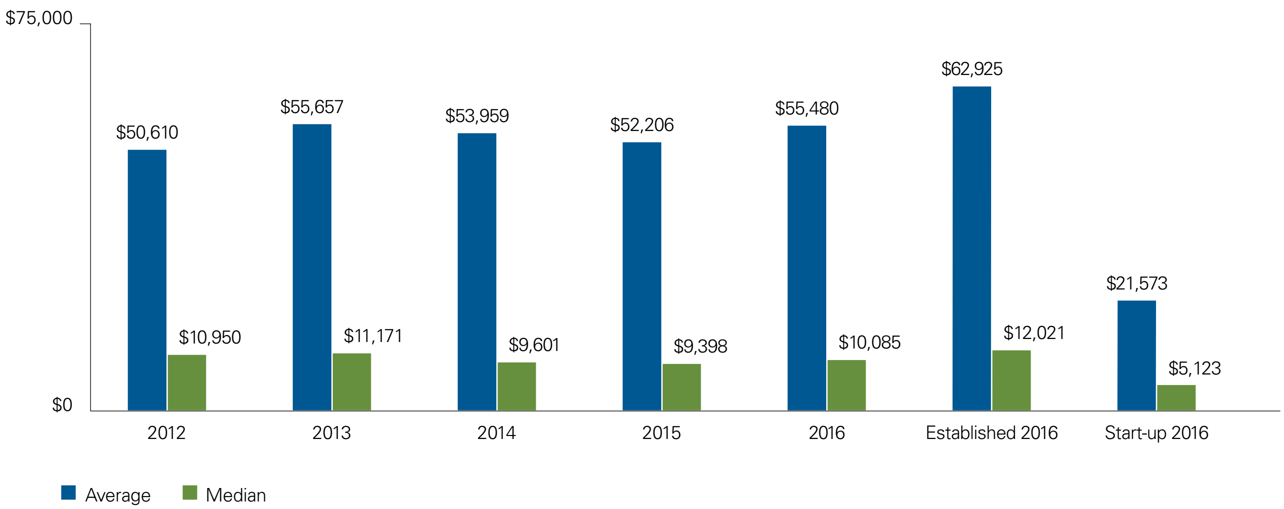
Account balances

Account balances are a widely cited measure of the overall effectiveness of DC plans. However, current balances may not reflect lifetime savings and are only a partial measure of retirement preparedness for many participants. The median balance represents the typical participant: Half of all participants have balances above the median and half have balances below.

In 2016, the average account balance for VRPA participants was $55,480; the median balance was $10,085 (**Figure 16**). Established plans had average account balances that were nearly three times larger than start-up plans.

Figure 16. Account balances

Vanguard Retirement Plan Access defined contribution plans



Source: Vanguard, 2017.

Account balances by participant demographics

Median and average account balances vary considerably by participant demographics (Figure 17). Among the factors influencing account balances are income, age, and job tenure. These three factors are intertwined. Not only do incomes, on average, tend to rise somewhat with age, making saving more affordable, but older participants generally save at higher rates. Also, the longer an employee's tenure with a firm, the more likely the employee is to earn a higher salary, participate in the plan, and contribute at higher levels. Longer-tenured participants also have higher balances because they have been contributing to their employer's plan for a longer period.

Figure 17. Account balances by participant demographics, 2016

Vanguard Retirement Plan Access defined contribution plans

	Average	Median	Established average	Start-up average
All	$55,480	$10,085	$62,925	$21,573
Income				
<$30,000	$16,099	$1,760	$19,734	$5,407
$30,000–$49,999	$22,456	$5,825	$25,862	$8,282
$50,000–$74,999	$40,540	$12,921	$46,891	$15,433
$75,000–$99,999	$61,126	$21,411	$71,361	$23,977
$100,000+	$151,656	$52,929	$182,257	$50,592
Age				
<25	$3,262	$1,263	$3,330	$3,064
25–34	$13,250	$5,066	$14,475	$9,290
35–44	$39,470	$12,169	$43,607	$21,666
45–54	$77,216	$19,844	$85,095	$33,279
55–64	$116,351	$28,126	$125,714	$48,864
65+	$157,354	$38,076	$166,851	$57,400
Gender				
Male	$73,189	$13,192	$83,989	$26,187
Female	$40,200	$8,770	$44,895	$16,584
Job tenure (years)				
0–1	$9,005	$2,268	$8,583	$10,084
2–3	$19,132	$7,693	$19,285	$18,567
4–6	$35,701	$15,304	$37,921	$22,036
7–9	$63,561	$26,486	$67,257	$33,298
10+	$168,116	$70,359	$175,799	$79,184

Source: Vanguard, 2017.

There are significant variations in account balances by industry sector, which reflect a complex mixture of firm characteristics (influencing employer contributions) and workforce demographics (influencing participant savings rates). Participants employed in the law firms group have average and median account balances that are more than two times higher than other participants (Figure 18). Participants employed in the education and health group have the lowest average and median account balances.

Figure 18. Account balances by industry sector, 2016

Vanguard Retirement Plan Access defined contribution plans

	Average	Median	Established average	Start-up average
Overall	$55,480	$10,085	$62,925	$21,573
Industry group				
Law firms	$132,488	$25,186	$144,499	$47,160
Architectural, engineering, and related services	$73,090	$20,017	$76,199	$42,144
Finance, insurance, and real estate	$64,074	$14,189	$72,349	$23,317
Technology	$42,096	$12,403	$50,156	$18,852
Agriculture, mining, and construction	$61,669	$11,163	$66,640	$25,282
Business, professional, and nonprofit	$48,838	$10,370	$53,646	$18,702
Ambulatory health care	$87,402	$10,230	$94,711	$37,531
Manufacturing	$49,917	$10,221	$53,151	$22,323
Wholesale and retail trade	$49,576	$7,748	$54,785	$16,668
Transportation, utilities, and communications	$37,596	$7,691	$40,955	$17,711
Media, entertainment, and leisure	$34,159	$7,170	$36,917	$11,800
Education and health	$27,761	$6,587	$29,703	$13,976

Source: Vanguard, 2017.

