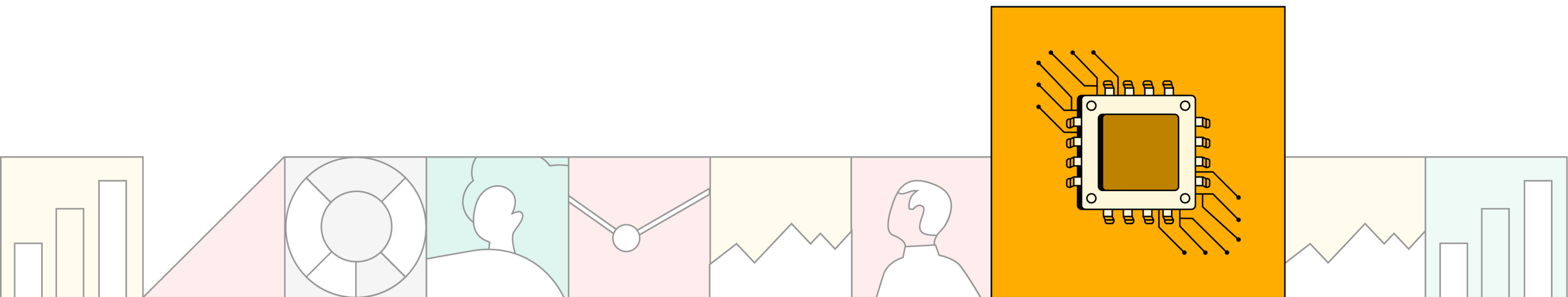


Custom DC plan benchmarks

Technology



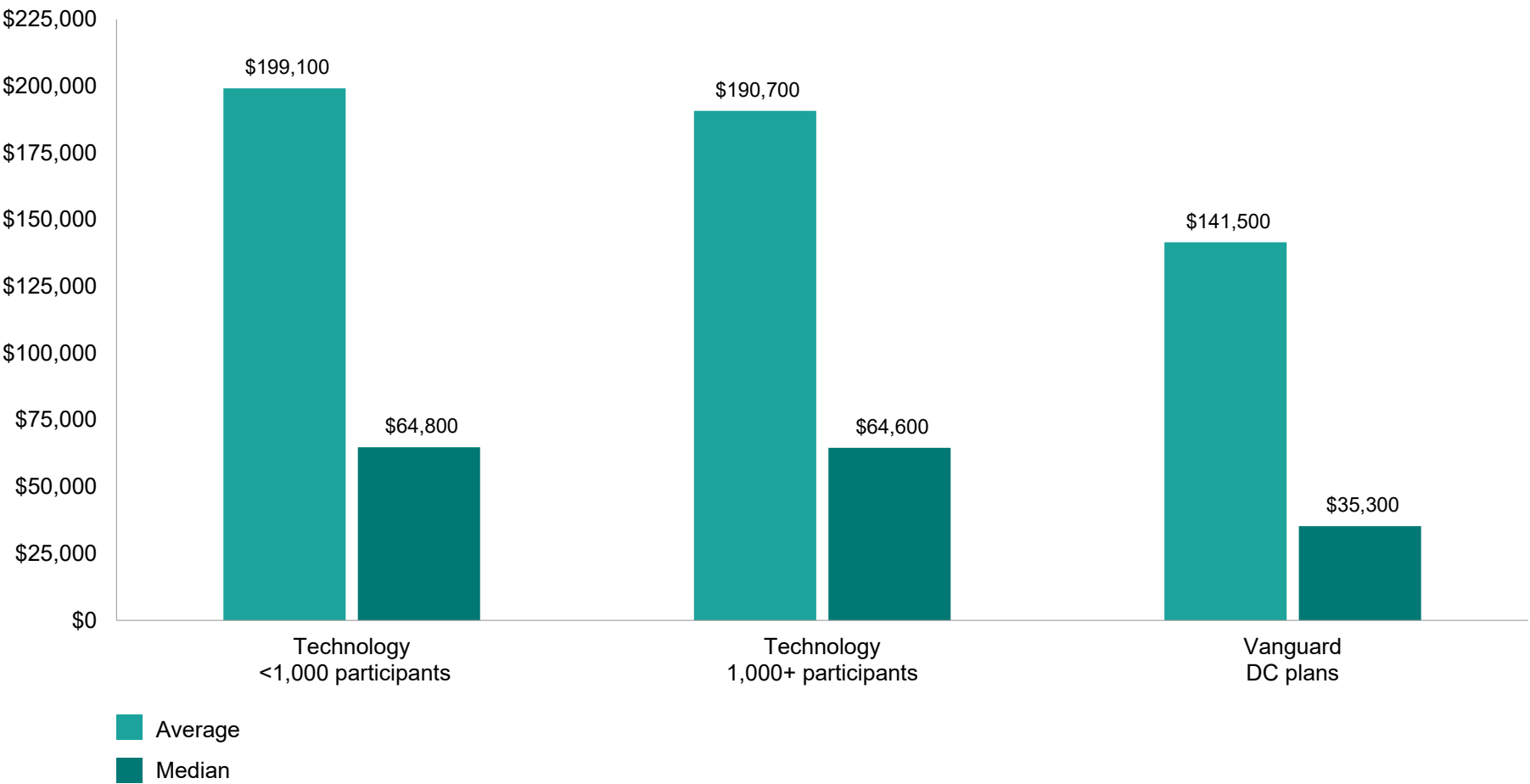
Benchmark population

	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
Number of plans	201	132	1,675
Number of participants	75,554	883,738	4.7 million
Average number of participants	376	6,695	2,850
Median number of participants	311	2,999	530
Amount of assets	\$15 billion	\$168.5 billion	\$670 billion
Average assets	\$74.8 million	\$1.3 billion	\$401.4 million
Median assets	\$58.4 million	\$438.7 million	\$78.8 million

Technology firms, using the Workforce Information Council's methodology, are from industries with at least 2.5 times the level of STEM Core employment (excluding healthcare) as compared to the national average for all industries.

Source: Vanguard, as of December 31, 2021.

