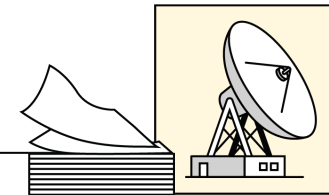


Custom DC plan benchmarks

Information



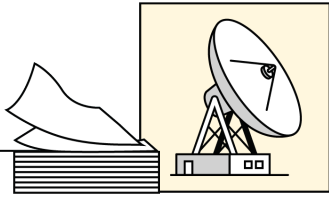


Benchmark population

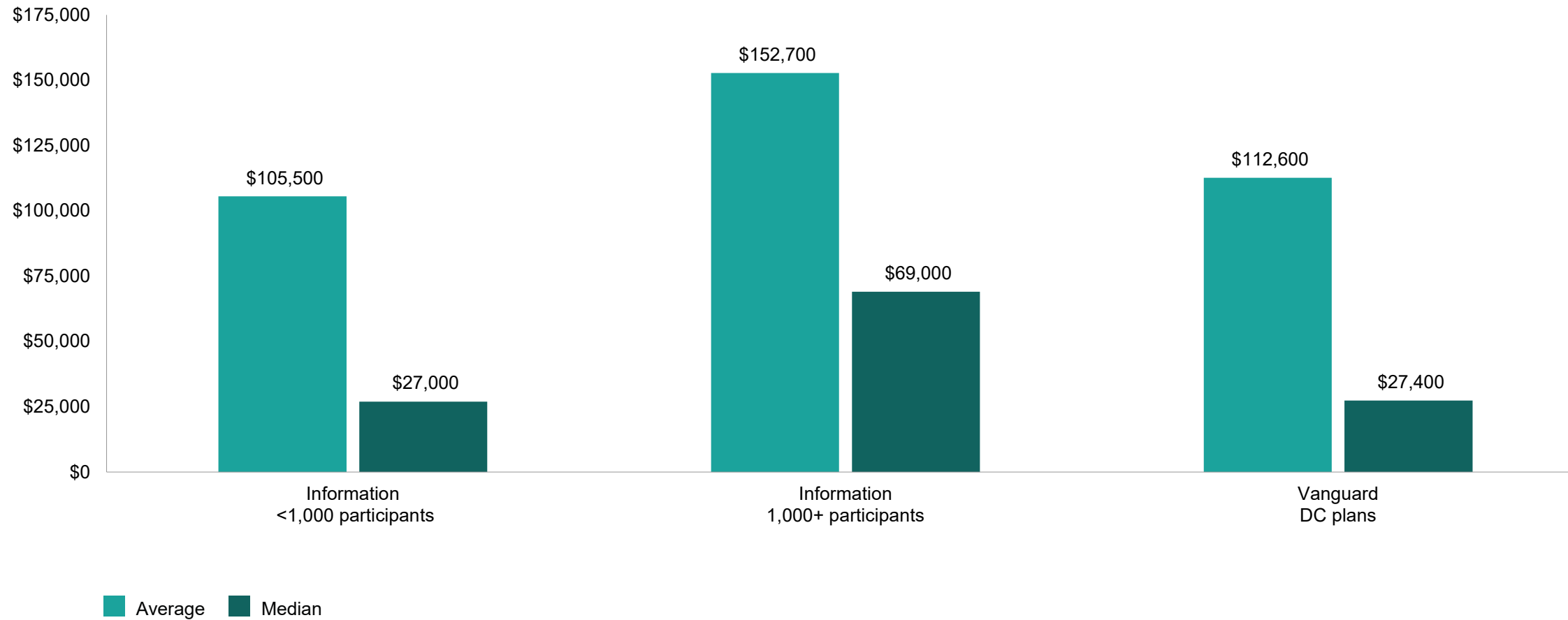
	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
Number of plans	25	36	1,650
Number of participants	8,388	351,063	4.9 million
Average number of participants	336	9,752	2,950
Median number of participants	365	3,016	565
Amount of assets	\$884.7 million	\$53.6 billion	\$550.2 billion
Average assets	\$35.4 million	\$1.5 billion	\$333.9 million
Median assets	\$24.8 million	\$297 million	\$65.5 million

The information industry is defined by NAICS (North America Industry Classification System) code 51.

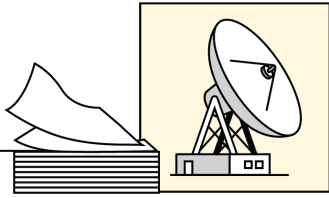
Source: Vanguard, as of December 31, 2022.



Participant balances

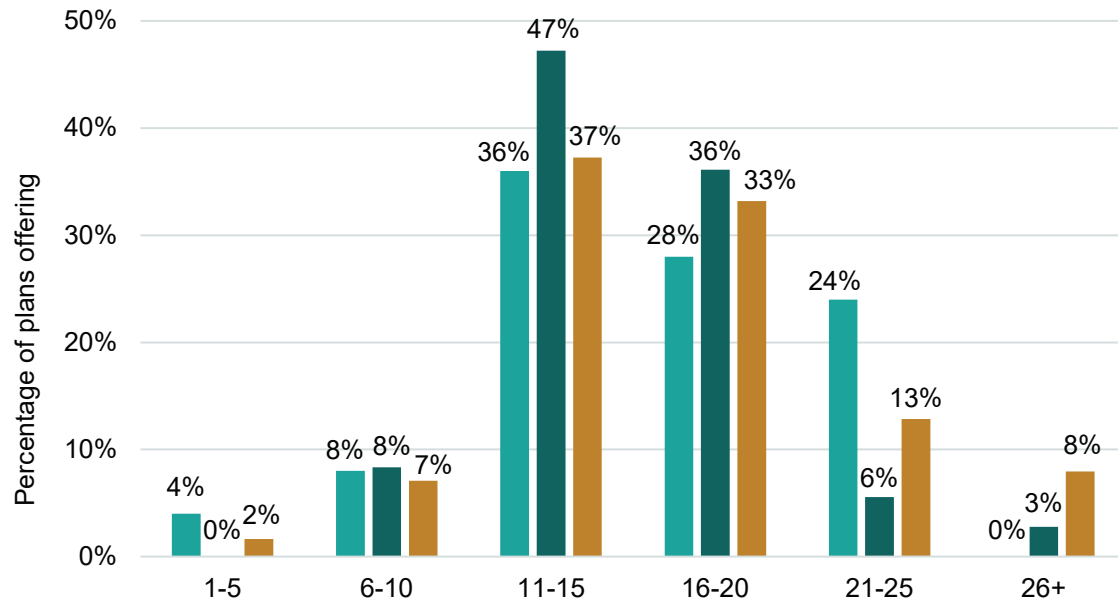


Source: Vanguard, as of December 31, 2022.
Bar chart may not align precisely with percentages due to rounding.