Asset and contribution allocations

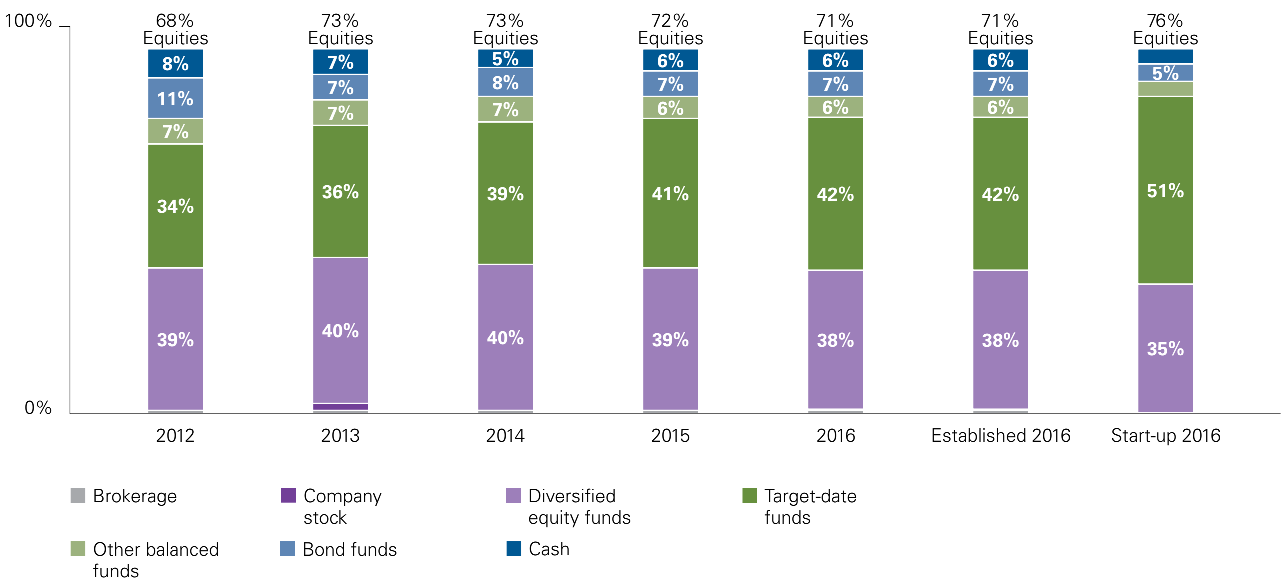
The percentage of plan assets invested in equities stood at 71% in 2016 (Figure 19). The allocation to equities includes the equity component of balanced strategies. In 2016, investment in balanced strategies reached 48%, including 42% in target-date funds and 6% in other balanced options. The growth of target-date funds in particular is dramatically reshaping investment patterns in DC plans, including increasing equity allocation differences by age and reducing extreme allocations.

Three-quarters of plan contribution dollars were invested in equities during 2016 and half of plan contribution dollars were invested in target-date funds (Figure 20).

Overall asset allocation varies somewhat by industry group (Figure 21). Participants in the technology and the business, professional, and nonprofit groups had the highest equity allocations—a median of 88% and 87%, respectively. Participants in the ambulatory health care, the manufacturing, and the education and health groups had median equity allocations of 78%.

Figure 19. Plan asset allocation summary

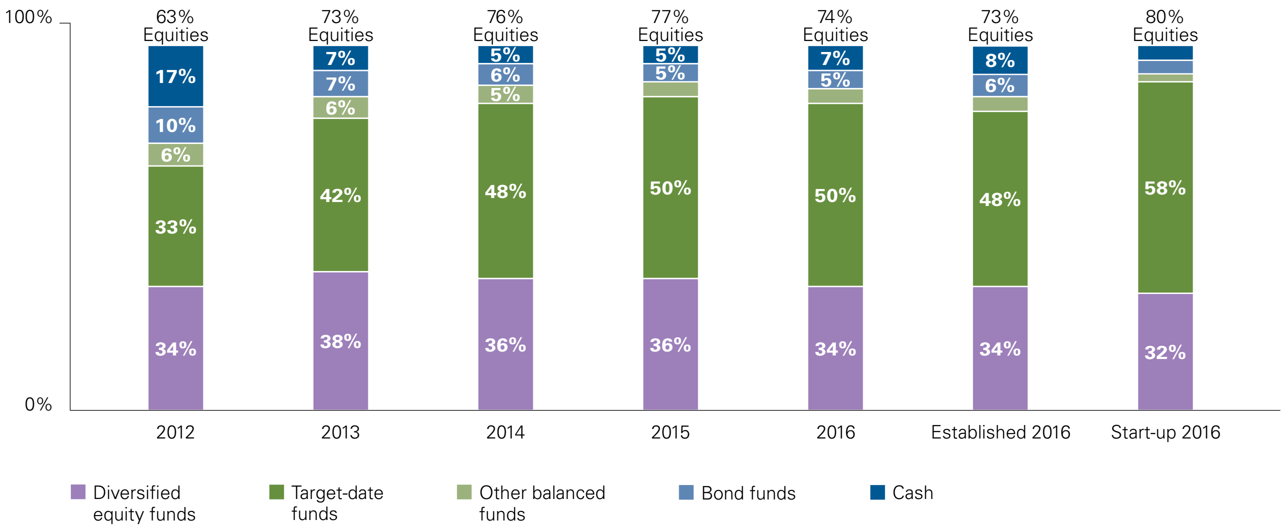
Vanguard Retirement Plan Access defined contribution plans



Source: Vanguard, 2017.

Figure 20. Plan contribution allocation summary

Vanguard Retirement Plan Access defined contribution plans



Source: Vanguard, 2017.

Figure 21. Asset allocation by industry sector, 2016

Vanguard Retirement Plan Access defined contribution plans

	Brokerage	Company stock	Diversified equity funds	Target-date funds	Other balanced funds	Bond funds	Cash	Average equity participant-weighted	Median equity participant-weighted
All asset-weighted	1%	<0.5%	38%	42%	6%	7%	6%	75%	85%
Industry group									
Technology	<0.5%	0%	39%	47%	4%	5%	5%	81%	88%
Business, professional, and nonprofit	1	0	40	42	5	7	5	77	87
Finance, insurance, and real estate	1	0	45	34	5	8	7	76	85
Architectural, engineering, and related services	<0.5	0	43	39	7	6	5	75	85
Media, entertainment, and leisure	<0.5	0	37	43	8	5	7	75	85
Transportation, utilities, and communications	0	0	39	41	5	7	8	74	85
Wholesale and retail trade	<0.5	0	36	42	7	7	8	74	84
Law firms	4	0	39	36	7	8	6	73	81
Agriculture, mining, and construction	1	0	33	46	6	7	7	73	79
Ambulatory health care	2	0	35	44	6	8	5	73	78
Education and health	<0.5	<0.5	32	51	6	6	5	72	78
Manufacturing	<0.5	0	36	41	8	7	8	71	78

Source: Vanguard, 2017.

