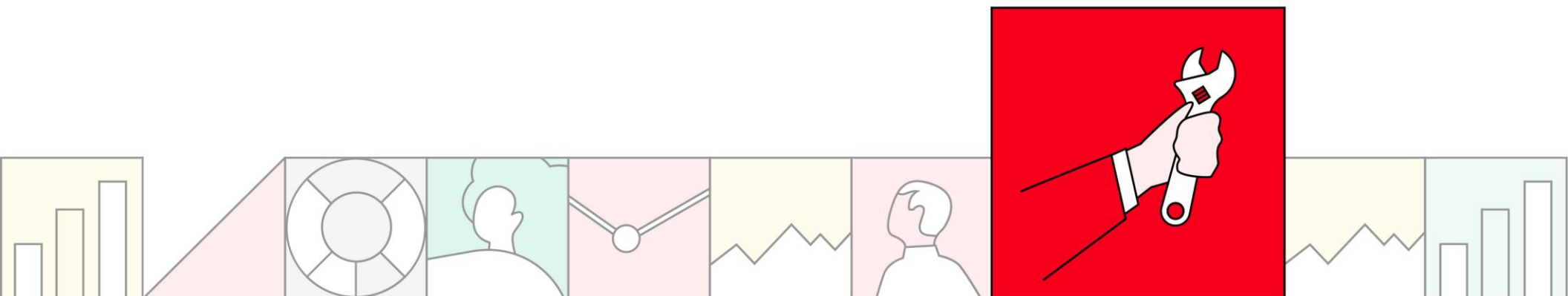


Custom DC plan benchmarks

Unions

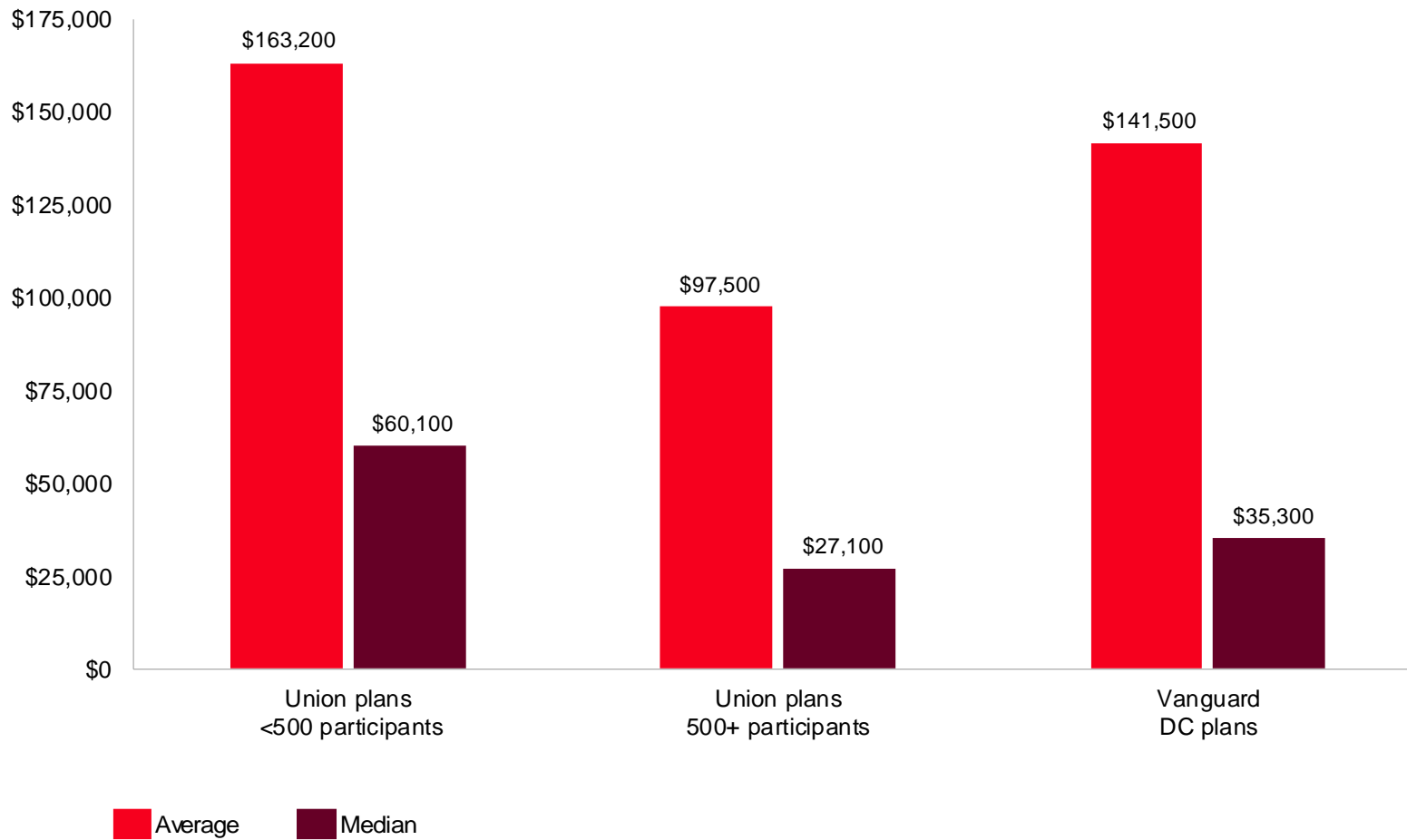


Benchmark population

	Union plans <500 participants	Union plans 500+ participants	Vanguard DC plans
Number of plans	44	44	1,675
Number of participants	9,150	155,860	4.7 million
Average number of participants	208	3,542	2,850
Median number of participants	187	1,327	530
Amount of assets	\$1.5 billion	\$15.2 billion	\$670 billion
Average assets	\$33.9 million	\$345.5 million	\$401.4 million
Median assets	\$20.2 million	\$137.7 million	\$78.8 million

