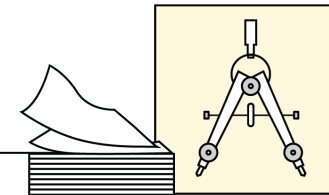


Custom DC plan benchmarks

# Architecture and engineering



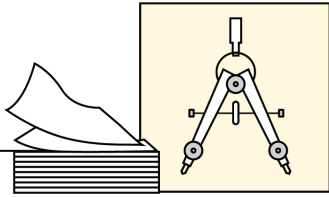


# Benchmark population

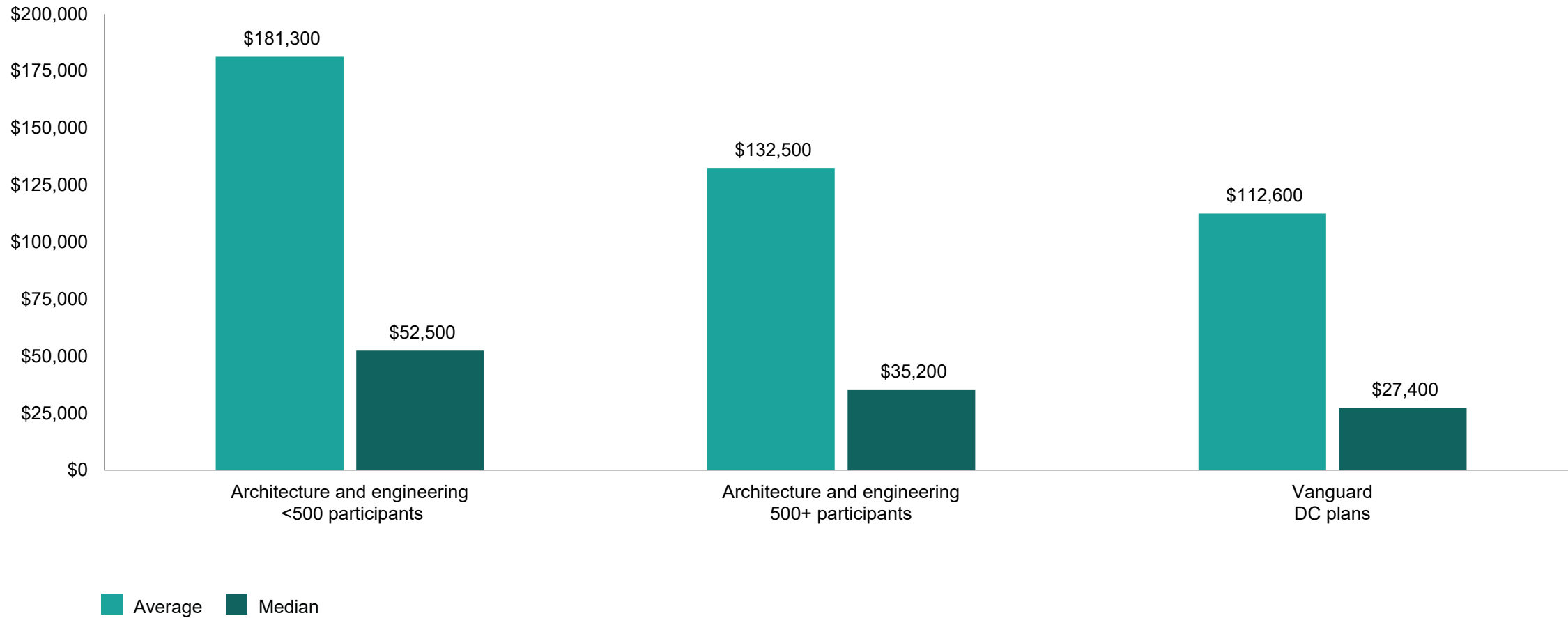
	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
Number of plans	25	31	1,650
Number of participants	5,029	127,939	4.9 million
Average number of participants	201	4,127	2,950
Median number of participants	166	1,585	565
Amount of assets	\$911.8 million	\$16.9 billion	\$550.2 billion
Average assets	\$36.5 million	\$546.7 million	\$333.9 million
Median assets	\$36.7 million	\$204.4 million	\$65.5 million

Architectural, engineering, and related services is defined by the NAICS (North American Industry Classification System) code 5413.

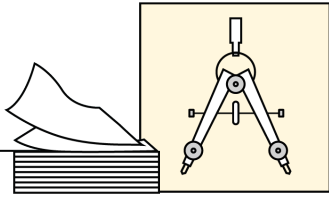
Source: Vanguard, as of December 31, 2022.