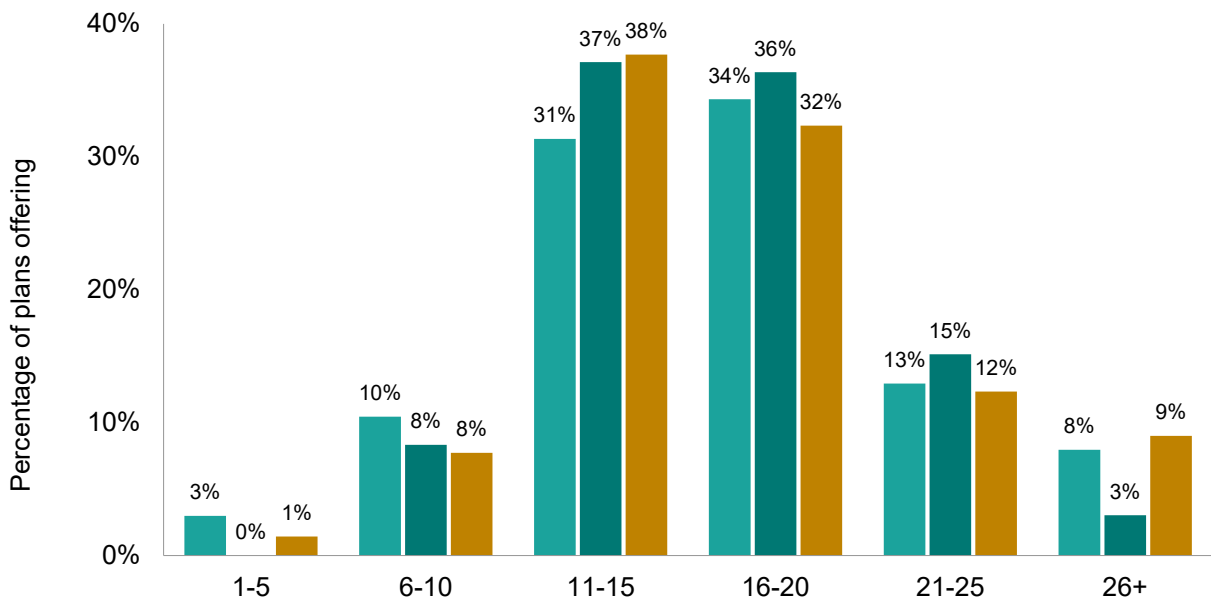
Participant balances



Source: Vanguard, as of December 31, 2021.

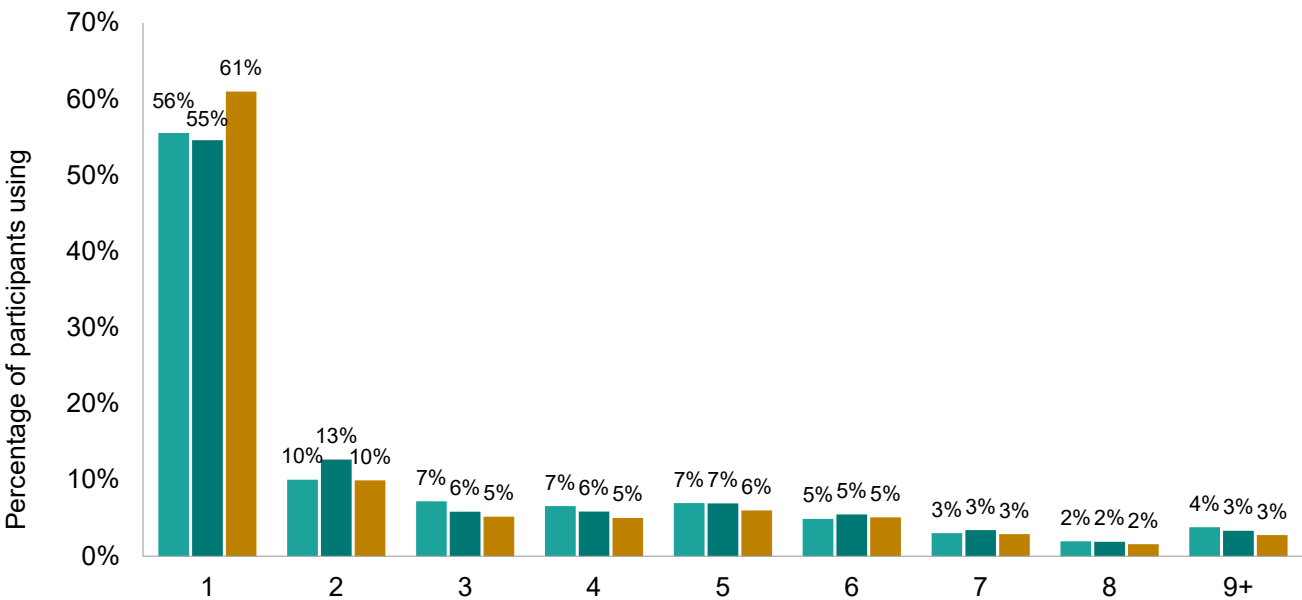
Number of fund options offered and used

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



	Average funds offered	Median funds offered
Technology <1,000 participants	17.5	16
Technology 1,000+ participants	17.0	16
Vanguard DC plans	17.5	16

Funds used per participant



Average funds used	Median funds used
2.7	1
2.6	1
2.4	1

Source: Vanguard, as of December 31, 2021.

Types of investment options offered and used*

	Technology <1,000 participants		Technology 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	99%	16%	100%	13%	99%	13%
Money market	68	9	66	7	69	6
Stable value / GIC	68	15	73	11	67	11
Bond	97%	21%	100%	20%	98%	18%
Active	76	11	88	7	79	7
Index	90	16	89	16	89	15
Inflation protected securities	34	4	37	4	34	3
Multi-sector	4	2	9	3	7	2
High-yield	19	6	14	4	17	4
International	22	5	20	2	19	3
Global	4	3	5	2	6	2
Emerging markets	1	<0.5	0	0	1	3
Balanced funds	99%	79%	100%	84%	99%	86%
Traditional balanced	61	15	52	14	63	13
Target-risk	14	27	6	4	13	9
Target-date	94	72	99	81	95	82
Company stock	4%	53%	27%	42%	8%	38%
Self-directed brokerage	10%	4%	27%	2%	20%	1%

*Among participants offered the option.

Source: Vanguard, as of December 31, 2021.

Types of investment options offered and used* (continued)

		Technology <1,000 participants		Technology 1,000+ participants		Vanguard DC plans
	Percentage of plans offering	Percentage of participants using*		Percentage of plans offering	Percentage of participants using*	Percentage of participants using*
Equity funds	99%	41%		100%	36%	32%
Domestic equity funds	99%	40%		100%	35%	31%
Large-cap index	98	29		100	27	24
Large-cap active	89	23		90	17	17
Large-cap value	91	13		86	9	10
Large-cap growth	91	19		93	14	14
Large-cap blend	98	29		100	27	24
Mid-cap index	77	15		89	18	15
Mid-cap active	61	11		55	9	8
Small-cap index	61	14		56	14	11
Small-cap active	71	11		63	8	8
Socially responsible	12	2		20	3	6
International equity funds	96%	22%		100%	22%	20%
Index international	77	14		90	16	14
Active international	82	14		84	12	11
Emerging markets	33	8		32	10	9
Global equity funds	17%	8%		15%	7%	4%
Sector funds	30%	10%		29%	7%	7%
REIT	26	8		25	7	6
Health care	8	9		2	9	6
Energy	7	9		3	6	4
Precious metals	2	2		3	2	2
Technology	1	10		3	6	6
Utilities	1	2		1	4	2
Natural resources	0	0		1	1	4
Financials	0	0		0	0	1
Communications	0	0		0	0	1
Commodities	0	0		0	0	6
Consumer	1	1		1	1	2
Industrials	0	0		0	0	1

*Among participants offered the option.