Plan investment options

Types of options offered

Virtually all VRPA plans offer an array of investment options covering four major investment categories: equities, bonds, balanced funds, and cash reserves (Figure 22). Equity offerings typically include both indexed and actively managed U.S. stock funds as well as one or more international funds.

Figure 22. Types of investment options offered and used, 2016

Vanguard Retirement Plan Access defined contribution plans

	Percentage of all plans offering	Percentage of established plans offering	Percentage of start-up plans offering	Percentage of participants offered using
Cash	**99%**	**99%**	**99%**	**11%**
Money market	83	80	91	9
Stable value/Investment contract	15	19	8	19
Bond funds	**>99.5%**	**>99.5%**	**>99.5%**	**15%**
Active	62	71	41	12
Index	86	83	91	10
Inflation-protected securities	32	38	17	5
High-yield	26	29	19	7
International	61	54	77	5
Balanced funds	**99%**	**99%**	**>99.5%**	**81%**
Target-date	98	97	99	75
Other balanced	81	80	82	14
Equity funds	**>99.5%**	**>99.5%**	**>99.5%**	**31%**
Domestic equity funds	>99.5%	>99.5%	>99.5%	30%
Active domestic	61	68	45	21
Index domestic	99	99	>99.5	27
Large-cap	>99.5	>99.5	>99.5	26
Mid-cap	93	93	93	16
Small-cap	95	95	94	16
Socially responsible	7	7	5	8
International equity funds	**99%**	**99%**	**99%**	**16%**
Active international	53	60	36	15
Index international	87	84	92	10
Emerging markets	69	65	77	9
Sector funds	**76%**	**77%**	**74%**	**13%**
REIT	71	71	71	10
Health care	19	21	14	11
Energy	14	16	10	7
Precious metals	9	10	6	5
Technology	10	11	7	8
Communications	2	2	2	4
Utilities	6	7	4	7
Commodities	**2%**	**2%**	**2%**	**8%**
Company stock	**<0.5%**	**<0.5%**	**0%**	**22%**
Self-directed brokerage	**12%**	**13%**	**10%**	**2%**
Model portfolio	**9%**	**10%**	**5%**	**20%**
Managed account	**22%**	**19%**	**27%**	**1%**

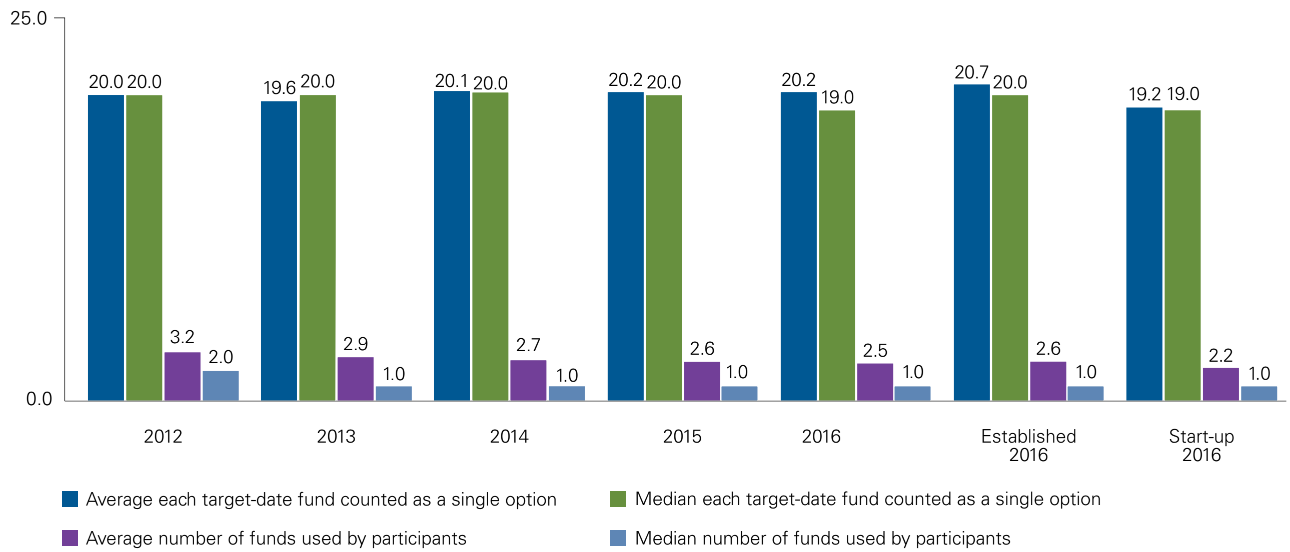
Source: Vanguard, 2017.

Number of options offered and used

The average VRPA plan offered 20.2 investment options in 2016 (**Figure 23**). In the plan analysis of options offered, we count a series of target-date funds as one fund, since these funds are designed as a single-fund investment. Counting a target-date series as a single fund offering, the median plan sponsor offered 19 investment options in 2016. In 2016, 1 in 5 plans offered more than 25 distinct investment options, while 6% of plans offered 10 or fewer (**Figure 24**).