# Participant balances

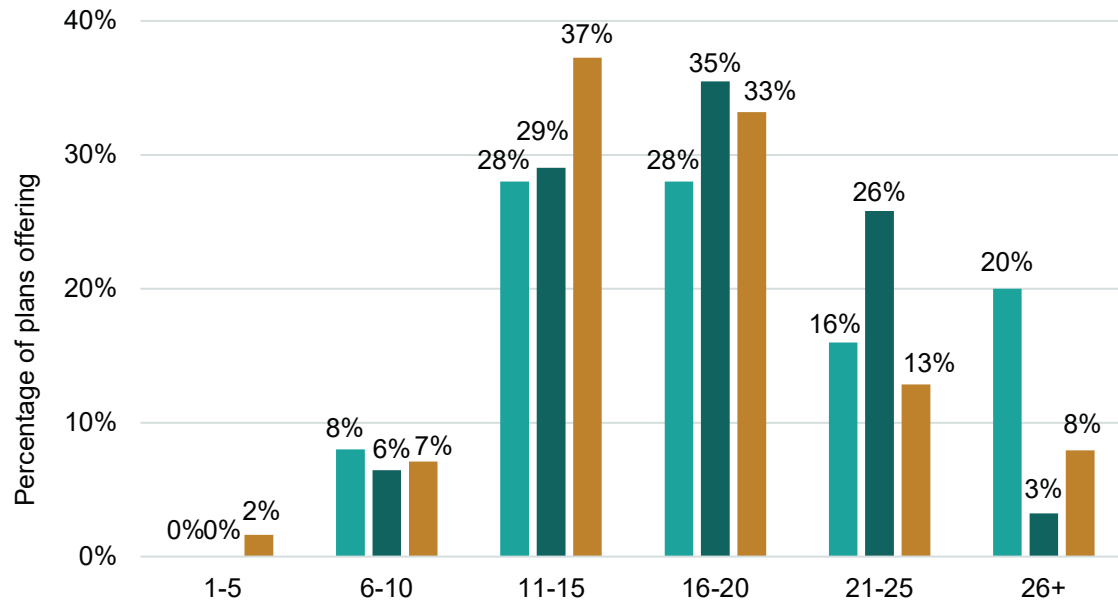


Source: Vanguard, as of December 31, 2022.  
Bar chart may not align precisely with percentages due to rounding.