Source: Vanguard, as of December 31, 2021.

Target-date funds availability and use

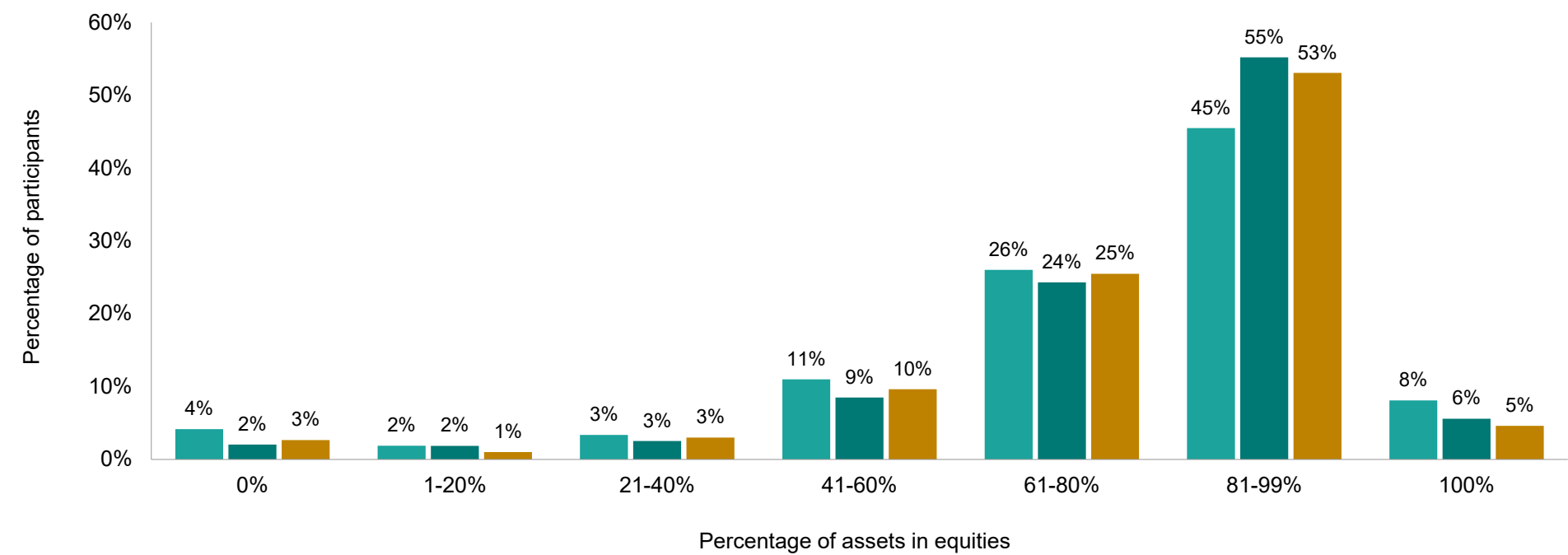
	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
Percentage of plans offering	94%	99%	95%
Plan assets invested*	34%	40%	38%
Percentage of plan assets*			
<10%	4%	2%	5%
10–19%	15%	7%	11%
20–29%	26%	18%	19%
30–39%	20%	28%	23%
40–49%	12%	18%	14%
50%+	24%	27%	28%
Percentage of participants using *	72%	81%	82%
Percentage of participant assets**	62%	60%	60%
Percentage of participant assets in target-date funds**			
1–24%	11%	12%	10%
25–49%	9%	10%	9%
50–74%	5%	7%	4%
75–99%	5%	7%	6%
100%	70%	64%	71%
Percentage of participants owning**			
One target-date fund only	68%	62%	69%
One target-date fund plus other funds	25%	31%	25%
Two or more target-date funds only	3%	2%	2%
Two or more target-date funds plus other funds	5%	5%	4%

*Among plans offering target-date options.

**Among participants owning target-date options.

Source: Vanguard, as of December 31, 2021.