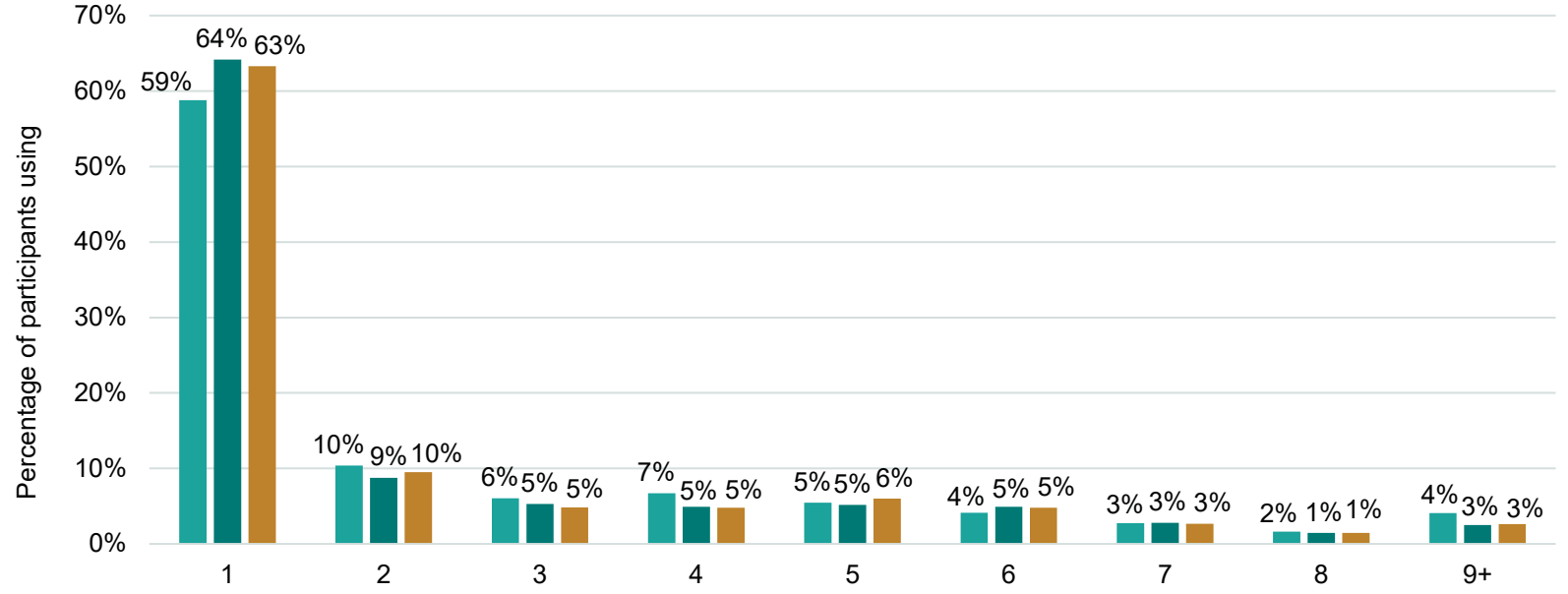


Number of fund options offered and used

Funds offered per plan (all life-cycle funds counted as one)



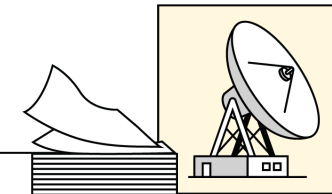
Funds used per participant



	Average funds offered	Median funds offered	Average funds used	Median funds used
Information <1,000 participants	16.1	17	2.6	1
Information 1,000+ participants	15.3	15	2.3	1
Vanguard DC plans	17.4	16	2.4	1

Source: Vanguard, as of December 31, 2022.

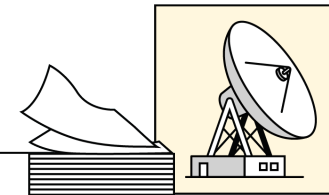
Bar chart may not align precisely with percentages due to rounding.



Types of investment options offered and used*

	Information <1,000 participants		Information 1,000+ participants		Vanguard DC plans	
	Percentage of plans offering	Percentage of participants using*	Percentage of plans offering	Percentage of participants using*	Percentage of plans offering	Percentage of participants using*
Cash	100%	17%	100%	9%	99%	12%
Money market	64	9	61	12	70	6
Stable value / GIC	60	17	61	5	68	10
Bond	96%	19%	100%	16%	98%	17%
Active	76	10	92	8	80	7
Index	84	13	72	12	89	14
Inflation-protected securities	40	3	19	3	35	3
Multisector	16	1	11	4	8	2
High-yield	20	3	14	3	17	3
International	28	2	11	2	19	3
Emerging markets	0	0	0	0	1	2
Balanced funds	100%	79%	100%	87%	99%	87%
Traditional balanced	48	17	67	14	62	12
Target-risk	20	15	8	19	13	10
Target-date	92	74	100	81	96	83
Company stock	0%	0%	11%	10%	8%	36%
Self-directed brokerage	8%	2%	17%	3%	20%	1%

*Among participants offered the option.
Source: Vanguard, as of December 31, 2022.

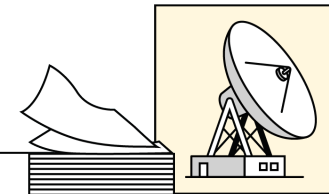


Types of investment options offered and used* (continued)

	Information <1,000 participants		Information 1,000+ participants		Vanguard DC plans	
	Percentage of plans offering	Percentage of participants using*	Percentage of plans offering	Percentage of participants using*	Percentage of plans offering	Percentage of participants using*
Equity funds	96%	37%	100%	33%	99%	30%
Domestic equity funds	96%	36%	100%	31%	99%	29%
Large-cap index	96	29	100	26	98	23
Large-cap active	88	16	89	13	90	16
Large-cap value	88	12	92	13	87	9
Large-cap growth	88	16	92	17	91	13
Large-cap blend	92	27	100	25	98	23
Mid-cap index	76	13	72	14	83	14
Mid-cap active	68	11	44	5	52	7
Small-cap index	64	14	67	12	63	11
Small-cap active	64	11	61	10	63	7
Socially responsible	20	3	28	6	15	5
International equity funds	92%	18%	89%	19%	97%	19%
Index international	76	11	64	14	79	14
Active international	80	11	81	10	83	10
Emerging markets	32	7	42	10	35	8
Global equity funds	24%	8%	11%	8%	17%	3%

*Among participants offered the option.