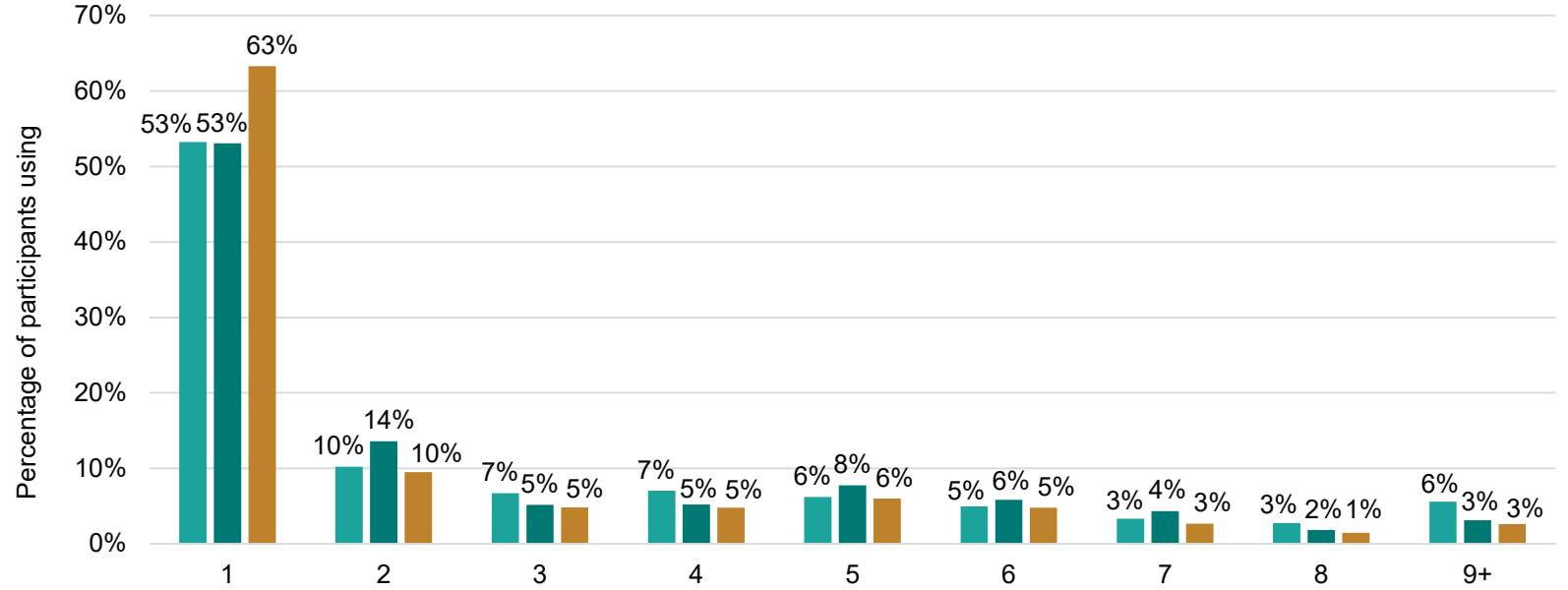


# Number of fund options offered and used

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



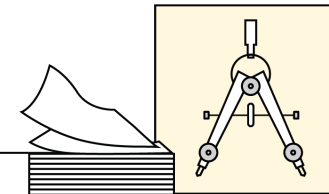
Funds used per participant



	Average funds offered	Median funds offered	Average funds used	Median funds used
Architecture and engineering <500 participants	20.9	18	2.9	1
Architecture and engineering 500+ participants	17.4	17	2.7	1
Vanguard DC plans	17.4	16	2.4	1

Source: Vanguard, as of December 31, 2022.

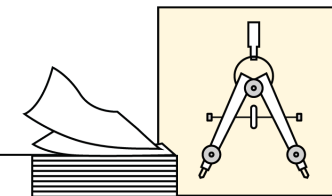
Bar chart may not align precisely with percentages due to rounding.



# Types of investment options offered and used\*

	Architecture and engineering <500 participants		Architecture and engineering 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*
<b>Cash</b>	<b>96%</b>	<b>16%</b>	<b>100%</b>	<b>16%</b>	<b>99%</b>	<b>12%</b>
Money market	64	10	55	4	70	6
Stable value / GIC	72	14	94	15	68	10
<b>Bond</b>	<b>100%</b>	<b>21%</b>	<b>100%</b>	<b>21%</b>	<b>98%</b>	<b>17%</b>
Active	84	14	94	5	80	7
Index	92	12	94	18	89	14
Inflation-protected securities	40	7	39	4	35	3
Multisector	0	0	10	3	8	2
High-yield	28	9	19	3	17	3
International	16	2	26	2	19	3
Emerging markets	0	0	0	0	1	2
<b>Balanced funds</b>	<b>100%</b>	<b>80%</b>	<b>100%</b>	<b>83%</b>	<b>99%</b>	<b>87%</b>
Traditional balanced	80	19	65	11	62	12
Target-risk	28	28	0	0	13	10
Target-date	92	71	100	80	96	83
<b>Company stock</b>	<b>4%</b>	<b>100%</b>	<b>10%</b>	<b>77%</b>	<b>8%</b>	<b>36%</b>
<b>Self-directed brokerage</b>	<b>8%</b>	<b>3%</b>	<b>16%</b>	<b>1%</b>	<b>20%</b>	<b>1%</b>

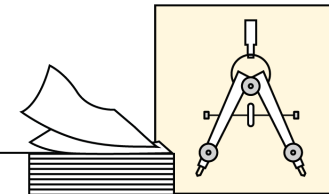
\*Among participants offered the option.  
Source: Vanguard, as of December 31, 2022.



# Types of investment options offered and used\* (continued)

	Architecture and engineering <500 participants		Architecture and engineering 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*
<b>Equity funds</b>	<b>100%</b>	<b>43%</b>	<b>100%</b>	<b>37%</b>	<b>99%</b>	<b>30%</b>
<b>Domestic equity funds</b>	<b>100%</b>	<b>41%</b>	<b>100%</b>	<b>36%</b>	<b>99%</b>	<b>29%</b>
Large-cap index	100	29	100	28	98	23
Large-cap active	96	25	87	20	90	16
Large-cap value	96	15	84	13	87	9
Large-cap growth	96	19	97	12	91	13
Large-cap blend	100	29	100	28	98	23
Mid-cap index	88	16	97	21	83	14
Mid-cap active	64	14	61	11	52	7
Small-cap index	80	14	71	17	63	11
Small-cap active	72	11	74	10	63	7
Socially responsible	32	4	29	2	15	5
<b>International equity funds</b>	<b>100%</b>	<b>21%</b>	<b>100%</b>	<b>23%</b>	<b>97%</b>	<b>19%</b>
Index international	80	12	97	14	79	14
Active international	88	14	97	12	83	10
Emerging markets	40	10	29	7	35	8
<b>Global equity funds</b>	<b>36%</b>	<b>12%</b>	<b>13%</b>	<b>5%</b>	<b>17%</b>	<b>3%</b>

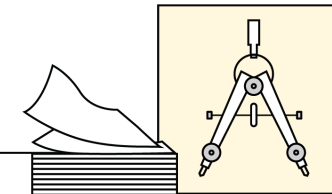
\*Among participants offered the option.  
Source: Vanguard, as of December 31, 2022.