Figure 23. Investment options offered and used

Vanguard Retirement Plan Access defined contribution plans

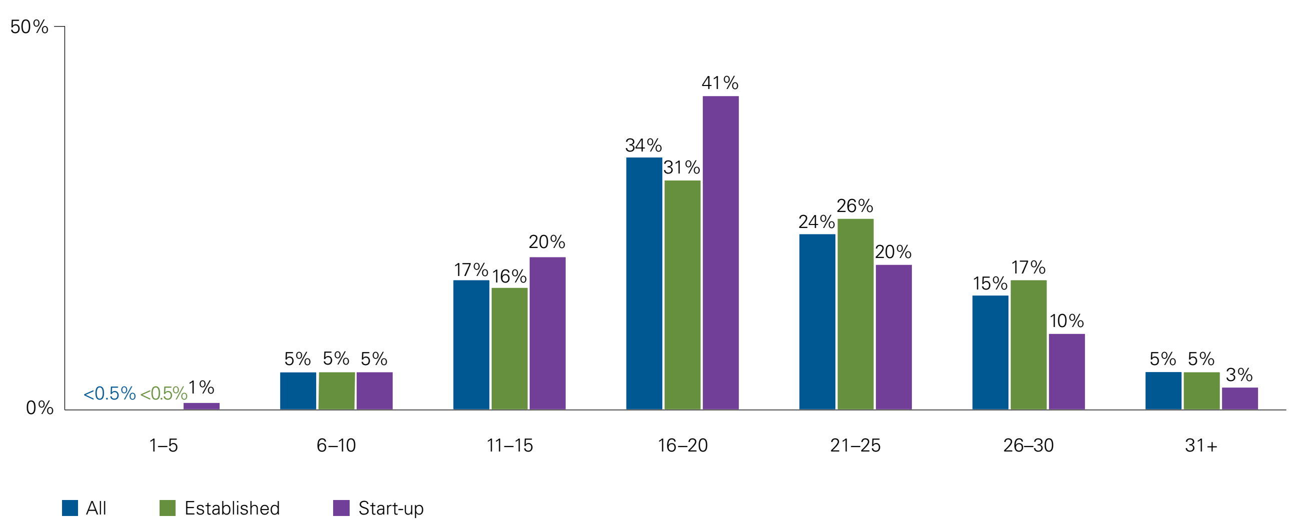


Source: Vanguard, 2017.

Figure 24. Number of options offered, 2016

Vanguard Retirement Plan Access defined contribution plans

Target-date funds counted as one option



Source: Vanguard, 2017.

Despite the large number of funds available to them, participants tend to use only a few. On average, VRPA plan participants used 2.5 funds and the typical participant held just one fund. In the participant analysis of options used, we count each target-date fund used as a separate fund, rather than considering them to be one fund. This is because participants can, and some do, invest in multiple target-date funds.

Default funds

Increasingly, participants are being directed into default investments selected by the plan sponsor, rather than making active investment choices on their own. Default investing is rising in importance in response to concerns about the lack of investment knowledge among participants, as well as the growing use of automatic enrollment. In response to these developments, the U.S. Department of Labor (DOL), acting under the Pension Protection Act, authorized three types of default investments as eligible for special fiduciary protection. These options include target-date funds, other balanced funds, and managed account programs (including model portfolios).

Nearly all VRPA plans have designated a default fund, and 95% had selected a target-date fund option as the default option in 2016 **(Figure 25)**. Ninety-eight percent of plans had specifically designated a QDIA under the DOL's regulations. Among all VRPA plans, 97% of designated QDIAs were target-date funds, 2% were balanced funds, and 1% selected a model portfolio.

Figure 25. **Default fund designations, 2016**

Vanguard Retirement Plan Access defined contribution plans

	All plans	Established plans	Start-up plans
Plans designating a default	**100%**	**100%**	**100%**
Target-date	95	95	97
Balanced fund	3	3	2
Model portfolio	1	1	1
Money market or stable value	1	1	<0.5
Other	<0.5	<0.5	<0.5
Plans designating a QDIA	**98%**	**98%**	**98%**
Target-date	97	96	98
Balanced fund	2	3	1
Model portfolio	1	1	1
	100%	100%	100%

Source: Vanguard, 2017.

Professionally managed allocations

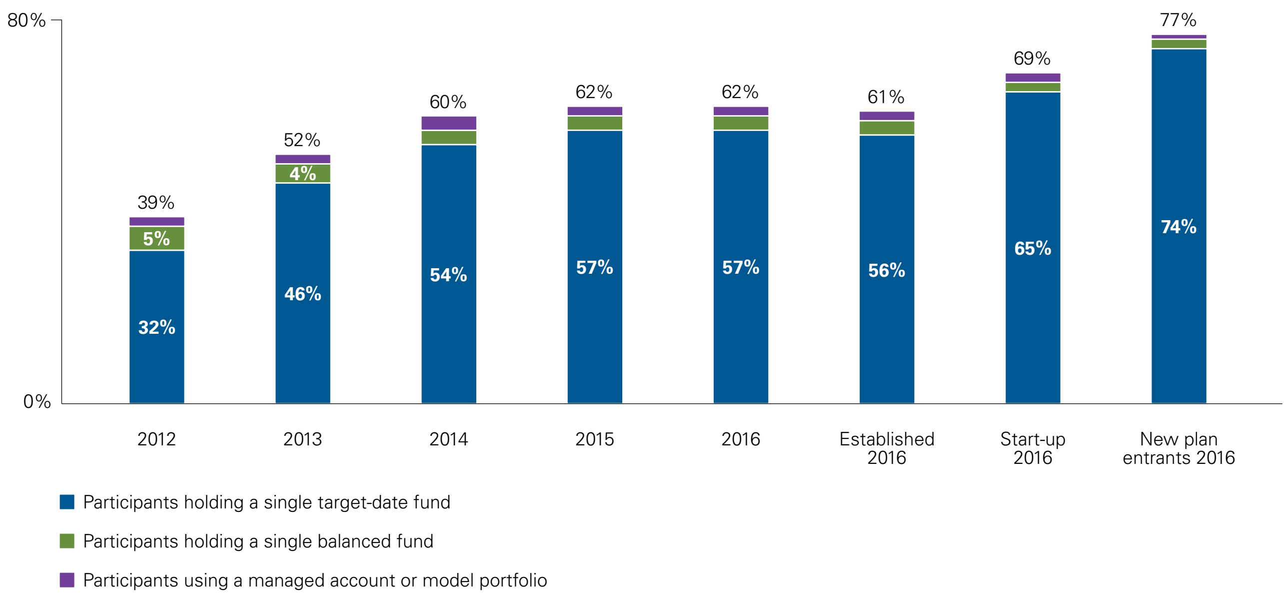
The most notable effect of plan investment menus on participant choices is the expanded offering and use of professionally managed allocations. Participants with professionally managed allocations are those who have their entire account balance invested solely in a single target-date fund, traditional balanced fund, a model portfolio, or a managed account program.

In 2016, 6 in 10 VRPA participants were invested in a professionally managed allocation (Figure 26). Driving this development is the growing use of target-date funds. A total of 57% of participants were invested in a single target-date fund in 2016. Among new plan entrants (those entering the plan for the first time), 74% of participants were invested in a single target-date fund.

Most VRPA plan sponsors chose to reenroll participants in a QDIA at conversion. As noted earlier in this report, VRPA was launched in 2011 and the majority of these plans converted between 2012 and 2016. Seven in 10 plans reenrolled participants in a QDIA at conversion and more than 95% using this strategy reenrolled in a target-date fund.

Figure 26. Participants with professionally managed allocations

Vanguard Retirement Plan Access defined contribution plans



Source: Vanguard, 2017.