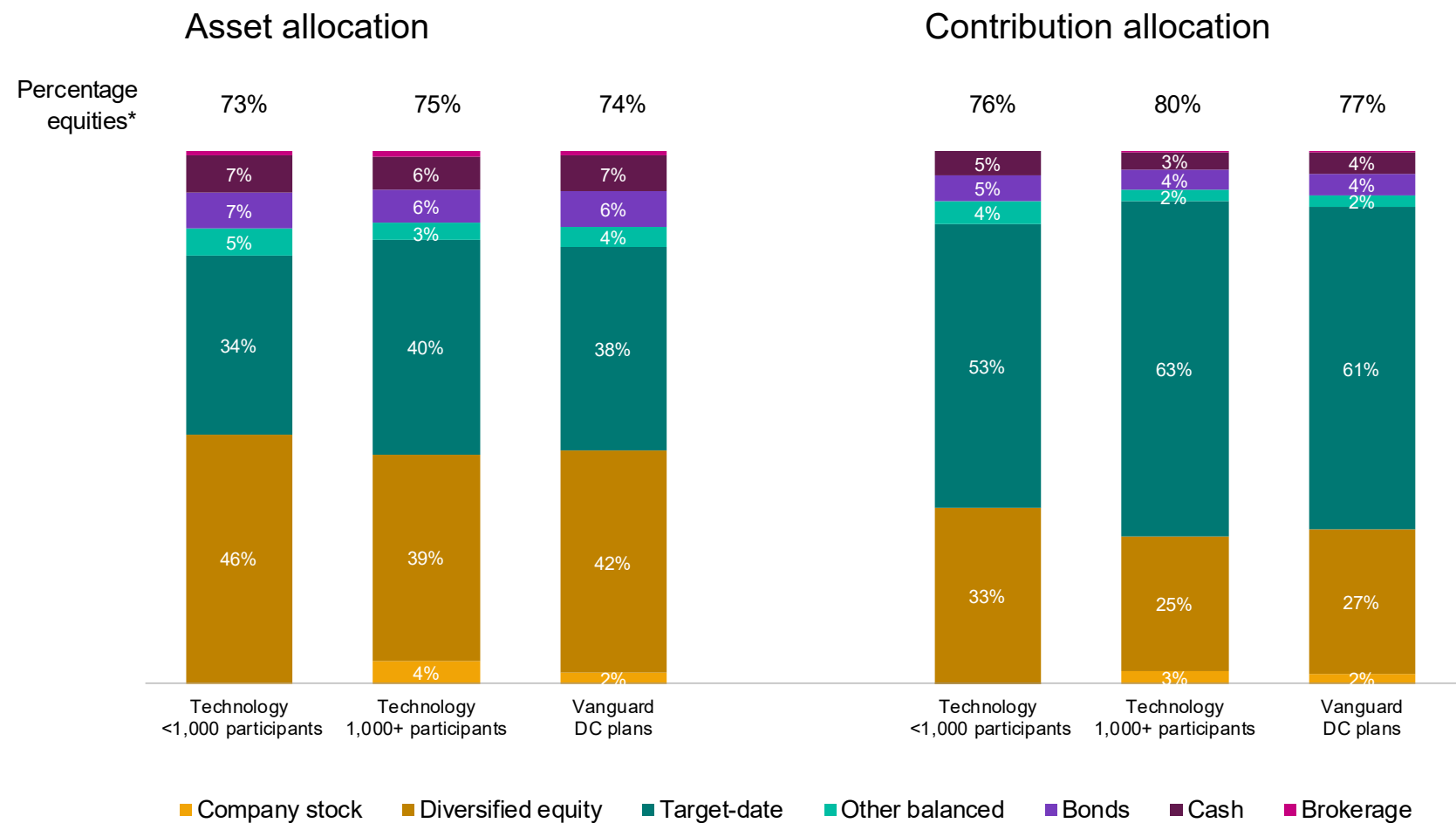
Participant equity exposure



	Average percentage in equities	Median percentage in equities
Technology <1,000 participants	75%	85%
Technology 1,000+ participants	78%	87%
Vanguard DC plans	77%	87%

Source: Vanguard, as of December 31, 2021.

Asset and contribution allocations



*Equities include company stock, diversified equity, and the equity portion of balanced funds.
Source: Vanguard, as of December 31, 2021.

Participants with professionally managed allocations

	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
All participants			
Single target-date fund	48%	50%	56%
Single balanced fund	1%	1%	1%
Managed account program	4%	7%	7%
Total	53%	58%	64%
New plan entrants during the year			
Single target-date fund	77%	76%	85%
Single balanced fund	1%	1%	1%
Managed account program	1%	2%	2%
Total	79%	79%	88%

Source: Vanguard, as of December 31, 2021.

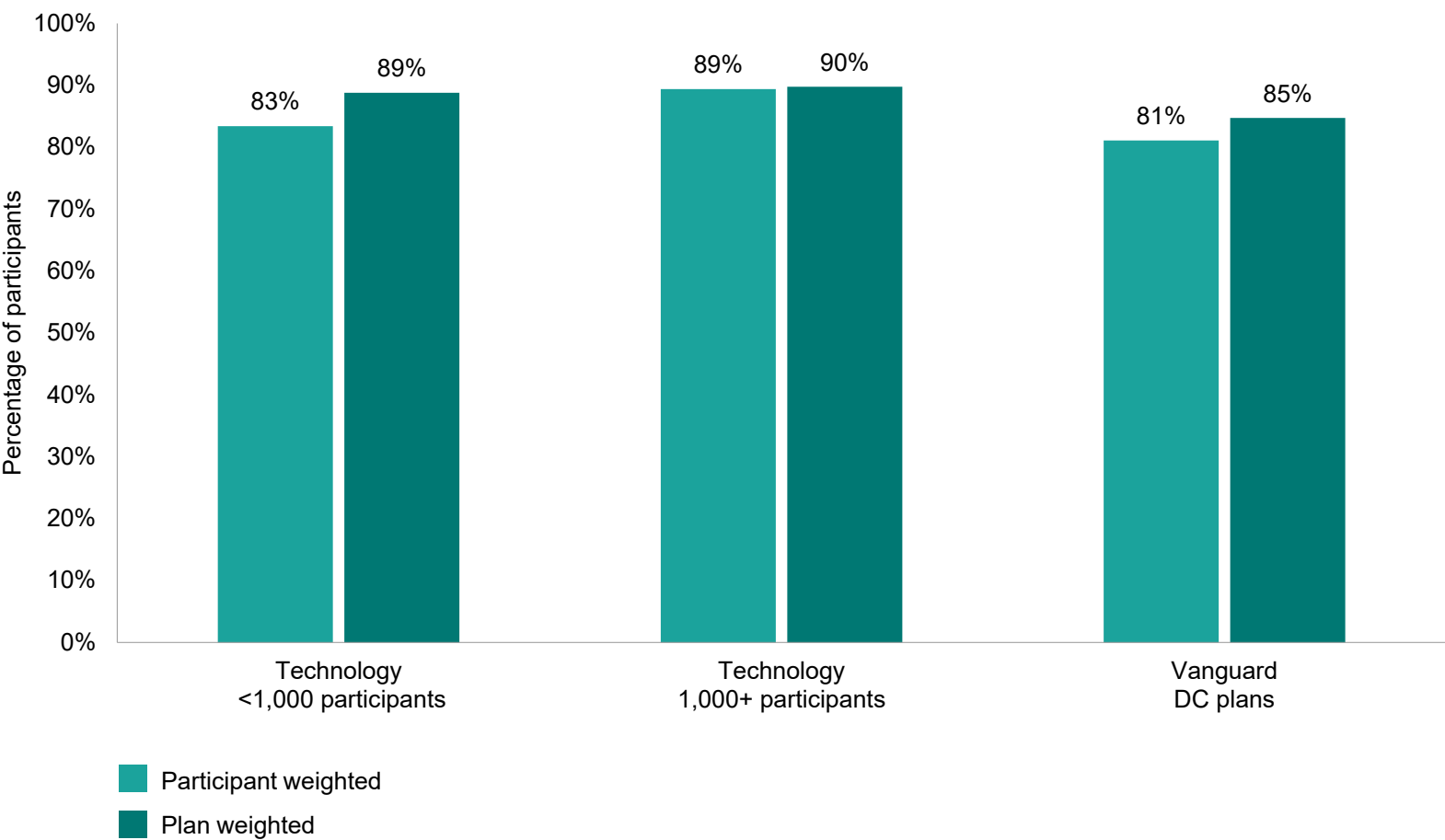
Automatic enrollment options*

	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
Automatic enrollment*			
Number of plans	99	98	859
Percentage of plans	53%	75%	56%
Default automatic enrollment rate			
1 percent	1%	3%	1%
2 percent	3%	2%	5%
3 percent	25%	31%	36%
4 percent	19%	10%	14%
5 percent	19%	12%	17%
6 percent or more	32%	42%	27%
Default automatic increase rate			
1 percent	58%	70%	67%
2 percent	4%	1%	2%
Voluntary election	29%	28%	24%
Service feature not offered	9%	1%	7%
Default automatic increase cap			
<6 percent	3%	4%	2%
6 to 9 percent	13%	4%	18%
10 to 14 percent	49%	53%	48%
15 to 19 percent	16%	26%	18%
20+ percent	8%	11%	6%
No cap	10%	1%	8%
Default fund			
Target-date fund	98%	99%	98%
Other balanced fund	0%	1%	1%
Money market or stable value fund	1%	0%	1%

*Limited to plans using Vanguard's automatic enrollment service.