# Types of investment options offered and used\* (continued)

	Architecture and engineering <500 participants		Architecture and engineering 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*
<b>Sector funds</b>	<b>52%</b>	<b>11%</b>	<b>39%</b>	<b>8%</b>	<b>38%</b>	<b>6%</b>
REIT	48	8	35	7	32	5
Health care	16	14	0	0	8	7
Energy	12	16	3	9	5	5
Precious metals	4	3	3	6	2	2
Technology	4	11	0	0	3	5
Utilities	0	0	6	5	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	4	2	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

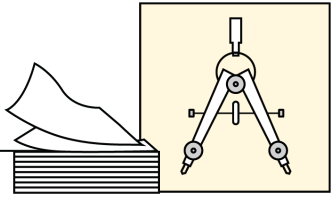
	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
Percentage of plans offering	92%	100%	96%
Plan assets invested*	31%	37%	40%
<b>Percentage of plan assets*</b>			
<10%	0%	0%	5%
10–19%	22%	10%	10%
20–29%	35%	13%	17%
30–39%	26%	35%	21%
40–49%	4%	23%	17%
50%+	13%	19%	30%
Percentage of participants using *	71%	80%	83%
Percentage of participant assets**	57%	56%	61%
<b>Percentage of participant assets in target-date funds**</b>			
1–24%	12%	13%	10%
25–49%	8%	9%	8%
50–74%	5%	5%	4%
75–99%	6%	9%	6%
100%	69%	63%	72%
<b>Percentage of participants owning**</b>			
One target-date fund only	66%	61%	71%
One target-date fund plus other funds	27%	32%	23%
Two or more target-date funds only	3%	2%	2%
Two or more target-date funds plus other funds	4%	4%	4%

\*Among plans offering target-date options.

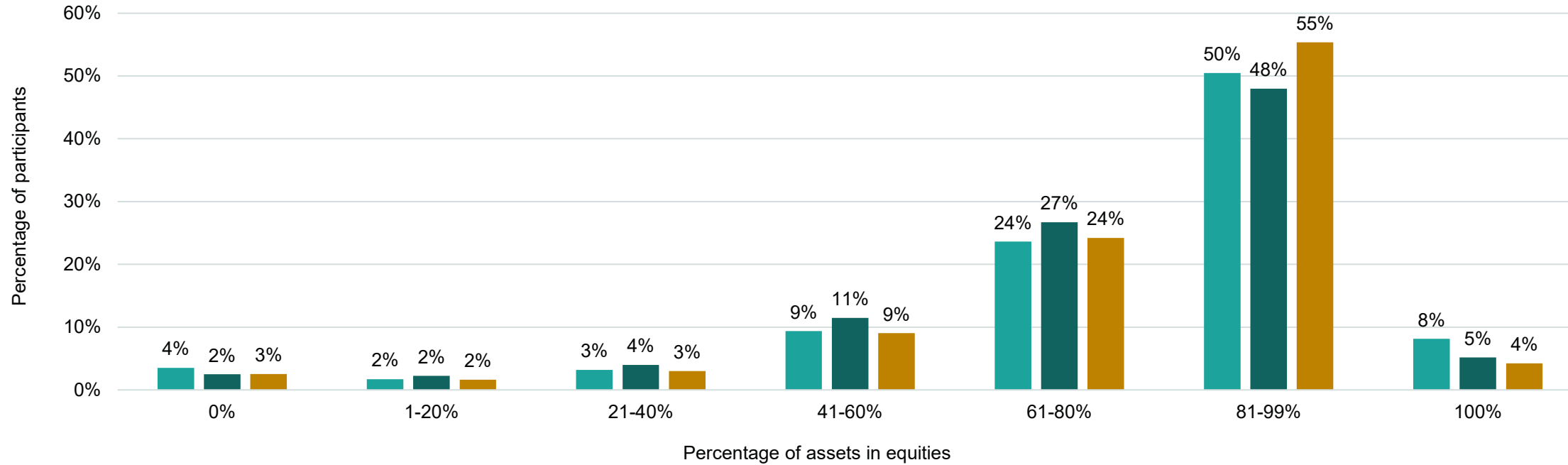
\*\*Among participants owning target-date options.

Source: Vanguard, as of December 31, 2022.