Target-date funds

Target-date funds base portfolio allocations on an expected retirement date; allocations grow more conservative as the participant approaches the fund's target year. At year-end 2016, nearly all VRPA participants were in plans offering target-date funds (Figure 27). Three-quarters of all participants had all or part of their account invested in target-date funds in 2016. Half of contribution dollars were directed to target-date funds in 2016.

Figure 27. Use of target-date funds

Vanguard Retirement Plan Access defined contribution plans

	2012	2013	2014	2015	2016	Established 2016	Start-up 2016
Percentage of all plans offering target-date funds	95%	97%	97%	97%	98%	97%	99%
Percentage of recordkeeping assets in target-date funds	34	36	39	41	42	41	51
Percentage of all contributions directed to target-date funds	33	42	48	50	50	48	58
Percentage of all participants offered target-date funds	98	97	96	98	98	97	98
Percentage of all participants using target-date funds	60	67	73	75	75	74	80

Source: Vanguard, 2017.

Note: 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 target-date funds is not guaranteed at any time, including on or after the target date.

Participant equity allocations

Equities are the dominant asset class holding of many plan participants. From an investment perspective, an asset allocation to equities of 80% or more may appear appropriate in light of the long-term retirement objectives of most DC plan participants (**Figure 28**).

The growing use of professionally managed allocations within DC plans, including target-date funds, is reshaping equity allocations by age and reducing extreme allocations. The fraction of participants with no allocation to equities was 4% in 2016. At the other extreme, the fraction of participants investing exclusively in equities was 7%.

Figure 28. **Distribution of equity exposure**

Vanguard Retirement Plan Access defined contribution plans

Participant-weighted balances

	2012	2013	2014	2015	2016	Established 2016	Start-up 2016	Percentage of contributions to equities 2016
Percentage of account balances								
0%	5%	4%	3%	3%	4%	4%	2%	3%
1%–30%	5	3	2	2	3	3	2	4
31%–40%	2	2	2	2	1	2	1	2
41%–50%	4	2	3	3	3	3	2	3
51%–60%	7	7	9	8	8	8	5	7
61%–70%	13	15	10	10	15	15	11	14
71%–80%	18	13	12	18	12	12	11	12
81%–90%	33	39	45	41	42	41	51	42
91%–99%	5	7	6	6	5	5	6	5
100%	8	8	8	7	7	7	9	8
Average equity participant-weighted	72	75	76	77	75	74	80	75
Median equity participant-weighted	79	83	84	87	85	83	88	85

Source: Vanguard, 2017.

This rising use of professionally managed allocations is also improving portfolio construction (Figure 29). The fraction of participants holding broadly diversified portfolios was 80% in 2016. Less than 1% of VRPA participants were holding concentrated company stock positions.

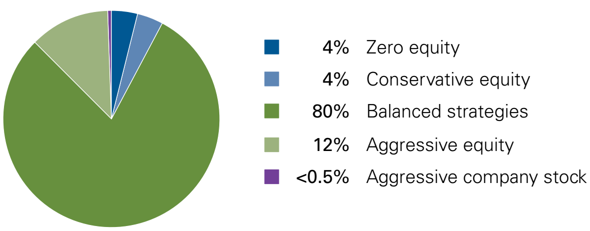
Trading activity

Participant trading or exchange activity is the movement of existing account assets from one plan investment option to another. This transaction is distinct from a contribution allocation decision, in which participants decide how future contributions to the plan should be invested. Exchange activity is a proxy for a participant's holding period for investments, as well as a measure of the participant's willingness to change their portfolio in response to short-term market volatility.

Daily trading is nearly universal for Vanguard DC plans, with virtually all plan sponsors allowing it. While assets can be traded daily, Vanguard and other investment companies serving DC plans typically have "round-trip" restrictions designed to thwart the minority of individual participants who seek to engage in active market-timing or day-trading. In 2016, only 5% of participants initiated one or more portfolio trades or exchanges during the year (Figure 30).

Figure 29. Participant portfolio construction

Vanguard Retirement Plan Access defined contribution plans

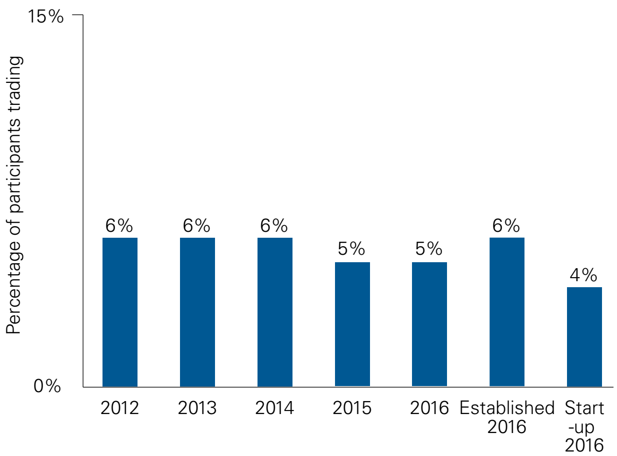


	2012	2013	2014	2015	2016	Established 2016	Start-up 2016
Percentage participants using							
Zero equity (0% equity and 0% company stock)	5%	4%	3%	3%	4%	4%	2%
Conservative equity (>0% and <40% equity)	6	5	4	4	4	5	2
Balanced strategies (40% to 90% equity and <20% company stock)	76	76	79	80	80	79	81
Aggressive equity (>90% equity)	13	14	14	13	12	12	15
Aggressive company stock (>20% company stock)	0	1	<0.5	<0.5	<0.5	<0.5	0

Source: Vanguard, 2017.

Figure 30. Participant-directed trading

Vanguard Retirement Plan Access defined contribution plans



Source: Vanguard, 2017.

Plan loans

If permitted by the plan, participants can borrow up to 50% of their balance (up to a maximum of $50,000) from their DC plan account. Loans are more common for plans accepting employee contributions and less common for employer-funded DC plans, such as money purchase or profit-sharing plans. Plan loans allow DC participants to access their plan savings before retirement without incurring income taxes or tax penalties.

Loans do appear to have a beneficial effect on retirement savings, raising contribution rates above what they would otherwise be. Yet they also come with risks. Cash that has been borrowed earns fixed income rather than equity market returns, and loan interest is double-taxed. Also, participants who leave their employer must typically repay any loan balance immediately—or risk paying taxes and a penalty and incurring a reduction in retirement savings by the amount of the loan outstanding.