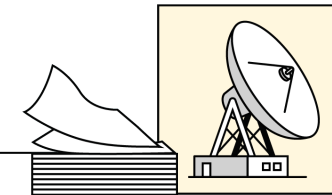
Source: Vanguard, as of December 31, 2022.



Types of investment options offered and used* (continued)

	Information <1,000 participants		Information 1,000+ participants		Vanguard DC plans	
	Percentage of plans offering	Percentage of participants using*	Percentage of plans offering	Percentage of participants using*	Percentage of plans offering	Percentage of participants using*
Sector funds	36%	8%	25%	6%	38%	6%
REIT	24	4	19	6	32	5
Health care	0	0	0	0	8	7
Energy	0	0	0	0	5	5
Precious metals	0	0	3	2	2	2
Technology	0	0	3	9	3	5
Utilities	0	0	0	0	1	2
Natural resources	0	0	0	0	1	4
Financials	0	0	0	0	<0.5	1
Communications	0	0	0	0	<0.5	1
Consumer	0	0	0	0	<0.5	2
Industrials	0	0	0	0	<0.5	1

*Among participants offered the option.
Source: Vanguard, as of December 31, 2022.



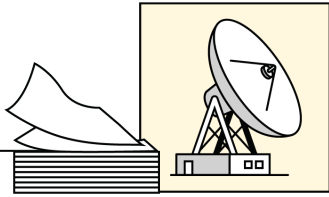
Target-date funds availability and use

	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
Percentage of plans offering	92%	100%	96%
Plan assets invested*	34%	50%	40%
Percentage of plan assets*			
<10%	17%	0%	5%
10–19%	13%	11%	10%
20–29%	17%	14%	17%
30–39%	9%	28%	21%
40–49%	4%	22%	17%
50%+	39%	25%	30%
Percentage of participants using *	75%	81%	83%
Percentage of participant assets**	59%	71%	61%
Percentage of participant assets in target-date funds**			
1–24%	12%	10%	10%
25–49%	7%	8%	8%
50–74%	4%	4%	4%
75–99%	6%	5%	6%
100%	71%	73%	72%
Percentage of participants owning**			
One target-date fund only	69%	71%	71%
One target-date fund plus other funds	23%	22%	23%
Two or more target-date funds only	2%	2%	2%
Two or more target-date funds plus other funds	6%	5%	4%

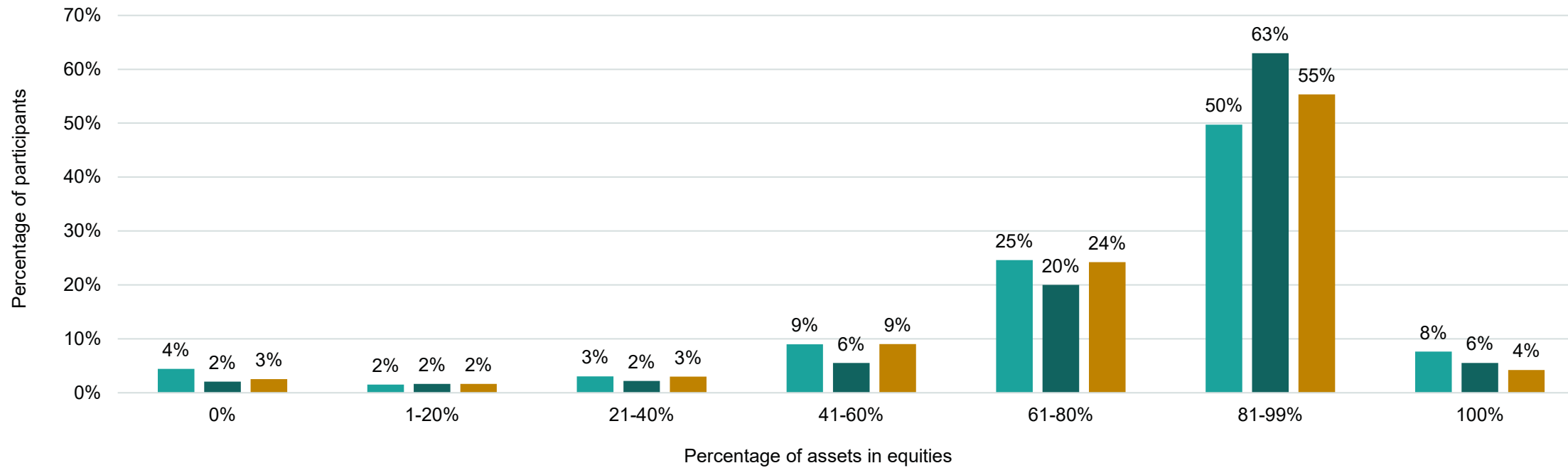
*Among plans offering target-date options.

**Among participants owning target-date options.

Source: Vanguard, as of December 31, 2022.