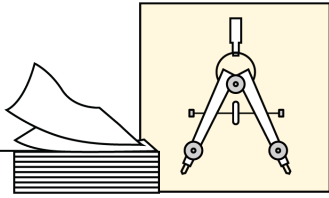


# Participant equity exposure

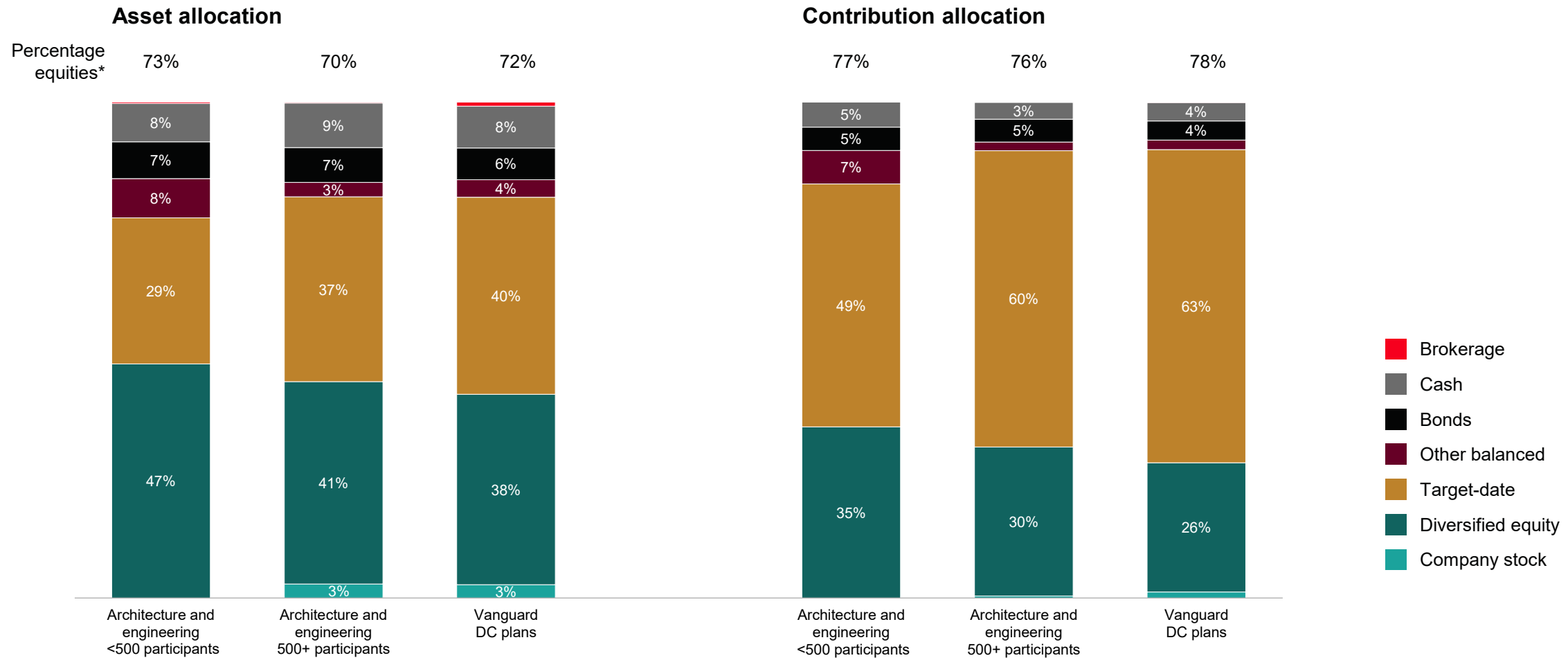


	Average percentage in equities	Median percentage in equities
Architecture and engineering <500 participants	76%	86%
Architecture and engineering 500+ participants	75%	84%
Vanguard DC plans	77%	86%

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



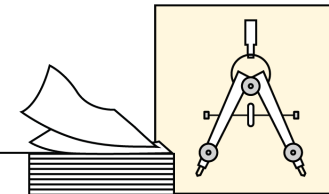
# Asset and contribution allocations



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

Source: Vanguard, as of December 31, 2022.

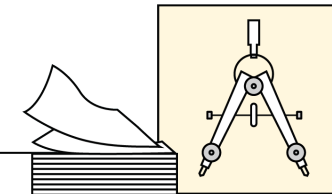
Bar chart may not align precisely with percentages due to rounding.