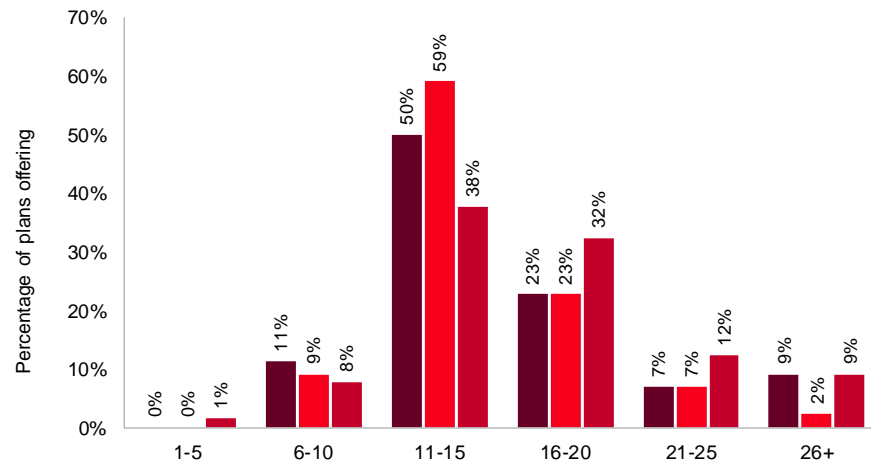
Union plans are defined as those plans designated exclusively for benefit of union participants.

Participant balances

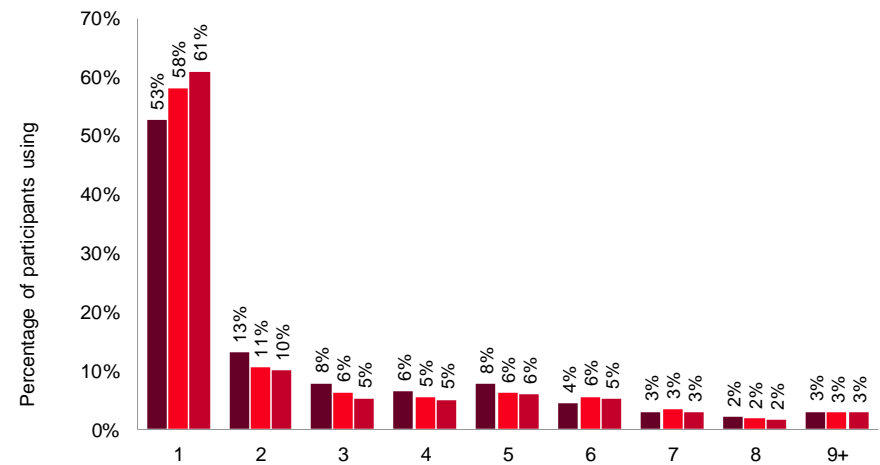


Number of fund options offered and used

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



Funds used per participant



	Average funds offered	Median funds offered
Union plans <500 participants	16.9	14
Union plans 500+ participants	15.8	15
Vanguard DC plans	17.5	16

	Average funds used	Median funds used
Union plans <500 participants	2.6	1
Union plans 500+ participants	2.6	1
Vanguard DC plans	2.4	1

Types of investment options offered and used*

	Union plans <500 participants		Union plans 500+ 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%	23%	100%	14%	99%	13%
Money market	52	6	75	6	69	6
Stable value / GIC	95	21	73	15	67	11
Bond	98%	22%	100%	18%	98%	18%
Active	70	10	70	5	79	7
Index	89	18	95	16	89	15
Inflation protected securities	23	5	18	4	34	3
Multi-sector	5	2	5	1	7	2
High-yield	7	6	18	2	17	4
International	18	13	16	4	19	3
Global	0	0	9	1	6	2
Emerging markets	0	0	0	0	1	3
Balanced funds	100%	74%	100%	86%	99%	86%
Traditional balanced	64	21	80	17	63	13
Target-risk	18	15	20	10	13	9
Target-date	95	65	98	76	95	82
Company stock	7%	86%	9%	42%	8%	38%
Self-directed brokerage	7%	5%	2%	1%	20%	1%

*Among participants offered the option.
Source: Vanguard, as of December 31, 2021.

Types of investment options offered and used* (continued)

	Union plans <500 participants		Union plans 500+ 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	100%	42%	100%	34%	99%	32%
Domestic equity funds	100%	40%	100%	33%	99%	31%
Large-cap index	98	27	100	26	98	24
Large-cap active	89	24	89	16	91	17
Large-cap value	86	16	82	10	87	10
Large-cap growth	95	18	84	15	91	14
Large-cap blend	98	26	100	25	99	24
Mid-cap index	80	13	89	11	82	15
Mid-cap active	45	13	32	6	53	8
Small-cap index	45	13	52	14	63	11
Small-cap active	66	10	48	10	64	8
Socially responsible	9	4	11	11	13	6
International equity funds	98%	21%	100%	19%	97%	20%
Index international	77	13	84	11	77	14
Active international	86	15	77	14	83	11
Emerging markets	27	9	25	6	35	9
Global equity funds	14%	10%	11%	1%	18%	4%
Sector funds	30%	14%	27%	5%	36%	7%
REIT	18	6	27	5	32	6
Health care	11	20	2	15	9	6
Energy	7	12	2	6	5	4
Precious metals	5	4	2	1	2	2
Technology	5	4	0	0	3	6
Utilities	5	4	0	0	1	2
Natural resources	2	6	2	12	1	4
Financials	2	1	0	0	<0.5	1
Communications	0	0	0	0	<0.5	1
Commodities	0	0	0	0	<0.5	6
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, 2021.