Source: Vanguard, as of December 31, 2021.

Participation rates



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

Participant deferral rates

	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
Deferral rates			
Average	8.4%	8.5%	7.3%
Median	7.2%	7.7%	6.1%
Distribution of rates			
<4.0%	16%	16%	26%
4.0% – 6.0%	19%	16%	20%
6.1% – 9.9%	35%	38%	31%
10.0% – 14.9%	21%	23%	16%
15.0%+	9%	8%	7%

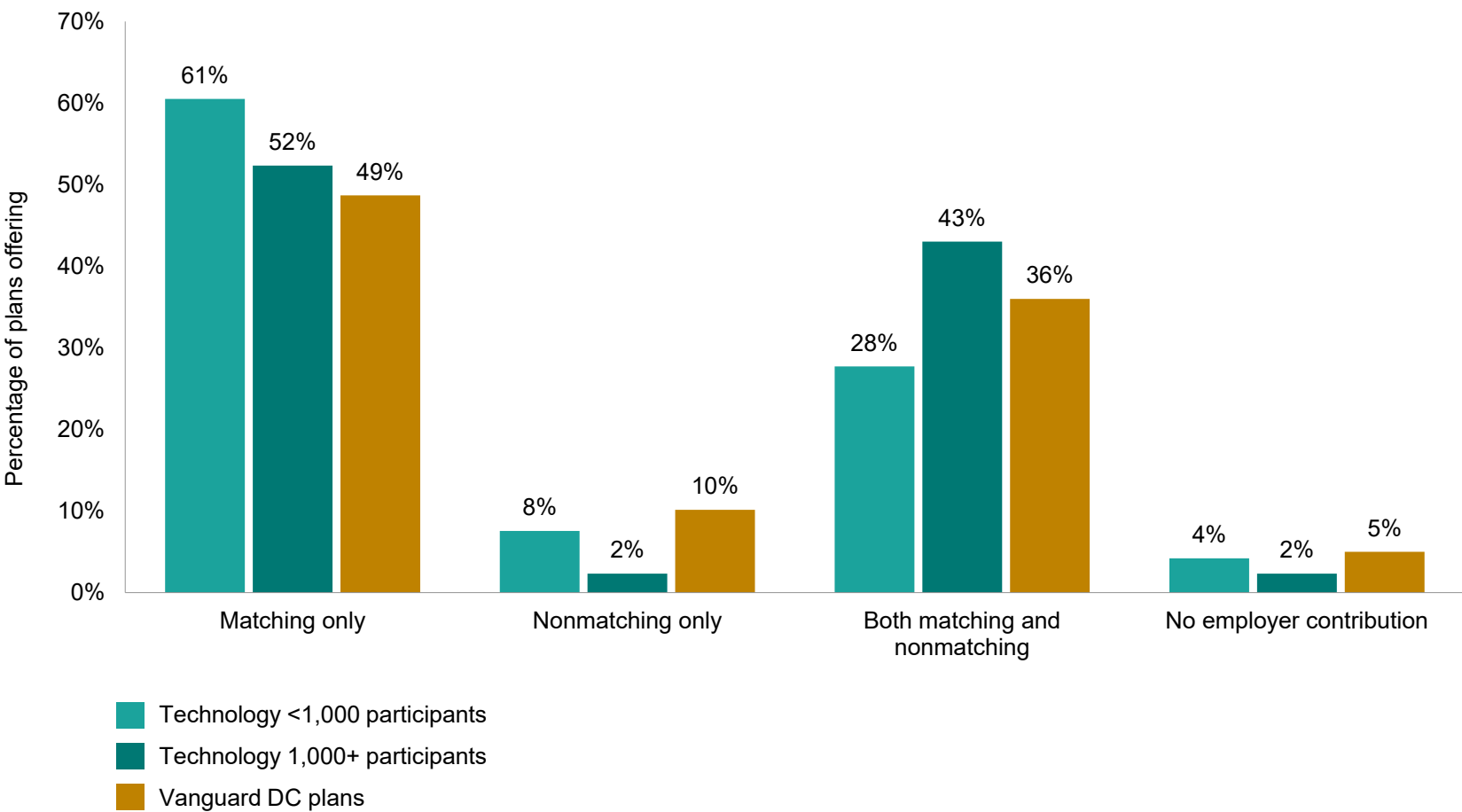
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.

Aggregate participant and employer contribution rates

	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
Total savings rate			
Average	13.1%	13.7%	11.2%
Median	12.5%	12.8%	10.4%
Distribution of rates			
<5.0%	9%	10%	18%
5.0% – 8.9%	18%	18%	21%
9.0% – 11.9%	20%	23%	22%
12.0% – 14.9%	19%	18%	16%
15.0% +	33%	31%	23%