# Participants with professionally managed allocations

	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
<b>All participants</b>			
Single target-date fund	46%	49%	59%
Single balanced fund	2%	<0.5%	<0.5%
Managed account program	3%	6%	7%
<b>Total</b>	<b>51%</b>	<b>55%</b>	<b>66%</b>
<b>New plan entrants during the year</b>			
Single target-date fund	79%	83%	87%
Single balanced fund	1%	<0.5%	<0.5%
Managed account program	2%	2%	2%
<b>Total</b>	<b>82%</b>	<b>85%</b>	<b>89%</b>

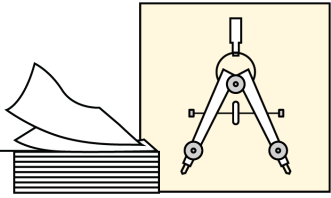
Source: Vanguard, as of December 31, 2022.



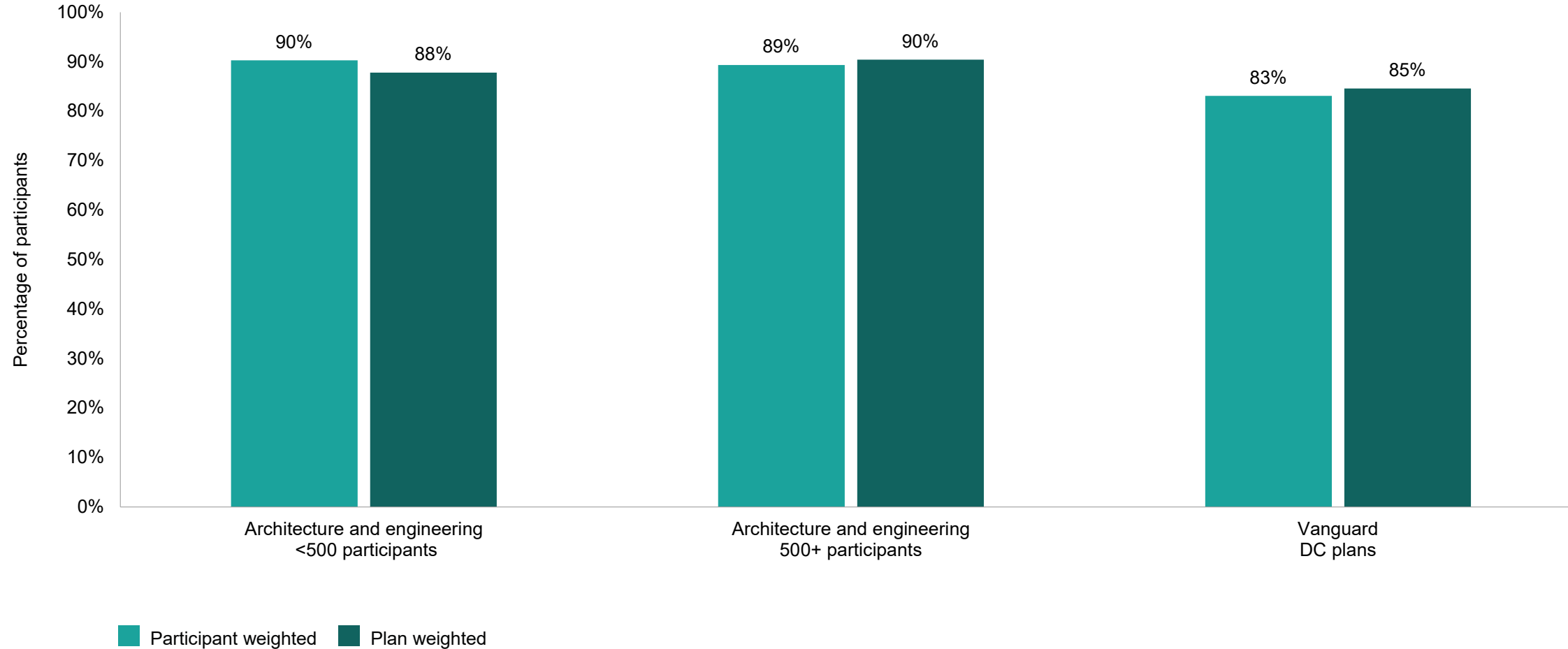
# Automatic enrollment options\*

	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
<b>Automatic enrollment*</b>			
Number of plans	9	25	884
Percentage of plans	39%	81%	58%
<b>Default automatic enrollment rate</b>			
1 percent	0%	0%	2%
2 percent	0%	4%	5%
3 percent	11%	52%	34%
4 percent	44%	8%	14%
5 percent	11%	0%	17%
6 percent or more	33%	36%	28%
<b>Default automatic increase rate</b>			
1 percent	67%	72%	66%
2 percent	11%	0%	3%
Voluntary election	11%	24%	25%
Service feature not offered	11%	4%	6%
<b>Default automatic increase cap</b>			
<6 percent	0%	6%	2%
6 to 9 percent	0%	6%	17%
10 to 14 percent	71%	67%	48%
15 to 19 percent	14%	17%	22%
20+ percent	14%	6%	6%
No cap	0%	0%	5%
<b>Default fund</b>			
Target-date fund	100%	100%	98%
Other balanced fund	0%	0%	1%
Money market or stable value fund	0%	0%	1%