Target-date funds availability and use

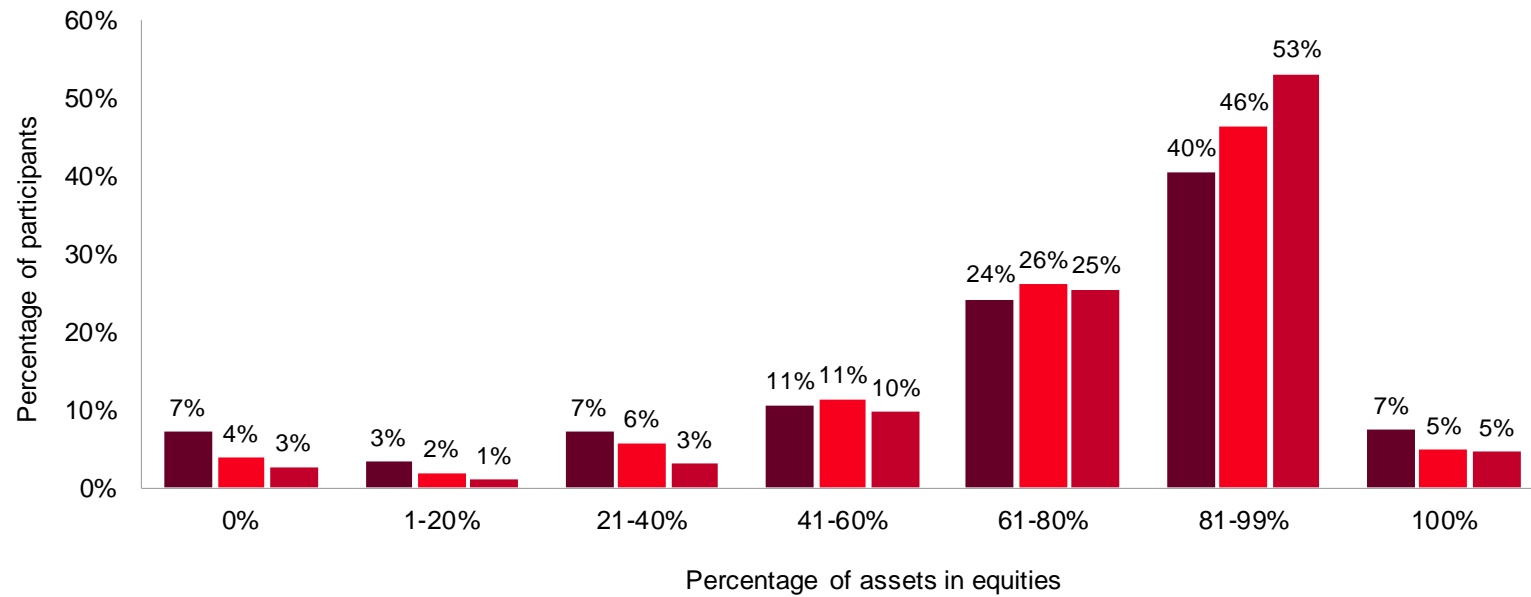
	Union plans <500 participants	Union plans 500+ participants	Vanguard DC plans
Percentage of plans offering	95%	98%	95%
Plan assets invested*	28%	33%	38%
Percentage of plan assets*			
<10%	10%	2%	5%
10–19%	12%	14%	11%
20–29%	36%	16%	19%
30–39%	5%	23%	23%
40–49%	10%	12%	14%
50%+	29%	33%	28%
Percentage of participants using *	65%	76%	82%
Percentage of participant assets**	59%	57%	60%
Percentage of participant assets in target-date funds**			
1–24%	13%	13%	10%
25–49%	9%	10%	9%
50–74%	4%	4%	4%
75–99%	4%	5%	6%
100%	69%	68%	71%
Percentage of participants owning**			
One target-date fund only	67%	66%	69%
One target-date fund plus other funds	27%	27%	25%
Two or more target-date funds only	2%	2%	2%
Two or more target-date funds plus other funds	4%	5%	4%

*Among plans offering target-date options.