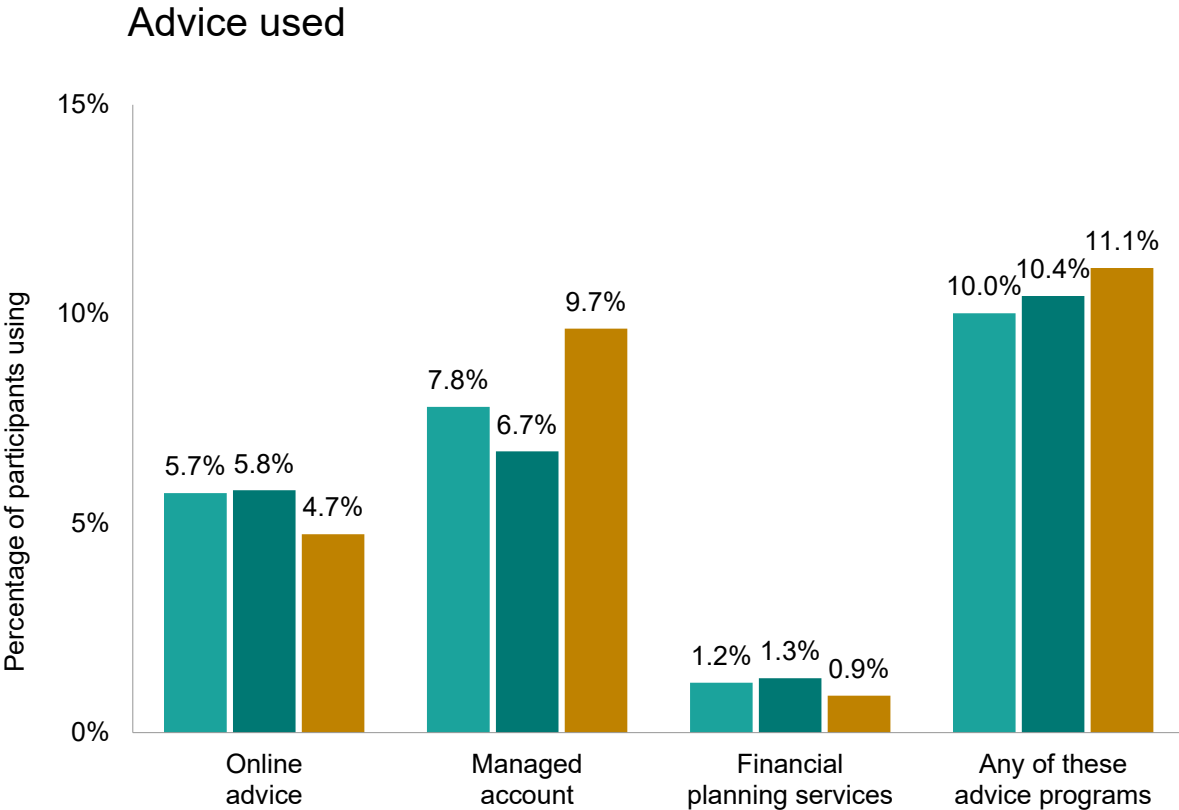
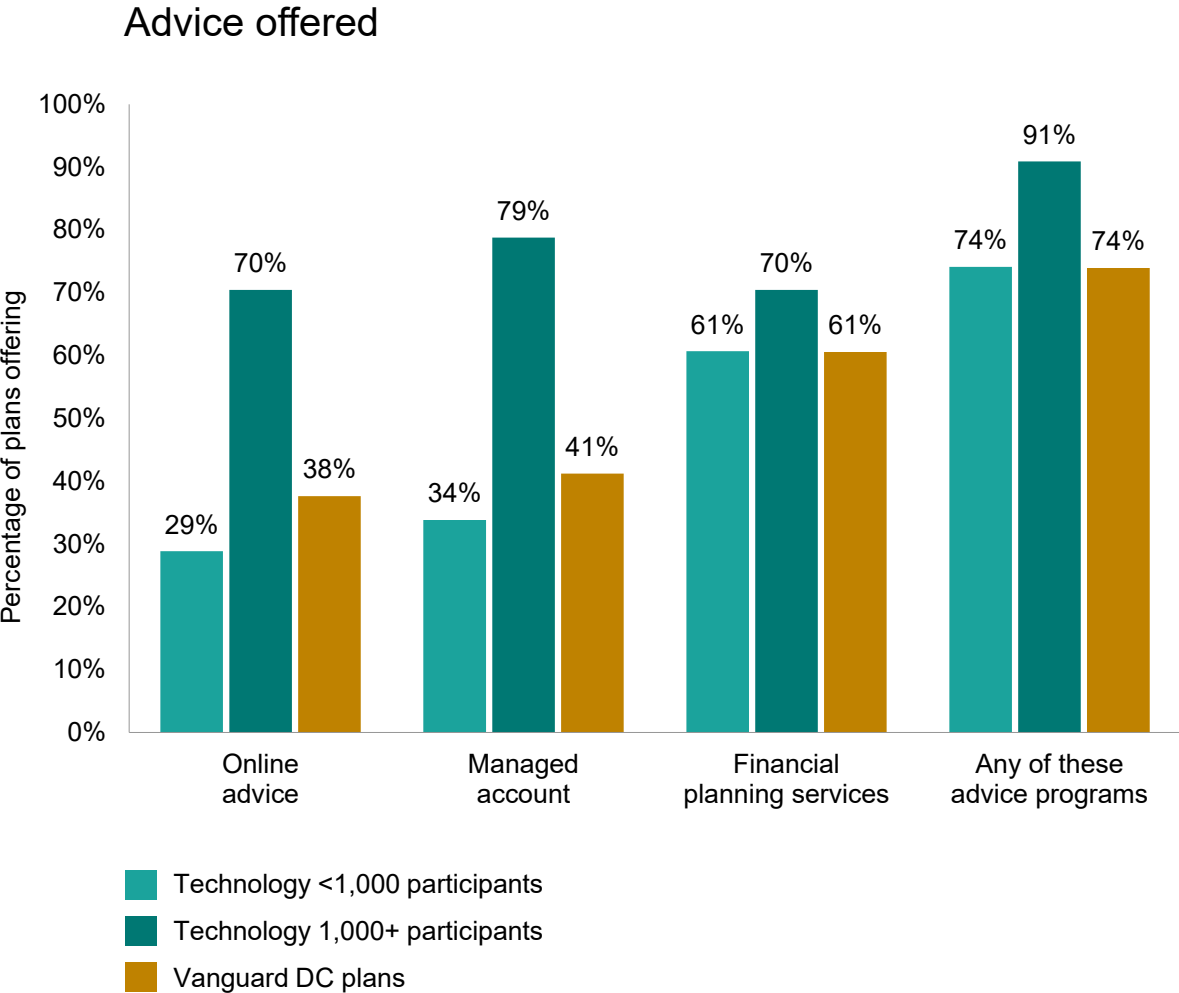
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.

Types of employer contributions



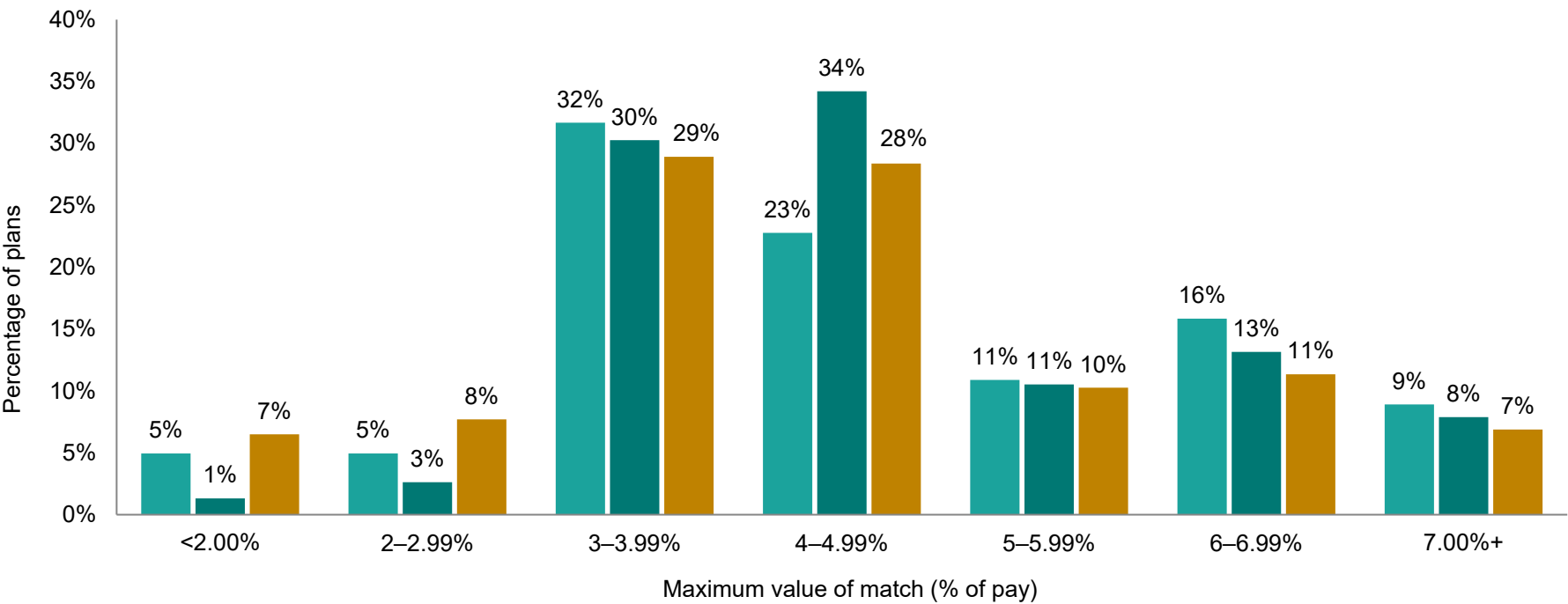
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.