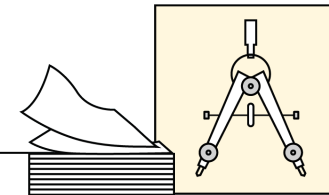
\*Limited to plans using Vanguard's automatic enrollment service.  
Source: Vanguard, as of December 31, 2022.



# Participation rates



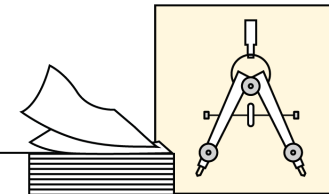
Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



# Participant deferral rates

	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
<b>Deferral rates</b>			
Average	9.2%	8.3%	7.4%
Median	8.0%	7.0%	6.4%
<b>Distribution of rates</b>			
<4.0%	11%	20%	25%
4.0% – 6.0%	19%	19%	19%
6.1% – 9.9%	34%	29%	32%
10.0% – 14.9%	23%	21%	17%
15.0%+	12%	10%	7%

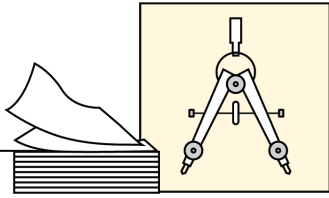
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.



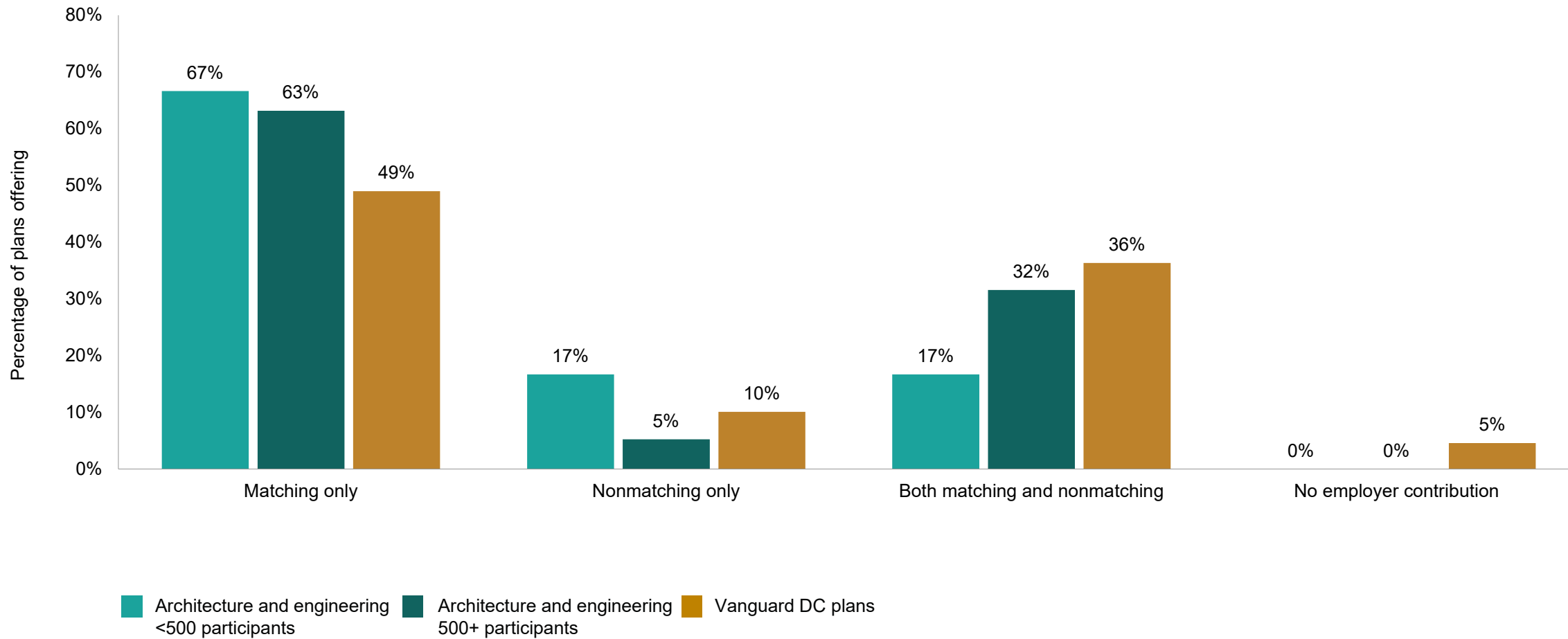
# Aggregate participant and employer contribution rates