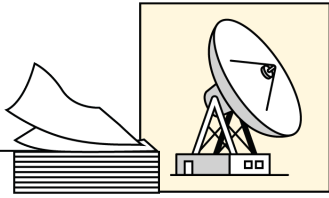
Participant equity exposure



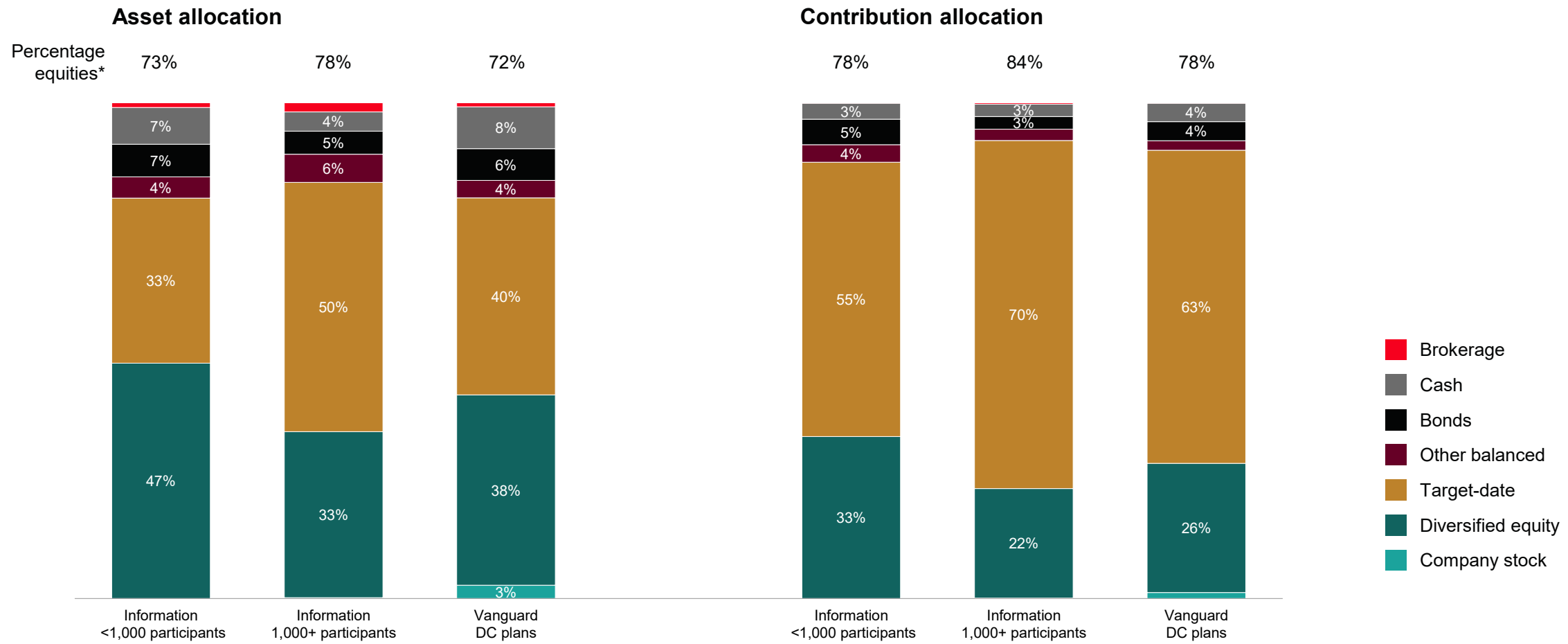
	Average percentage in equities	Median percentage in equities
Information <1,000 participants	76%	86%
Information 1,000+ participants	80%	89%
Vanguard DC plans	77%	86%

Source: Vanguard, as of December 31, 2022.

Bar chart may not align precisely with percentages due to rounding.



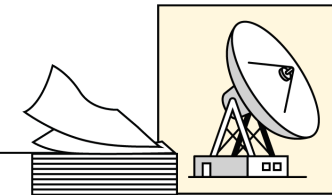
Asset and contribution allocations



*Equities include company stock, diversified equity, and the equity portion of balanced funds.

Source: Vanguard, as of December 31, 2022.

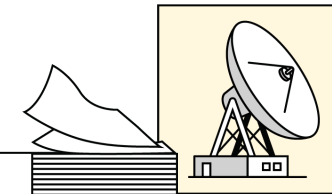
Bar chart may not align precisely with percentages due to rounding.



Participants with professionally managed allocations

	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
All participants			
Single target-date fund	51%	58%	59%
Single balanced fund	1%	2%	<0.5%
Managed account program	3%	5%	7%
Total	55%	65%	66%
New plan entrants during the year			
Single target-date fund	86%	84%	87%
Single balanced fund	1%	<0.5%	<0.5%
Managed account program	1%	1%	2%
Total	88%	85%	89%

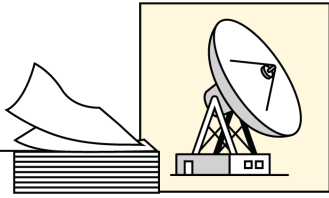
Source: Vanguard, as of December 31, 2022.