Loan availability

Loans are widely offered by employee-contributory DC plans. In 2016, 70% of VRPA 401(k) plans permitted participants to borrow from their plan and 78% of participants had access to a loan feature (Figure 31). Only 8% of VRPA participants offered a loan had a loan outstanding at year-end 2016.

On average, the outstanding loan account balance equaled 11% of the participant's account balance including the loan, and the average participant had borrowed about $8,600. Participants in start-up plans were least likely to have borrowed from their retirement plan account, but if they had borrowed, they borrowed 15% of their account balance.

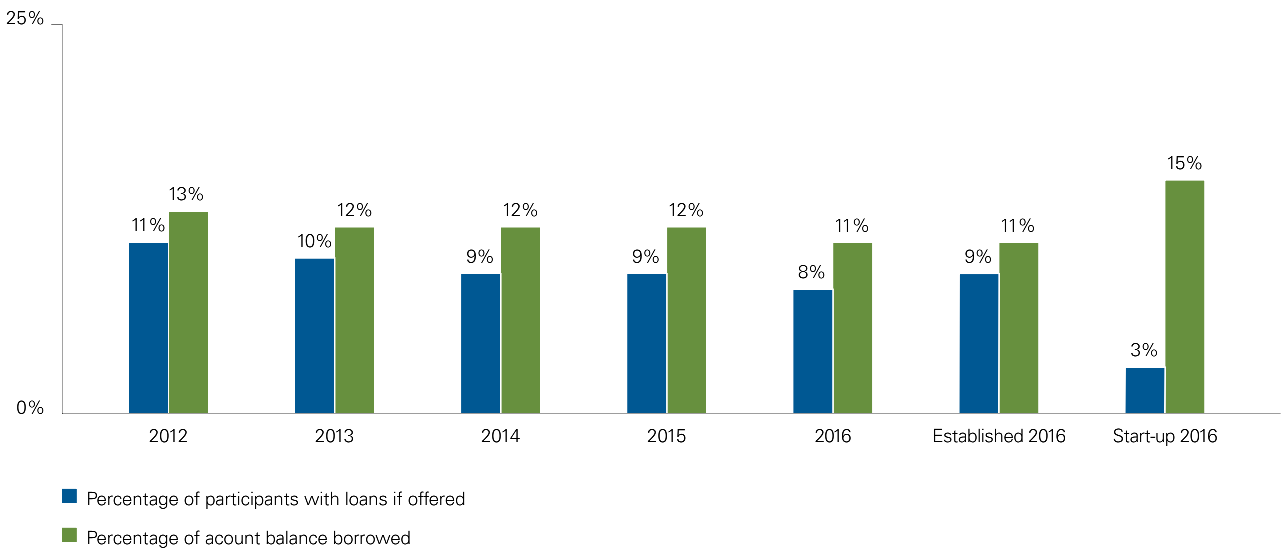
Outstanding loans are typically excluded from measures of plan and participant assets because these assets have, in effect, been withdrawn from the plan and are not currently available as a retirement resource. However, more than 90% of loans are repaid and outstanding loans represent participant and plan assets. Only about 1% of aggregate plan assets had been borrowed by participants.

Plan withdrawals

Plan withdrawals allow participants to access their plan savings before a job change or retirement. Withdrawals are optional plan provisions and availability varies from plan to plan. They can be

Figure 31. Loans

Vanguard Retirement Plan Access defined contribution plans



	2012	2013	2014	2015	2016	Established 2016	Start-up 2016
Percentage of all plans offering loans	73%	72%	71%	69%	70%	73%	64%
Percentage of participants offered loans	85	81	82	79	78	80	70
Percentage of recordkeeping assets borrowed	2	2	1	1	1	1	1
Average participant loan	$8,090	$8,539	$8,409	$8,541	$8,648	$8,681	$8,202

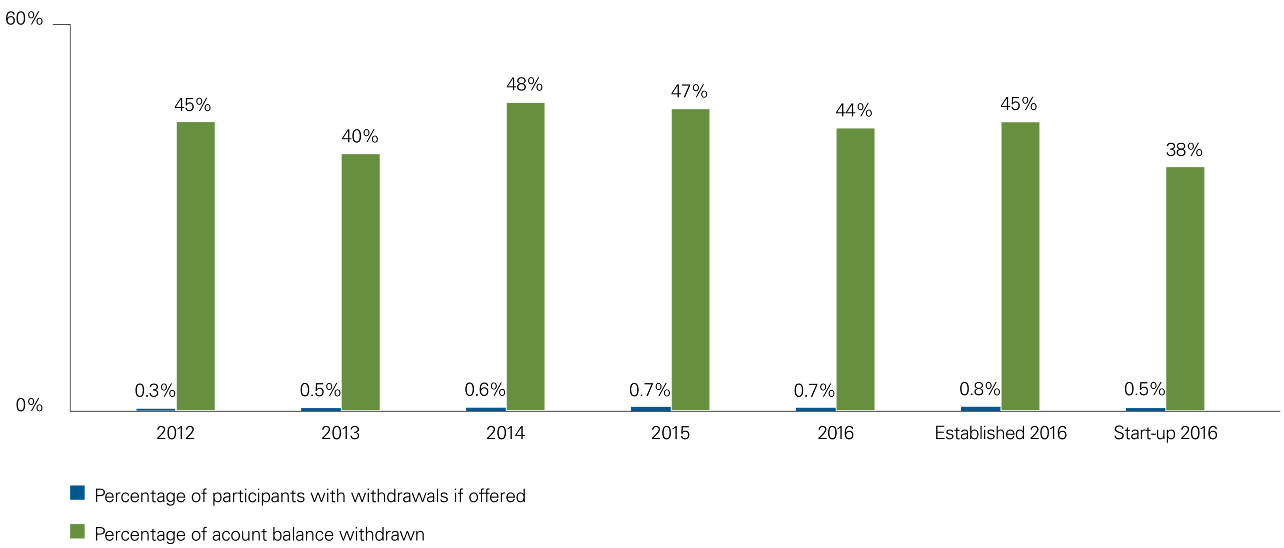
Source: Vanguard, 2017.

classified into two categories. Hardship withdrawals allow participants to access a portion of their savings when they have a demonstrated financial hardship, such as receipt of an eviction or home foreclosure notice, but may also be used for such purposes as college education and purchase of a first home. Nonhardship withdrawals include both post-age-59½ withdrawals and other withdrawals. Post-age-59½ withdrawals allow participants age 59½ and older to access their savings while they are working and are exempt from the 10% penalty on premature distributions. Some plans may also allow participants to withdraw employer profit-sharing contributions, after-tax contributions, or rollover assets while they are working.