**Among participants owning target-date options.

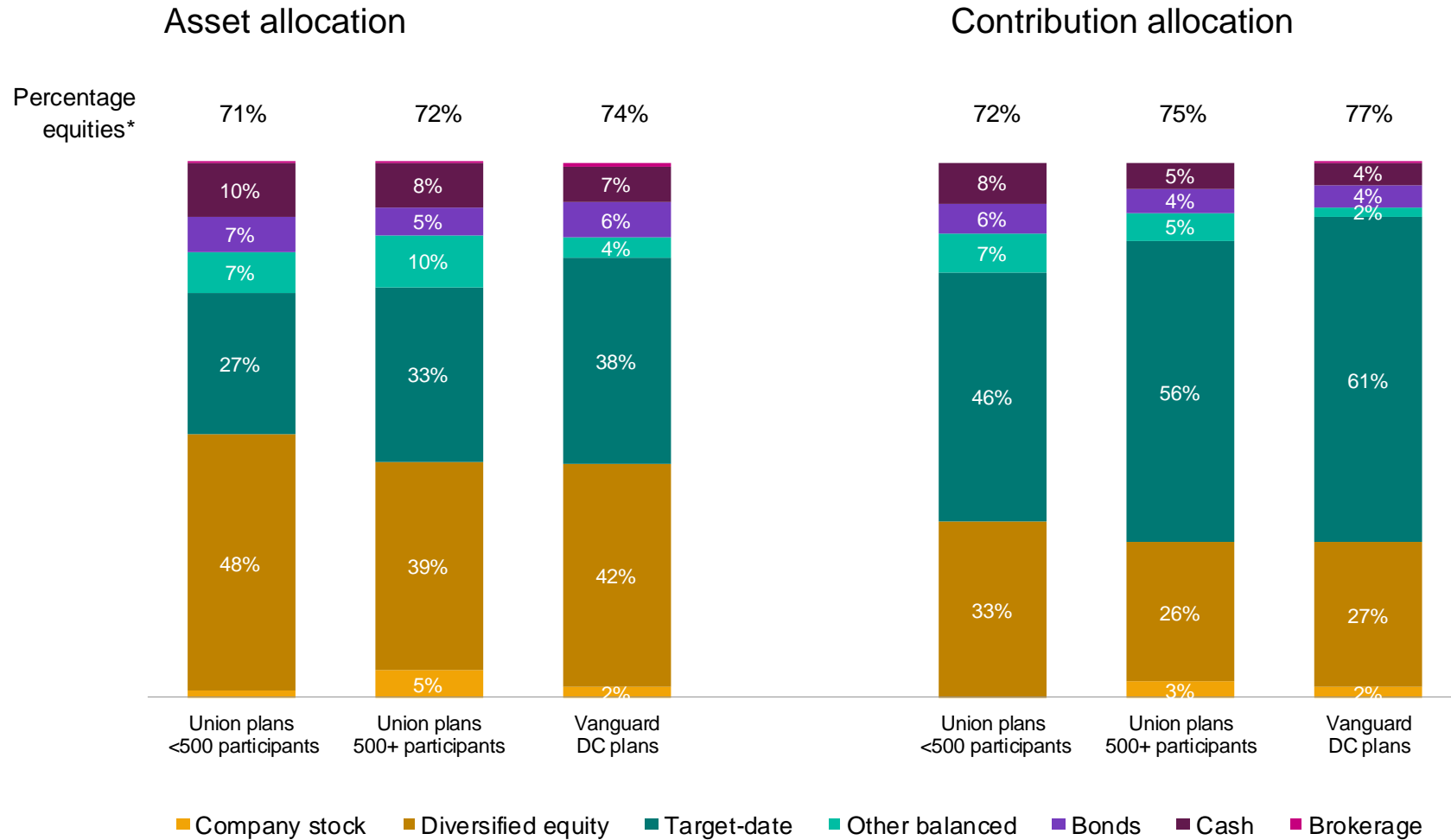
Source: Vanguard, as of December 31, 2021.

Participant equity exposure



	Average percentage in equities	Median percentage in equities
Union plans <500 participants	69%	80%
Union plans 500+ participants	73%	82%
Vanguard DC plans	77%	87%

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

	Union plans <500 participants	Union plans 500+ participants	Vanguard DC plans
All participants			
Single target-date fund	40%	50%	56%
Single balanced fund	3%	3%	1%
Managed account program	6%	7%	7%
Total	49%	60%	64%
New plan entrants during the year			
Single target-date fund	81%	85%	85%
Single balanced fund	5%	2%	1%
Managed account program	1%	3%	2%
Total	87%	90%	88%

Automatic enrollment options*

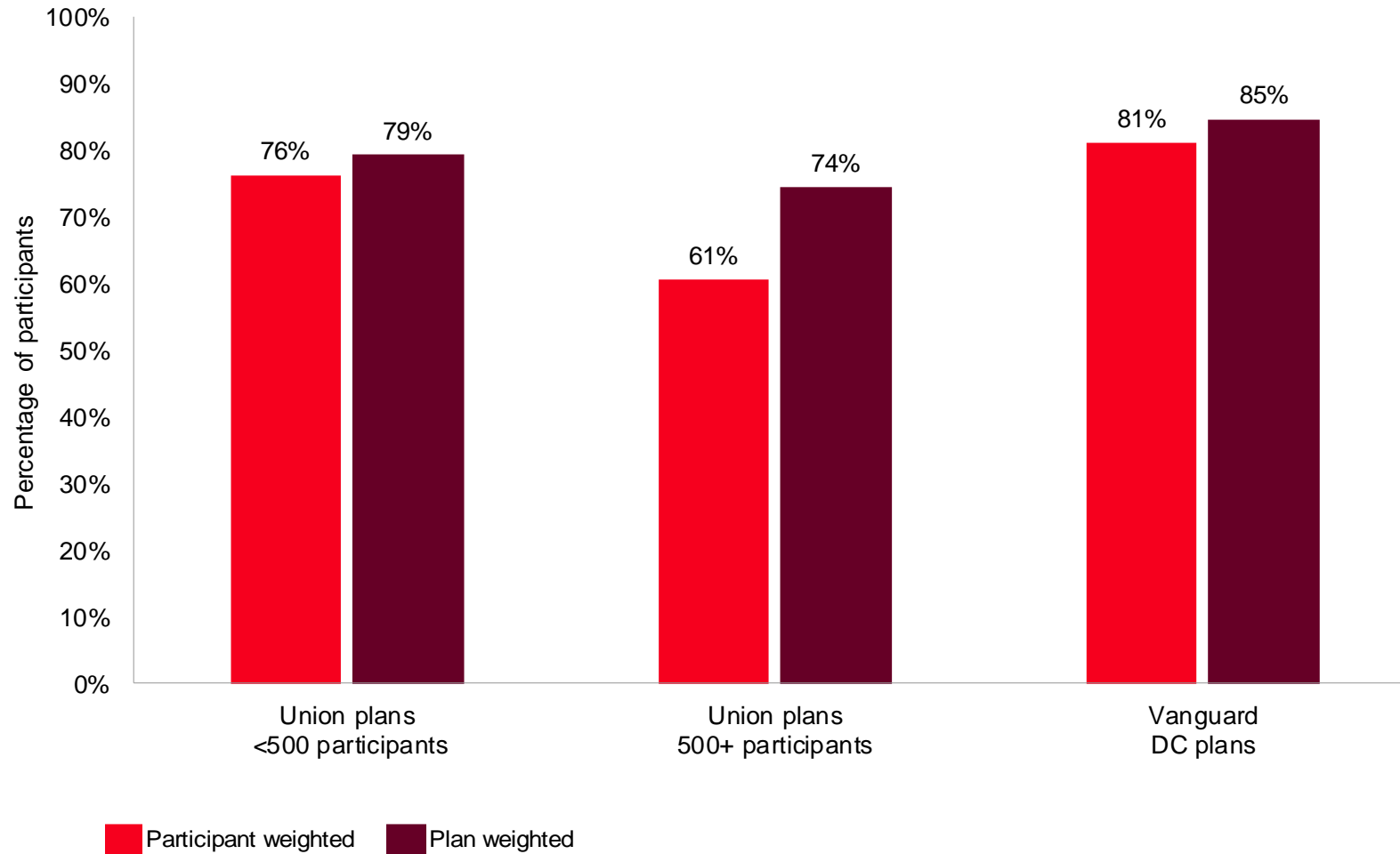
	Union plans all plans	Vanguard DC plans
Automatic enrollment*		
Number of plans	26	859
Percentage of plans	37%	56%
Default automatic enrollment rate		
1 percent	0%	1%
2 percent	19%	5%
3 percent	27%	36%
4 percent	12%	14%
5 percent	15%	17%
6 percent or more	27%	27%
Default automatic increase rate		
1 percent	81%	67%
2 percent	0%	2%
Voluntary election	12%	24%
Service feature not offered	8%	7%
Default automatic increase cap		
<6 percent	10%	2%
6 to 9 percent	19%	18%
10 to 14 percent	24%	48%
15 to 19 percent	24%	18%
>20 percent	19%	6%
No cap	5%	8%
Default fund		
Target-date fund	100%	98%
Other balanced fund	0%	1%
Money market or stable value fund	0%	1%