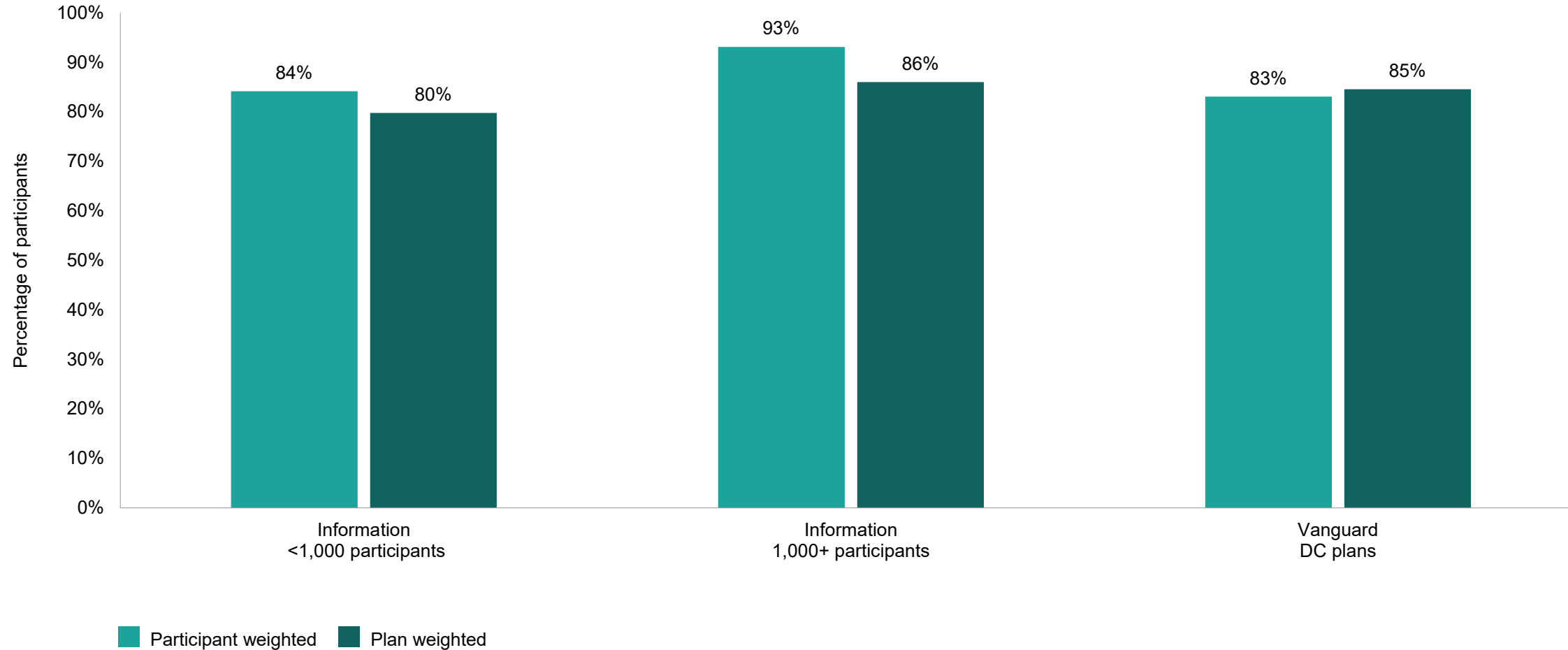
Automatic enrollment options*

	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
Automatic enrollment*			
Number of plans	12	24	884
Percentage of plans	55%	69%	58%
Default automatic enrollment rate			
1 percent	8%	4%	2%
2 percent	0%	4%	5%
3 percent	33%	8%	34%
4 percent	0%	17%	14%
5 percent	33%	17%	17%
6 percent or more	25%	50%	28%
Default automatic increase rate			
1 percent	42%	71%	66%
2 percent	0%	4%	3%
Voluntary election	58%	25%	25%
Service feature not offered	0%	0%	6%
Default automatic increase cap			
<6 percent	40%	0%	2%
6 to 9 percent	0%	6%	17%
10 to 14 percent	60%	56%	48%
15 to 19 percent	0%	28%	22%
20+ percent	0%	0%	6%
No cap	0%	11%	5%
Default fund			
Target-date fund	92%	100%	98%
Other balanced fund	8%	0%	1%
Money market or stable value fund	0%	0%	1%

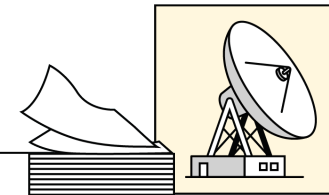
*Limited to plans using Vanguard's automatic enrollment service.
Source: Vanguard, as of December 31, 2022.



Participation rates



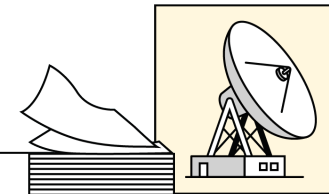
Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



Participant deferral rates

	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
Deferral rates			
Average	7.7%	8.9%	7.4%
Median	6.0%	8.1%	6.4%
Distribution of rates			
<4.0%	27%	8%	25%
4.0% – 6.0%	21%	12%	19%
6.1% – 9.9%	27%	51%	32%
10.0% – 14.9%	16%	22%	17%
15.0%+	9%	6%	7%

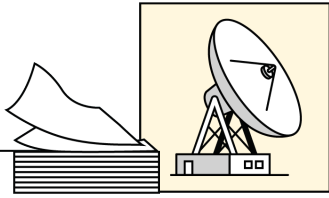
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.



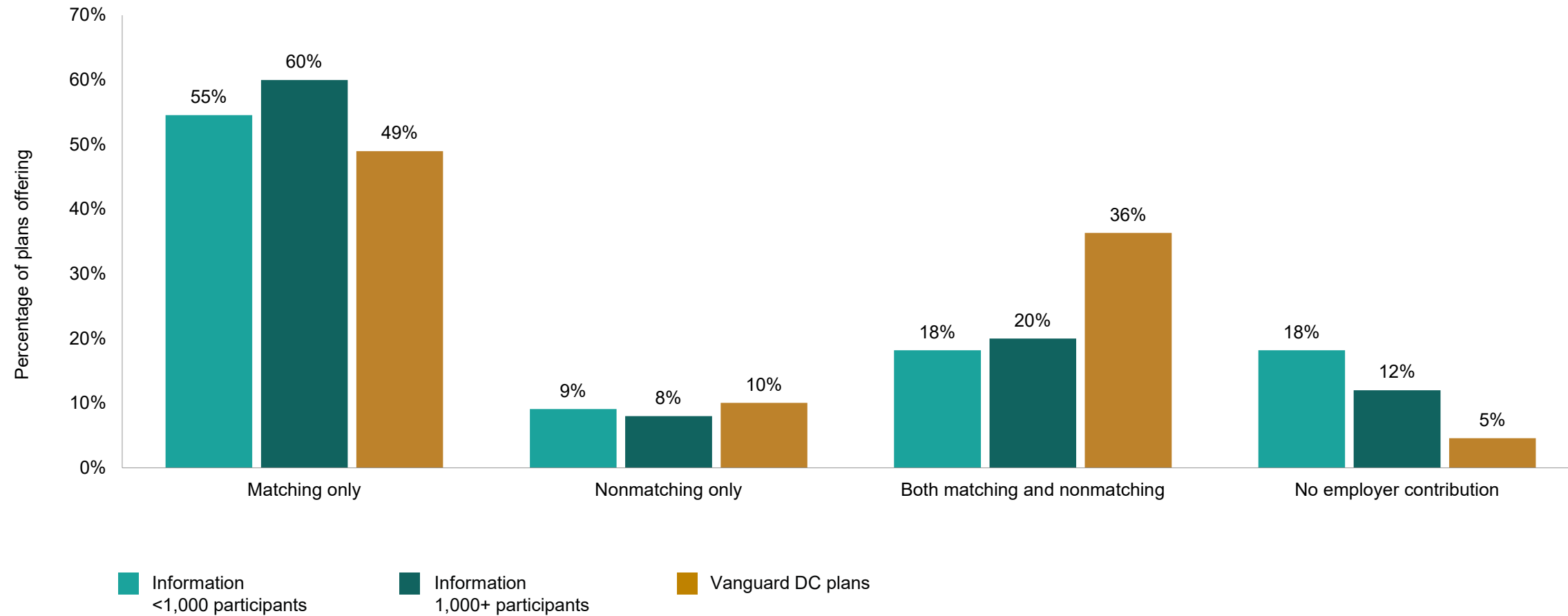
Aggregate participant and employer contribution rates

	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
Total saving rate			
Average	10.5%	15.4%	11.3%
Median	9.0%	14.0%	10.6%
Distribution of rates			
<5.0%	20%	10%	18%
5.0% – 8.9%	26%	23%	20%
9.0% – 11.9%	20%	27%	21%
12.0% – 14.9%	14%	21%	17%
15.0% +	21%	19%	23%

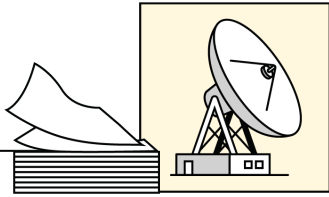
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.