Advice services



Source: Vanguard, as of December 31, 2021.

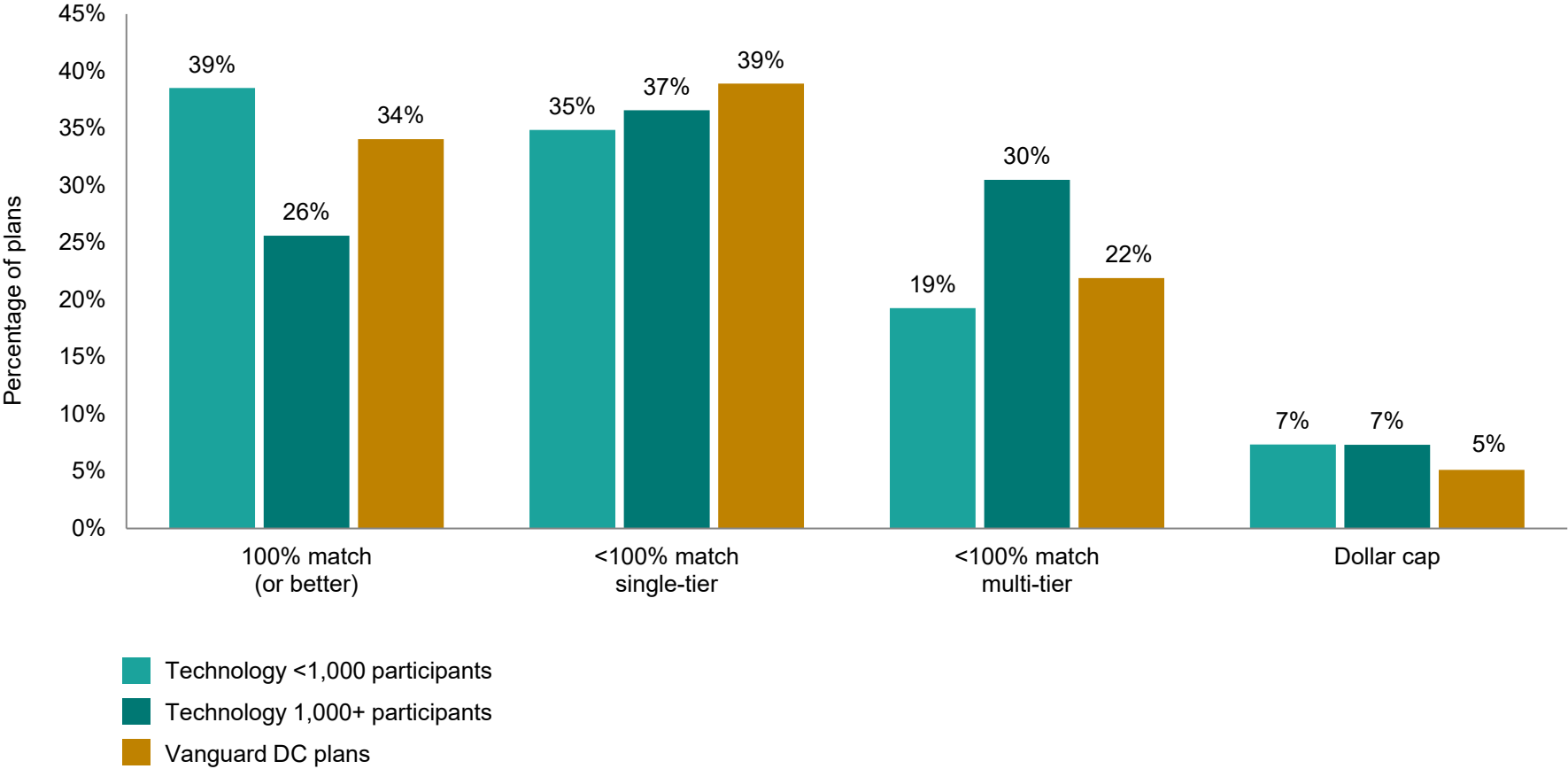
Matching contributions



	Average value	Median value
Technology <1,000 participants	5.5%	4.0%
Technology 1,000+ participants	5.1%	4.0%
Vanguard DC plans	4.4%	4.0%