Among VRPA DC plans in 2016, 84% allowed hardship withdrawals and 99% allowed plan withdrawals for those who have reached age 59½ (Figure 32). In 2016, less than 1% (0.7%) of participants in plans offering any type of withdrawal used the feature, and the average portion of account balance withdrawn was 44%. Assets withdrawn totaled 1% of VRPA recordkeeping assets. Certain participants could, over time, jeopardize their retirement program if they continue to rely on this feature throughout their working careers.

Figure 32. Withdrawals

Vanguard Retirement Plan Access defined contribution plans



	2012	2013	2014	2015	2016	Established 2016	Start-up 2016
Percentage of all plans offering withdrawals	>99.5%	>99.5%	99%	99%	>99.5%	>99.5%	>99.5%
Percentage of all plans offering hardship withdrawals	88	86	85	84	84	82	89
Percentage of all plans offering age 59½ withdrawals	99	99	99	99	99	99	>99.5
Percentage of all plans offering employer contribution withdrawals	88	90	91	92	94	95	84
Percentage of all participants offered withdrawals	>99.5	>99.5	>99.5	>99.5	>99.5	>99.5	>99.5
Percentage of recordkeeping assets withdrawn	1	1	1	1	1	1	1
Average participant withdrawal	$39,340	$30,878	$23,034	$21,126	$22,277	$24,539	$7,574

Source: Vanguard, 2017.

Plan distributions and rollovers

When changing jobs or retiring, DC plan participants have the choice of preserving their savings for retirement (by retaining them in the plan or rolling them over to an IRA or another DC plan) or taking a cash lump sum (and spending or investing it). If they choose to roll over their savings to an IRA or another qualified retirement plan, participants avoid paying taxes on the accumulated balance. If participants spend the lump-sum distribution or invest it in a taxable account, they incur a possible income tax liability (and a 10% penalty if they are younger than 59½).

All VRPA plans permit indefinite deferral of savings, meaning that participant balances can remain in the employer plan **(Figure 33)**. Seven percent of VRPA plans allow participants to establish installment payments. VRPA plans permit terminated participants to take partial ad hoc cash distributions.

Participant and asset flows

Plan distributions can occur reasonably frequently as participants change jobs or retire, and they represent a large portion of total plan and participant assets. During 2016, about one-third of VRPA plan participants could have taken their plan account as a cash distribution because they had separated from service in the current year or prior years. However, just 12% of participants eligible for a cash distribution took one, while the vast majority (88%) continued to preserve their plan assets for retirement **(Figure 34)**.

These figures differ from other reported statistics on plan distributions because they include participants who choose to retain their assets in their prior employer's plan when they change jobs or retire. Among only those participants who took a distribution from their plan, more took cash distributions (12%) than rolled over their assets to another plan or IRA (11%). But in our view, a full assessment of plan distribution behavior must include participants who kept their assets within their prior employer's plan at the time of a job change or retirement.

Figure 33. Distribution options, 2016

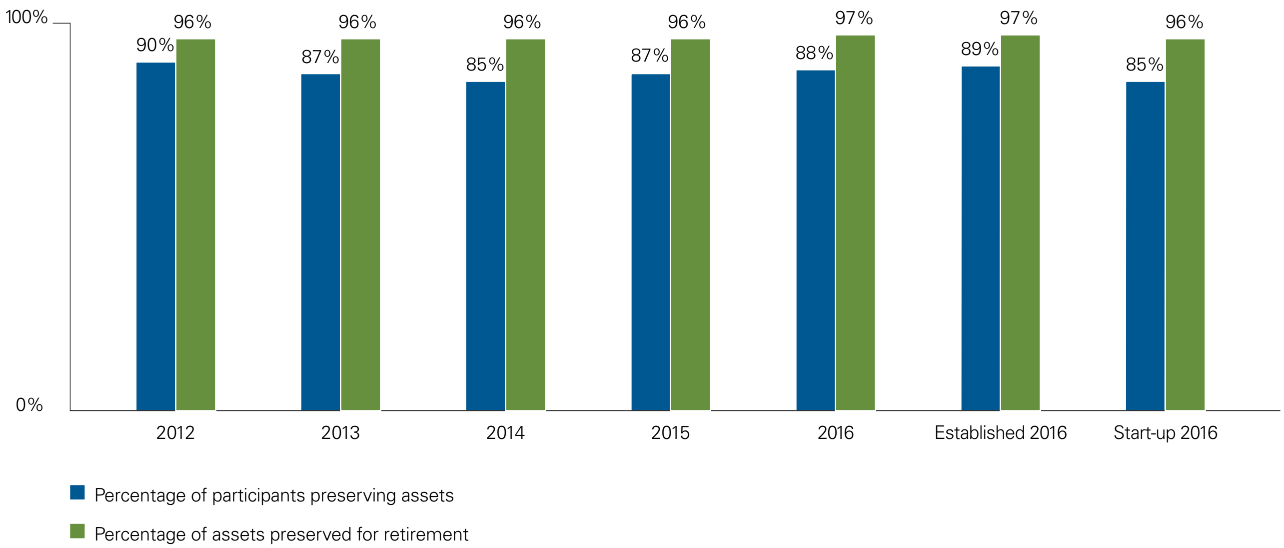
Vanguard Retirement Plan Access defined contribution plans

	All	Established	Start-up
Deferral	100%	100%	100%
Installments other than RMDs	7	9	2
Ad hoc partial distributions	100	100	100

Source: Vanguard, 2017.

Figure 34. Plan distributions

Vanguard Retirement Plan Access defined contribution plans



	2012	2013	2014	2015	2016	Established 2016	Start-up 2016
Percentage of participants choosing							
Remain in plan	81%	77%	73%	75%	77%	77%	74%
Rollover	9	10	12	12	11	11	11
Remain in plan and rollover	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Installment payments	0	<0.5	<0.5	<0.5	<0.5	<0.5	0
Participants preserving assets	90	87	85	87	88	89	85
Cash lump sum	10	12	14	12	11	11	15
Rollover and cash	<0.5	1	1	1	1	<0.5	<0.5
Percentage of assets available for distribution							
Remain in plan	81%	78%	76%	74%	77%	78%	76%
Rollover	15	17	19	21	19	19	20
Remain in plan and rollover	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Installment payments	0	<0.5	<0.5	<0.5	1	<0.5	<0.5
Assets preserved for retirement	96	96	96	96	97	97	96
Cash lump sum	3	3	3	3	2	2	3
Rollover and cash	1	1	1	1	1	1	1

Source: Vanguard, 2017.