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

Note – Total industry shown due to insufficient sample.

Source: Vanguard, as of December 31, 2021.

Participation rates



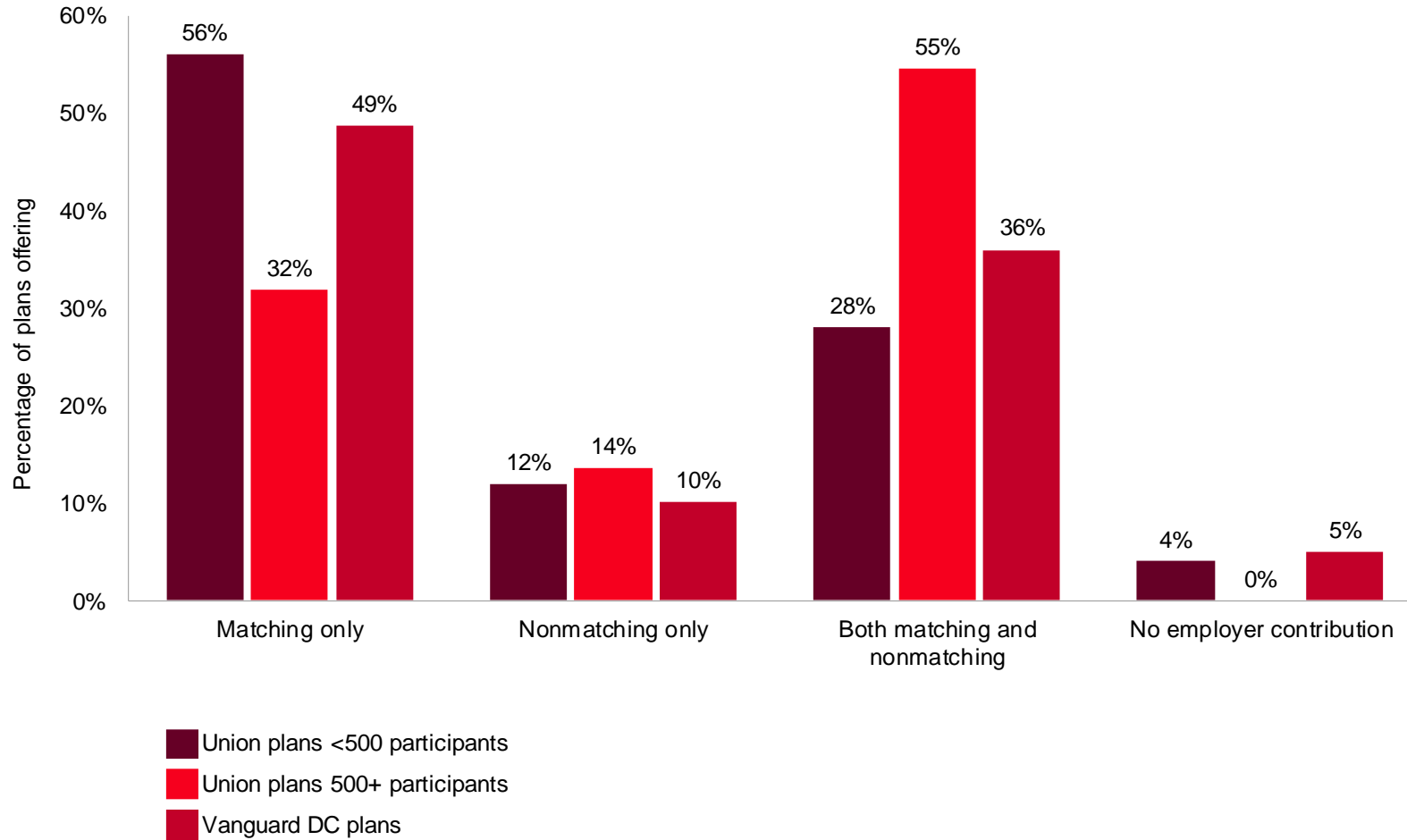
Participant deferral rates

	Union plans <500 participants	Union plans 500+ participants	Vanguard DC plans
Deferral rates			
Average	8.3%	7.4%	7.3%
Median	7.0%	6.0%	6.1%
Distribution of rates			
<4.0%	18%	29%	26%
4.0% – 6.0%	22%	20%	20%
6.1% – 9.9%	30%	24%	31%
10.0% – 14.9%	19%	17%	16%
15.0%+	11%	9%	7%