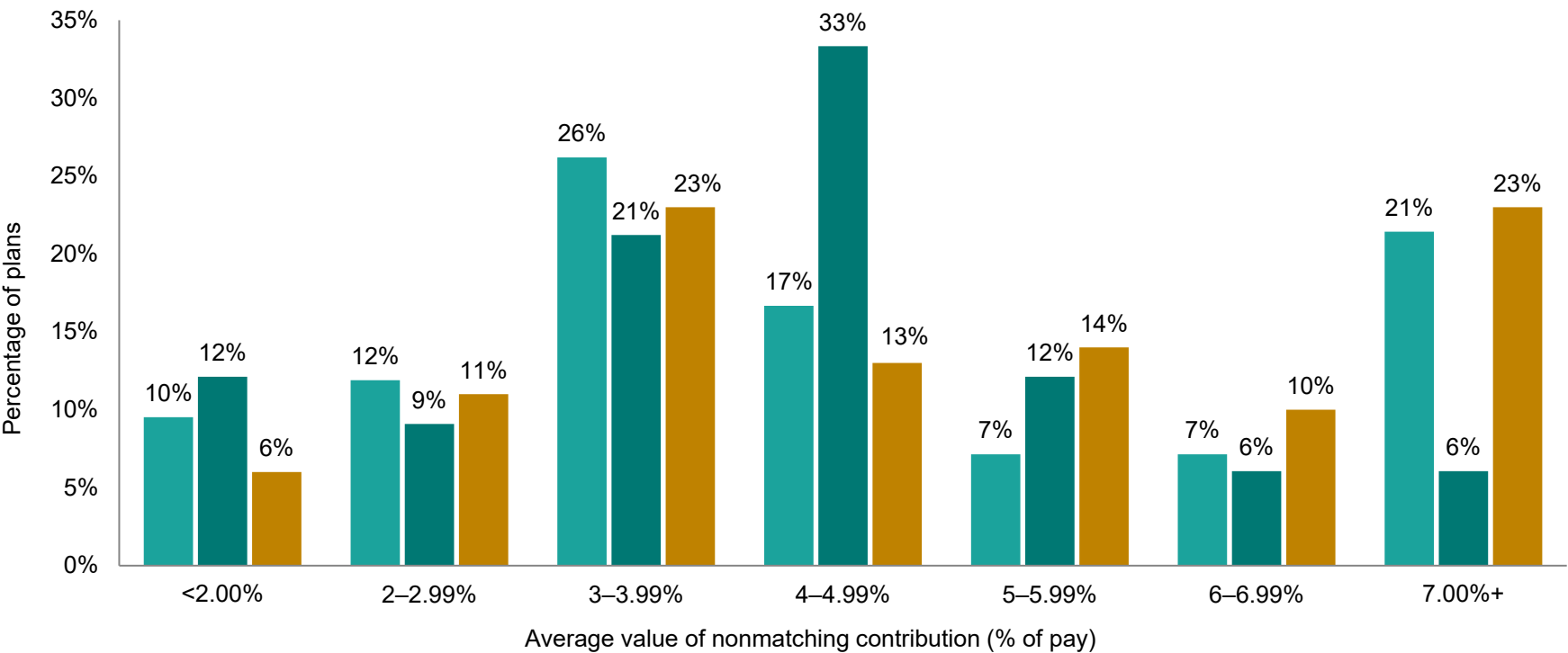
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.

Matching formulas



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

Nonmatching / profit-sharing employer contributions



	Average value	Median value
Technology <1,000 participants	5.5%	4.2%
Technology 1,000+ participants	4.6%	4.1%
Vanguard DC plans	5.1%	4.2%

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

Roth availability and use

	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
Percentage of plans offering Roth	79%	92%	77%
Percentage of plan assets invested in Roth*	3.8%	4.8%	3.5%
Distribution of percentage of plan assets in Roth			
<1%	17%	17%	20%
1–2%	34%	35%	38%
3–5%	25%	34%	25%
6–9%	20%	8%	12%
10–14%	3%	4%	3%
15%+	1%	2%	2%
Percentage of participants with assets in Roth*	19%	21%	16%
Percentage of participant assets in Roth**	17%	18%	17%
Distribution of participant assets in Roth			
1–24%	53%	55%	55%
25–49%	24%	23%	22%
50–74%	17%	15%	14%
75–99%	5%	5%	6%
100%	2%	2%	3%
Percentage of participants making Roth contributions (past 12 mo)***	21%	17%	16%
Percentage of participant contributions going to Roth**	58%	56%	53%
Distribution of percentage of participant contributions to Roth			
1–24%	19%	22%	23%
25–49%	22%	23%	25%
50–74%	16%	14%	15%
75–99%	6%	8%	7%
100%	37%	33%	30%

*Among plans offering Roth.

**Among participants using Roth.

***Among participants making elective deferrals.

Source: Vanguard, as of December 31, 2021.

Participant loans and in-service withdrawals

	Technology <1,000 participants	Technology 1,000+ participants	Vanguard DC plans
Outstanding loans*			
Percentage of participants with outstanding loans	10%	9%	13%
Percentage of account balance in loans	7%	8%	8%
Average loan balance	12,757	12,733	10,614
Number of outstanding loans per participant*			
No loans	90%	91%	87%
One loan	8%	7%	10%
Two loans	2%	2%	3%
Three+ loans	0%	0%	0%
Loans issued past 12 months*			
Average per 1,000 active participants	92	68	91
Average loan amount	15,099	14,430	11,498
Nonhardship withdrawals taken past 12 months**			
Average per 1,000 active participants	102	129	96
Average withdrawal amount	36,866	19,914	22,018
Hardship withdrawals taken past 12 months**			
Average per 1,000 active participants	24	20	36
Average withdrawal amount	9,565	8,321	6,074

*Among plans allowing loans.

**Among participants allowed in-service withdrawals.

Source: Vanguard, as of December 31, 2021.

Important information

All investing is subject to risk, including the possible loss of the money you invest. Be aware that fluctuations in the financial markets and other factors may cause declines in the value of your account. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income.

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.

Vanguard Personal Advisor Services are provided by Vanguard Advisers, Inc., a registered investment advisor, or by Vanguard National Trust Company, a federally chartered, limited purpose trust company. The services provided to clients who elect to receive ongoing advice will vary based upon the amount of assets in a portfolio. Please review the Vanguard Personal Advisor Services Brochure for an overview of the service.

Vanguard Situational Advice is offered through Vanguard Financial Planning Services. Vanguard Financial Planning Services, offered as part of Vanguard Personal Advisor Services, are provided by Vanguard Advisers, Inc., a registered investment advisor. Eligibility restrictions may apply.

Vanguard Digital Advisor's services are provided by Vanguard Advisers, Inc., a federally registered investment advisor. Go to vanguard.com/digitalbrochure for important details about this service. Vanguard Digital Advisor's financial planning tools provide projections and goal achievement forecasts that are hypothetical in nature. They are provided for educational purposes only and are not guarantees of future results.

Financial Engines is a trademark of Financial Engines, Inc. All rights reserved. Used with permission. The Vanguard Group has partnered with Financial Engines Advisors, L.L.C., to provide subadvisory services to the Vanguard Managed Account Program and Personal Online Advisor. Financial Engines Advisors, L.L.C., is an independent, federally registered investment advisor that does not sell investments or receive commission for the investments it recommends. Advice is provided by Vanguard Advisers, Inc. (VAI), a federally registered investment advisor and an affiliate of The Vanguard Group, Inc. (Vanguard). Eligibility restrictions may apply. Vanguard is owned by the Vanguard funds, which are distributed by Vanguard Marketing Corporation, a registered broker-dealer affiliated with VAI and Vanguard. Neither Vanguard, Financial Engines, nor their respective affiliates guarantee future results.

VAI is a subsidiary of VGI and an affiliate of VMC. Neither VAI, PAS, Digital Advisor, VGI, nor VMC guarantees profits or protection from losses.

© 2022 The Vanguard Group, Inc. All rights reserved.