Types of employer contributions

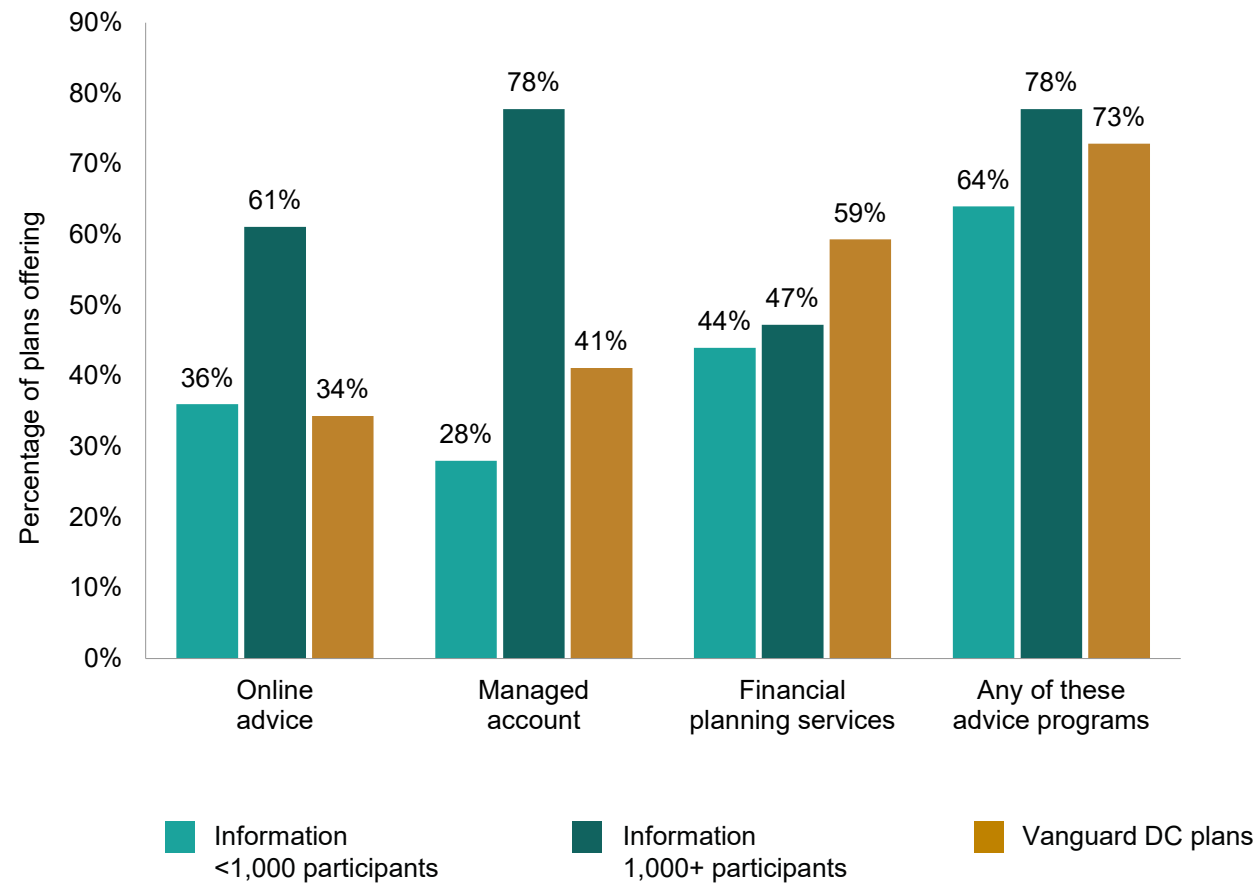


Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.