Aggregate participant and employer contribution rates

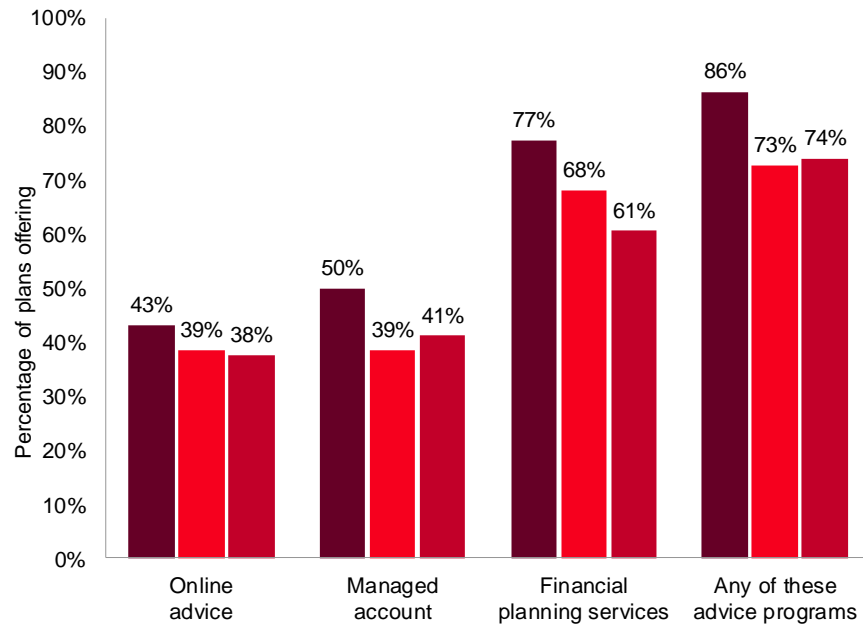
	Union plans <500 participants	Union plans 500+ participants	Vanguard DC plans
Total savings rate			
Average	11.0%	8.4%	11.2%
Median	10.2%	7.0%	10.4%
Distribution of rates			
<5.0%	16%	31%	18%
5.0% – 8.9%	20%	29%	21%
9.0% – 11.9%	19%	15%	22%
12.0% – 14.9%	15%	10%	16%
15.0% +	30%	15%	23%