Appendix

In this table we provide a comparison of VRPA key statistics with the *How America Saves* population recordkept directly by Vanguard.

Vanguard Retirement Plan Access comparison with *How America Saves*

	Vanguard Retirement Plan Access					*How America Saves*
	2012	2013	2014	2015	2016	2016
Vanguard recordkeeping statistics						
Number of participant accounts	16,436	61,746	125,136	199,242	273,045	4.4 million
Number of plans	445	1,418	2,666	4,452	6,506	1.9 thousand
Median participant age	42	42	42	42	42	45
Median participant tenure	5	4	4	4	4	6
Percentage male	58%	56%	56%	56%	57%	58%
Median eligible employee income (thousands)	$62	$53	$47	$47	$49	$52
Median participant income (thousands)	$74	$67	$58	$59	$64	$65
Median nonparticipant income (thousands)	$42	$35	$29	$30	$30	$37
1. Accumulating						
Plan design						
Plans offering immediate eligibility for employee contributions	24%	24%	23%	22%	21%	61%
Plans providing an employer contribution	82%	75%	72%	72%	75%	94%
Plans with automatic enrollment	15%	19%	18%	16%	15%	45%
Plans with automatic enrollment with automatic annual increases	55%	41%	38%	36%	38%	67%
Plans offering catch-up contributions	99%	99%	>99.5%	>99.5%	>99.5%	98%
Plans offering Roth contributions	76%	73%	75%	76%	78%	65%
Plans offering after-tax contributions	2%	3%	2%	3%	3%	18%
Participation rates						
Plan-weighted participation rate	73%	73%	73%	72%	71%	81%*
Participant-weighted participation rate	67%	66%	65%	64%	61%	79%*
Voluntary enrollment participant-weighted participation rate	65%	62%	59%	58%	57%	63%*
Automatic enrollment participant-weighted participation rate	90%	87%	89%	88%	82%	90%*
Participants using catch-up contributions (when offered)	17%	17%	18%	18%	17%	12%
Participants using Roth (when offered)	12%	13%	14%	14%	15%	13%
Participants using after-tax (when offered)	0%	<0.5%	1%	1%	<0.5%	8%
Employee deferrals						
Average participant deferral rate	7.4%	7.1%	6.7%	6.7%	6.9%	6.2%
Median participant deferral rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Percentage of participants deferring more than 10%	20%	19%	18%	18%	19%	18%
Voluntary enrollment plan average participant deferral rate	7.6%	7.5%	7.1%	7.2%	7.3%	6.3%
Automatic enrollment plan average participant deferral rate	5.7%	5.7%	5.6%	5.5%	5.7%	6.1%
Participants reaching 402(g) limit ($18,000 in 2016)	11%	12%	11%	12%	12%	10%
Average total contribution rate (participant and employer)	10.4%	9.5%	9.1%	9.0%	9.3%	10.9%*
Median total contribution rate (participant and employer)	8.0%	7.6%	7.9%	7.5%	8.0%	10.0%*
Account balances						
Average balance	$50,610	$55,657	$53,959	$52,206	$55,480	$96,495
Median balance	$10,950	$11,171	$9,601	$9,398	$10,085	$24,713

	Vanguard Retirement Plan Access					*How America Saves*
	2012	2013	2014	2015	2016	2016
2. Managing						
Asset and contribution allocation						
Average plan asset allocation to equities	68%	73%	73%	72%	71%	71%
Average plan contribution allocation to equities	63%	73%	76%	77%	74%	74%
Average plan asset allocation to target-date funds	34%	36%	39%	41%	42%	28%
Average plan contribution allocation to target-date funds	33%	42%	48%	50%	50%	49%
Participants with balanced strategies	76%	76%	79%	80%	80%	71%
Extreme participant asset allocations (100% fixed income or equity)	13%	12%	11%	10%	11%	10%
Plan investment options						
Average number of funds offered	20.0	19.6	20.1	20.2	20.2	17.9
Average number of funds used	3.2	2.9	2.7	2.6	2.5	2.7
Percentage of plans designating a QDIA	98%	98%	98%	98%	98%	80%
Among all plans designating a QDIA, percentage target-date	97%	96%	96%	96%	97%	96%
Plans offering target-date funds	95%	97%	97%	97%	98%	92%
Participants using target-date funds (when offered)	60%	67%	73%	75%	75%	74%
Plans offering managed account program or a model portfolio	13%	20%	25%	29%	31%	27%
Participants with professionally managed allocations	39%	52%	60%	62%	62%	53%
Participants using a single target-date fund	32%	46%	54%	57%	57%	46%
Participants using a single risk-based balanced fund	5%	4%	3%	3%	3%	3%
Participants using a managed account program or model portfolio	2%	2%	3%	2%	2%	4%
Plans actively offering company stock	<0.5%	<0.5%	<0.5%	<0.5%	<0.5%	9%
Participants with >20% company stock	0%	1%	<0.5%	<0.5%	<0.5%	6%
Trading activity						
Participant-directed trading	6%	6%	6%	5%	5%	8%
3. Accessing						
Loans						
Plans offering loans	73%	72%	71%	69%	70%	79%
Participants with an outstanding loan (when offered)	11%	10%	9%	9%	8%	16%
Recordkeeping assets borrowed	2%	2%	1%	1%	1%	1%
Withdrawals						
Plans offering hardship withdrawals	88%	86%	85%	84%	84%	84%
Participants using withdrawals (when offered)	<0.5%	1%	1%	1%	1%	3%
Recordkeeping assets withdrawn	1%	1%	1%	1%	1%	1%
Participant account balance withdrawn	45%	40%	48%	48%	44%	32%
Distributions and rollovers						
Terminated participants preserving assets	90%	87%	85%	87%	88%	82%
Assets preserved that were available for distribution	96%	96%	96%	96%	97%	97%

* The 2016 data is estimated. For an explanation, please see the Methodology section on page 106 of *How America Saves 2017*.

Source: Vanguard, 2017.

Acknowledgments

Launched in 2011, Vanguard Retirement Plan Access (VRPA) is a comprehensive service for retirement plans with up to $20-plus million in assets. Ascensus, Inc.—a nationally recognized recordkeeping firm—provides the administration of these plans on Vanguard's behalf. Through VRPA, we served 6,500 plan sponsors with 270,000 participants as of year-end 2016.

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