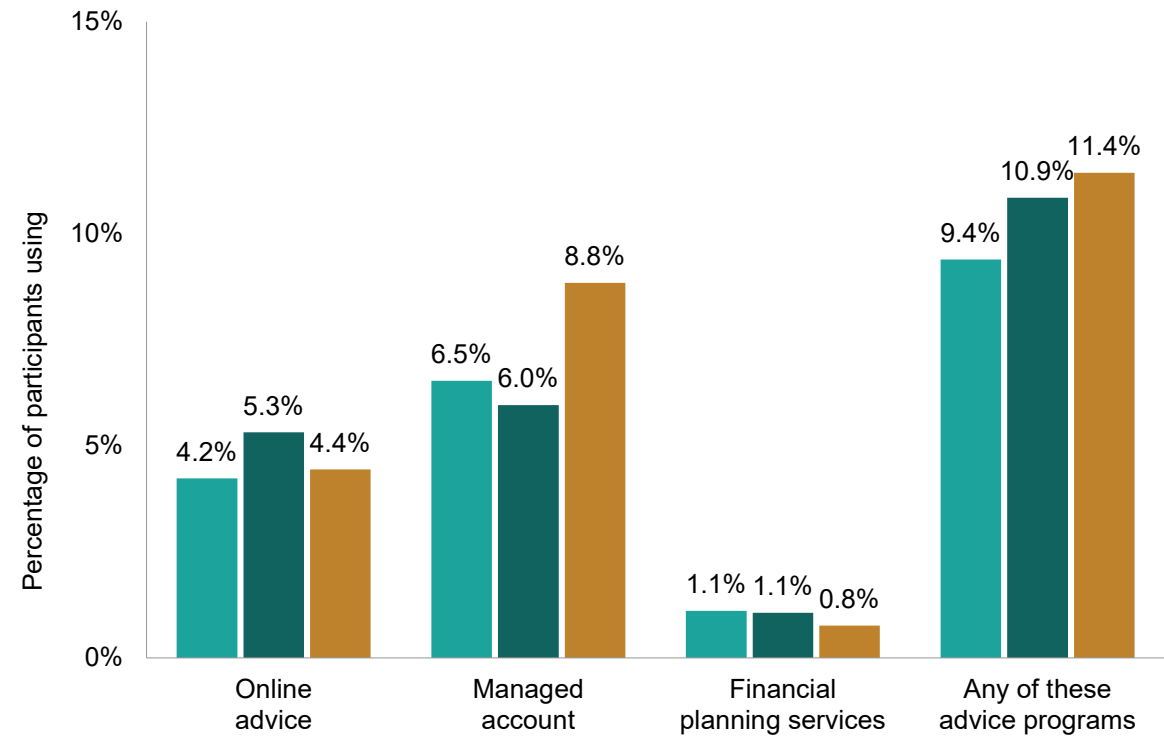


Advice services

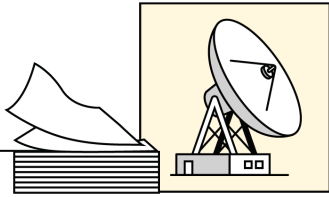
Advice offered



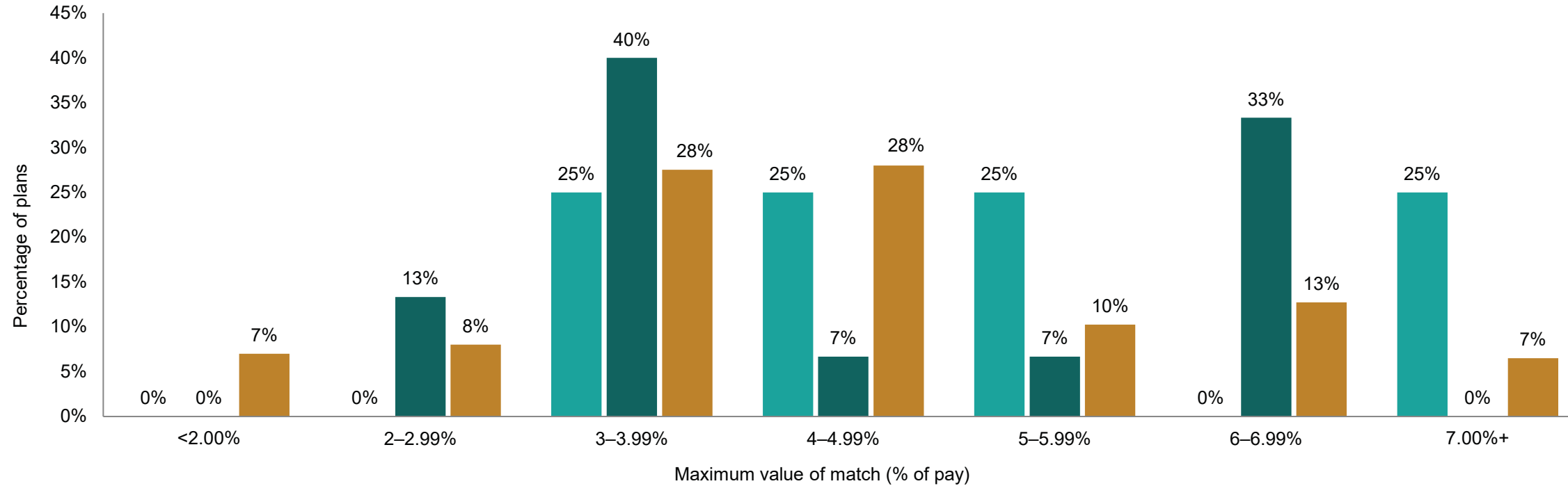
Advice used



Source: Vanguard, as of December 31, 2022.
 Bar chart may not align precisely with percentages due to rounding.

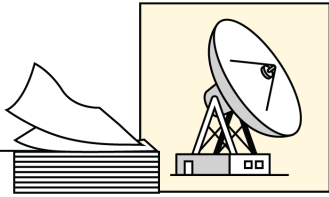


Matching contributions

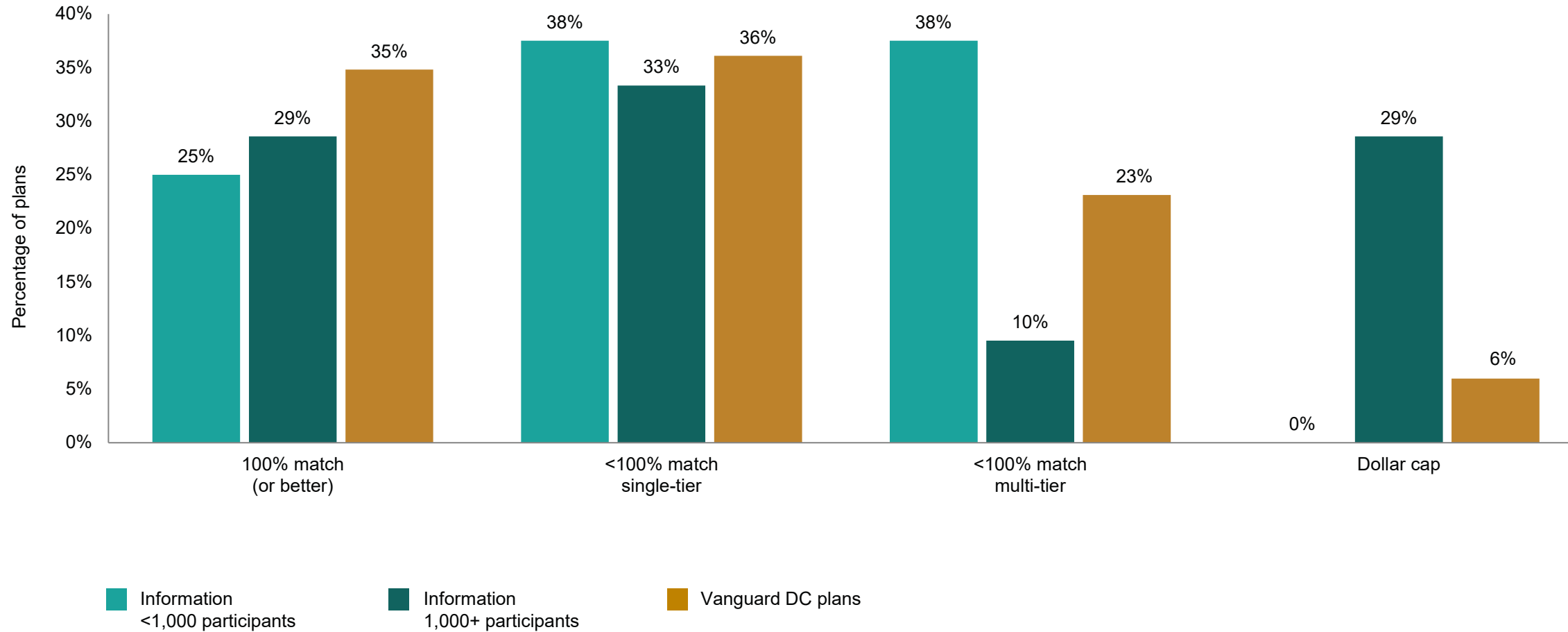


	Average value	Median value
Information <1,000 participants	5.8%	4.5%
Information 1,000+ participants	4.2%	3.5%
Vanguard DC plans	4.5%	4.0%