Types of employer contributions

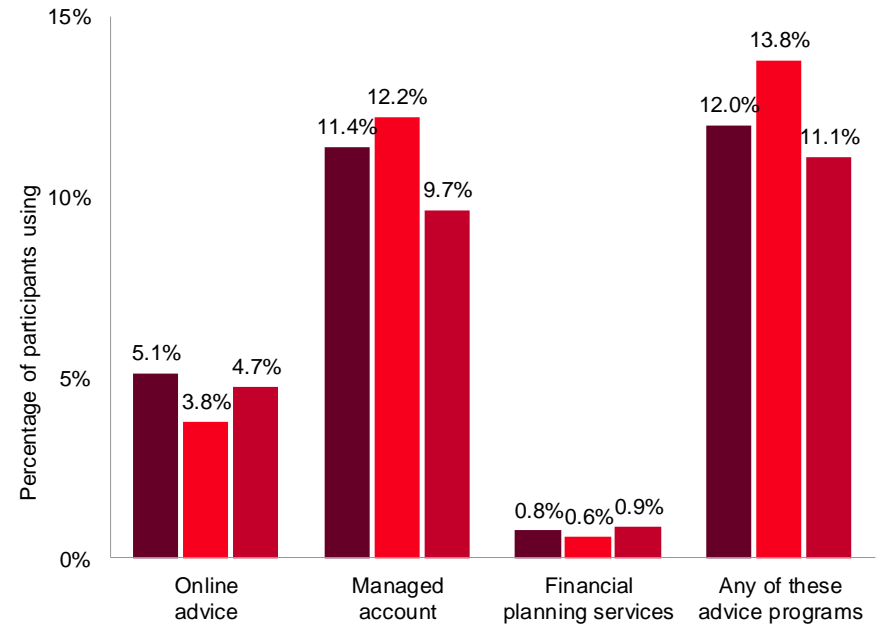


Advice services

Advice offered

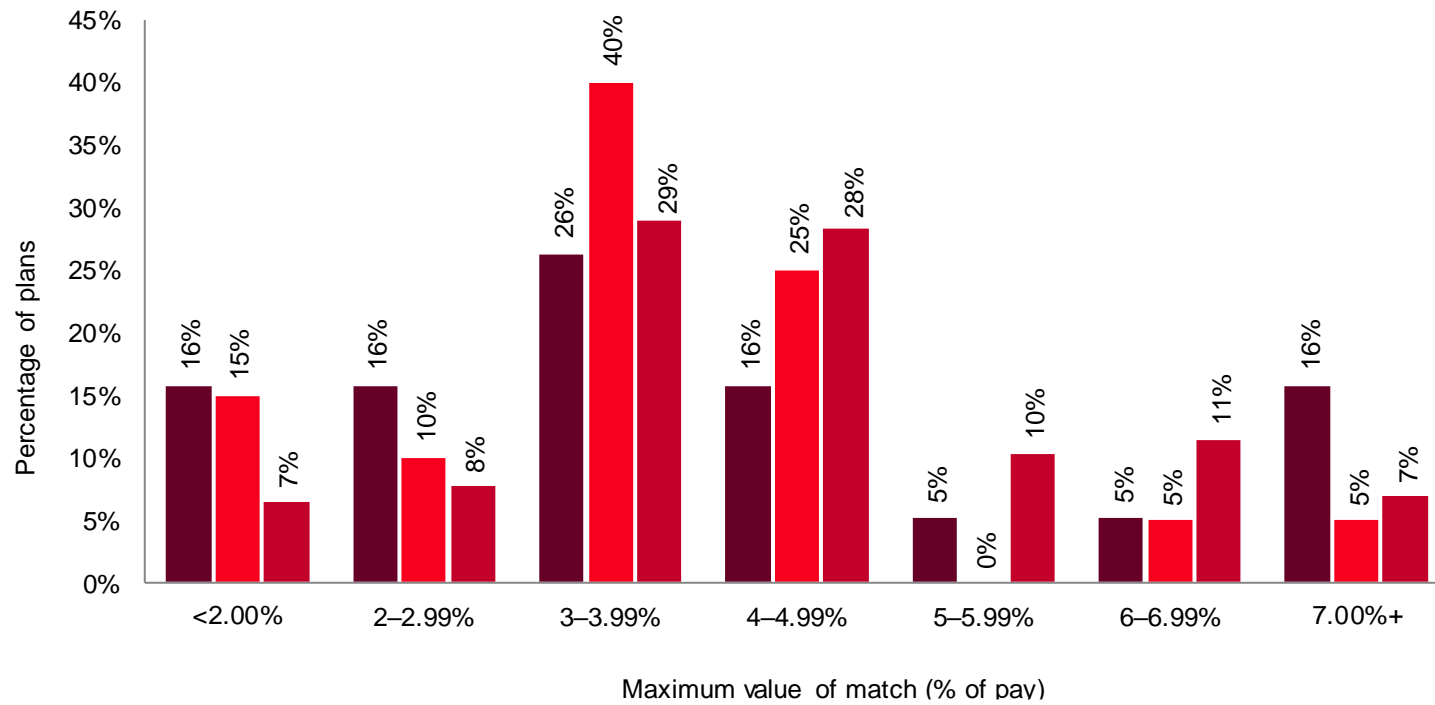


Advice used



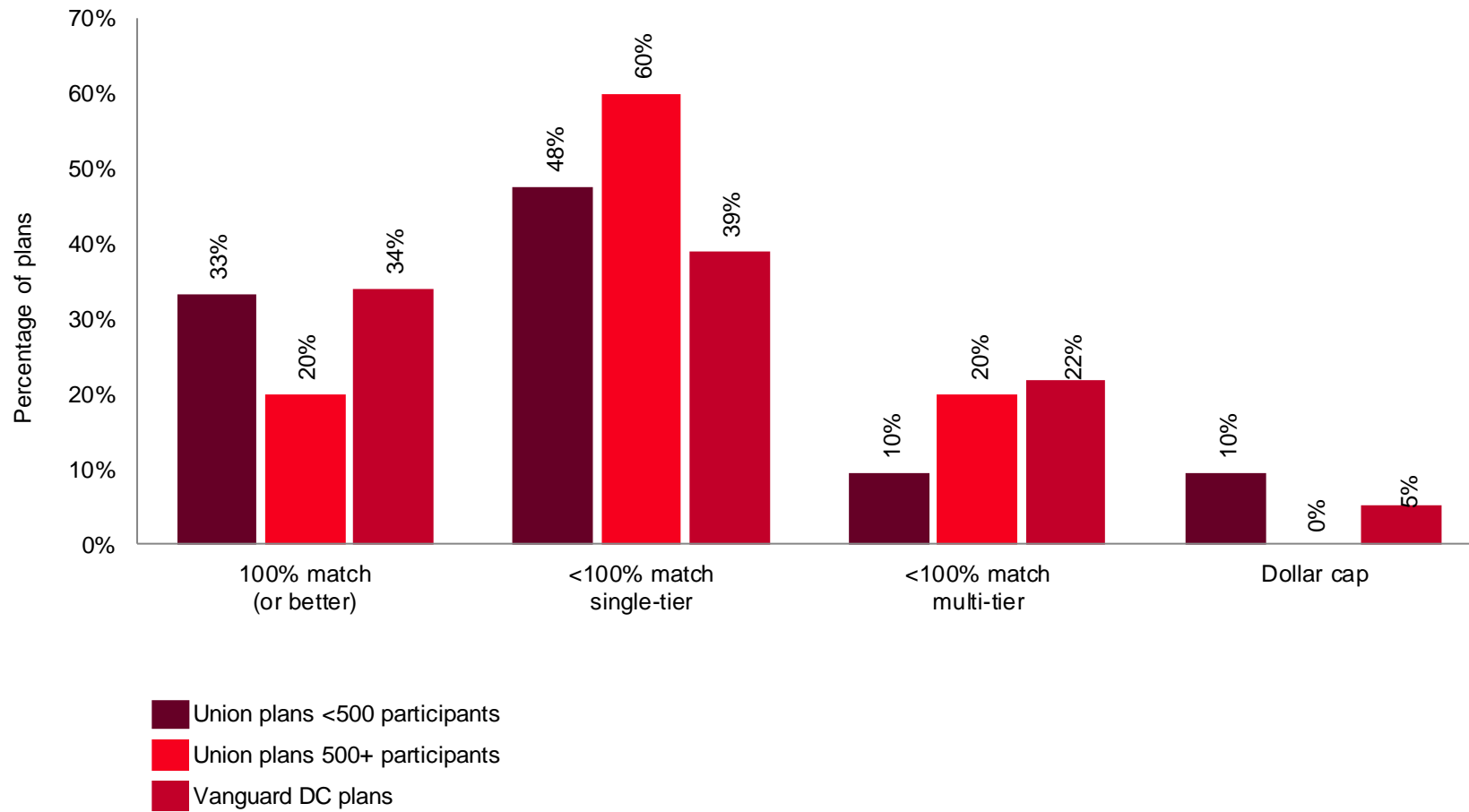
- Union plans <500 participants
- Union plans 500+ participants
- Vanguard DC plans