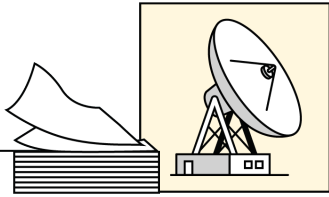
Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



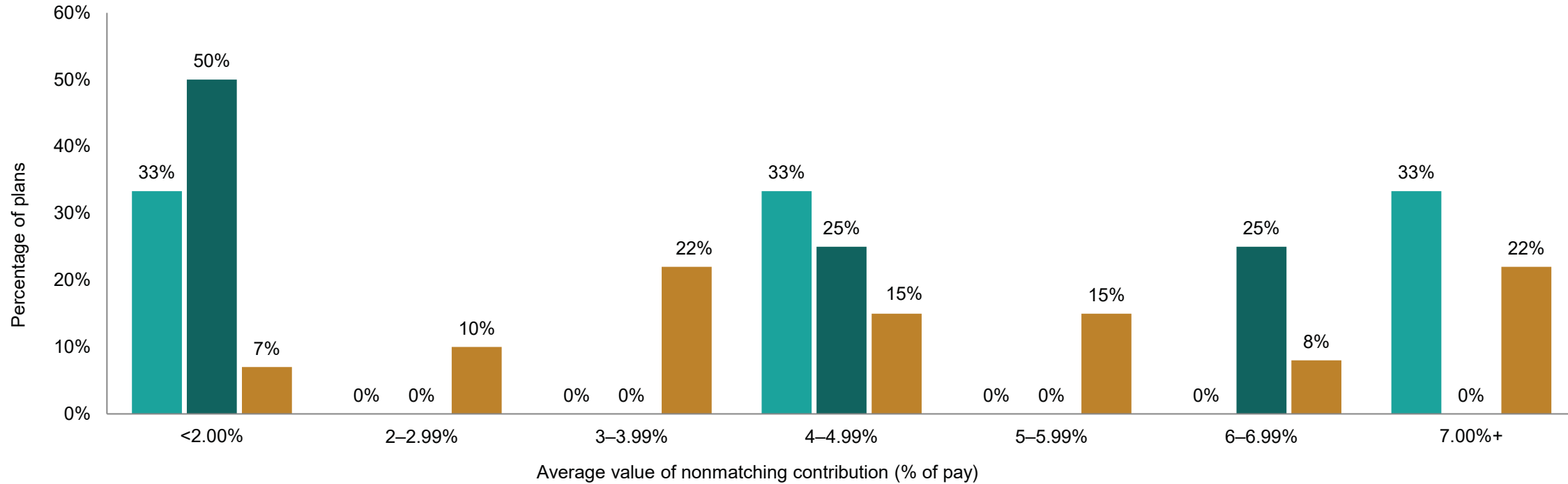
Matching formulas



Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.

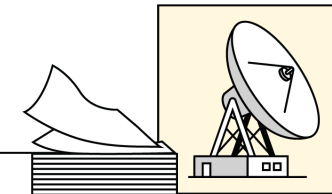


Nonmatching/Profit-sharing employer contributions



	Average value	Median value
Information <1,000 participants	4.1%	4.0%
Information 1,000+ participants	3.4%	3.1%
Vanguard DC plans	5.1%	4.1%

Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



Roth availability and use

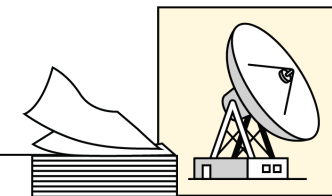
	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
Percentage of plans offering Roth (among plans with elective deferrals)	86%	89%	80%
Percentage of plan assets invested in Roth*	3.6%	8.6%	3.8%
Distribution of percentage of plan assets in Roth			
<1%	32%	32%	19%
1–2%	37%	42%	36%
3–5%	11%	6%	27%
6–9%	11%	10%	13%
10–14%	11%	10%	4%
15%+	0%	0%	2%
Percentage of participants with assets in Roth*	16%	25%	16%
Percentage of participant assets in Roth**	18%	22%	17%
Distribution of participant assets in Roth			
1–24%	44%	55%	54%
25–49%	22%	27%	23%
50–74%	21%	14%	14%
75–99%	7%	3%	6%
100%	6%	1%	3%
Percentage of participants making Roth contributions (past 12 mo)***	17%	14%	15%
Percentage of participant contributions going to Roth**	61%	61%	55%
Distribution of percentage of participant contributions to Roth			
1–24%	15%	23%	22%
25–49%	19%	22%	26%
50–74%	16%	11%	15%
75–99%	5%	9%	7%
100%	44%	36%	30%

*Among plans offering Roth.

**Among participants using Roth.

***Among participants making elective deferrals.

Source: Vanguard, as of December 31, 2022.



Participant loans and in-service withdrawals

	Information <1,000 participants	Information 1,000+ participants	Vanguard DC plans
Outstanding loans*			
Percentage of participants with outstanding loans	6%	7%	12%
Percentage of account balance in loans	11%	12%	11%
Average loan balance	\$11,671	\$14,456	\$10,369
Number of outstanding loans per participant*			
No loans	94%	93%	88%
One loan	5%	5%	10%
Two loans	1%	2%	2%
Three+ loans	0%	0%	0%
Loans issued past 12 months*			
Average per 1,000 active participants	43	57	93
Average loan amount	\$12,467	\$14,909	\$10,701
Nonhardship withdrawals taken past 12 months**			
Average per 1,000 active participants	56	107	93
Average withdrawal amount	\$21,295	\$9,492	\$17,560
Hardship withdrawals taken past 12 months**			
Average per 1,000 active participants	18	25	49
Average withdrawal amount	\$4,763	\$7,427	\$5,126

*Among plans allowing loans.

**Among participants allowed in-service withdrawals.

Source: Vanguard, as of December 31, 2022.

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