Matching contributions

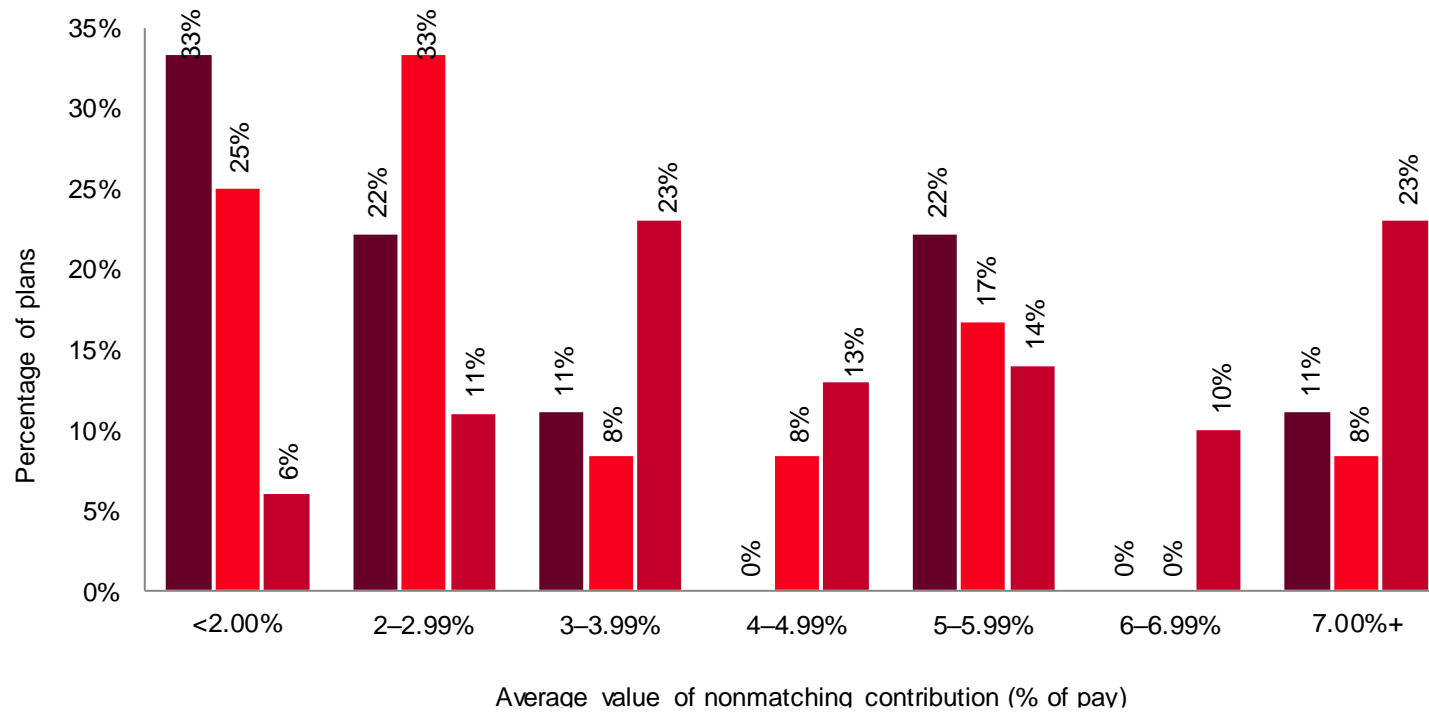


	Average value	Median value
Union plans <500 participants	5.0%	3.0%
Union plans 500+ participants	3.4%	3.0%
Vanguard DC plans	4.4%	4.0%

Matching formulas



Nonmatching / profit-sharing employer contributions



	Average value	Median value
Union plans <500 participants	3.7%	3.0%
Union plans 500+ participants	3.3%	2.6%
Vanguard DC plans	5.1%	4.2%

Roth availability and use

	Union plans <500 participants	Union plans 500+ participants	Vanguard DC plans
Percentage of plans offering Roth	54%	65%	77%
Percentage of plan assets invested in Roth*	4.8%	3.7%	3.5%
Distribution of percentage of plan assets in Roth			
<1%	35%	18%	20%
1–2%	15%	50%	38%
3–5%	35%	27%	25%
6–9%	10%	0%	12%
10–14%	5%	5%	3%
15%+	0%	0%	2%
Percentage of participants with assets in Roth*	21%	20%	16%
Percentage of participant assets in Roth**	17%	19%	17%
Distribution of participant assets in Roth			
1–24%	60%	49%	55%
25–49%	24%	23%	22%
50–74%	11%	10%	14%
75–99%	3%	10%	6%
100%	2%	8%	3%
Percentage of participants making Roth contributions (past 12 mo)***	22%	23%	16%
Percentage of participant contributions going to Roth**	50%	49%	53%
Distribution of percentage of participant contributions to Roth			
1–24%	24%	22%	23%
25–49%	30%	28%	25%
50–74%	18%	17%	15%
75–99%	6%	5%	7%
100%	23%	28%	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

	Union plans <500 participants	Union plans 500+ participants	Vanguard DC plans
Outstanding loans*			
Percentage of participants with outstanding loans	19%	19%	13%
Percentage of account balance in loans	8%	11%	8%
Average loan balance	11,581	11,199	10,614
Number of outstanding loans per participant*			
No loans	81%	81%	87%
One loan	15%	13%	10%
Two loans	3%	6%	3%
Three+ loans	1%	0%	0%
Loans issued past 12 months*			
Average per 1,000 active participants	110	114	91
Average loan amount	13,259	11,702	11,498
Nonhardship withdrawals taken past 12 months**			
Average per 1,000 active participants	109	115	96
Average withdrawal amount	21,554	14,123	22,018
Hardship withdrawals taken past 12 months**			
Average per 1,000 active participants	28	29	36
Average withdrawal amount	12,728	8,928	6,074

*Among plans allowing loans.

**Among participants allowed in-service withdrawals.

Source: Vanguard, as of December 31, 2021.

Important information

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