	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
<b>Total saving rate</b>			
Average	13.3%	13.2%	11.3%
Median	12.5%	12.6%	10.6%
<b>Distribution of rates</b>			
<5.0%	6%	10%	18%
5.0% – 8.9%	19%	18%	20%
9.0% – 11.9%	22%	19%	21%
12.0% – 14.9%	21%	17%	17%
15.0% +	32%	36%	23%

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

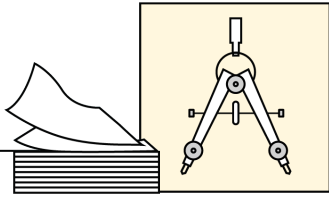


# Types of employer contributions



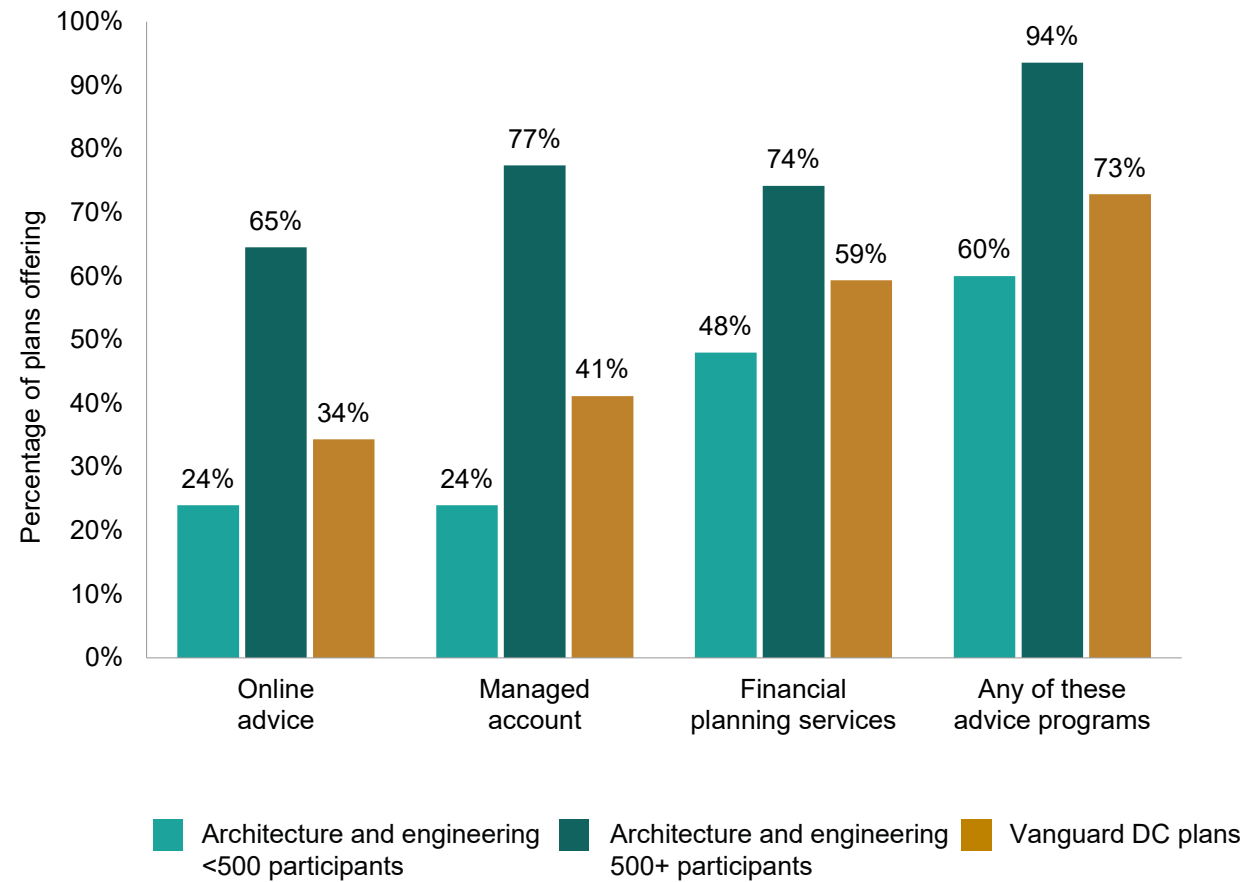
Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



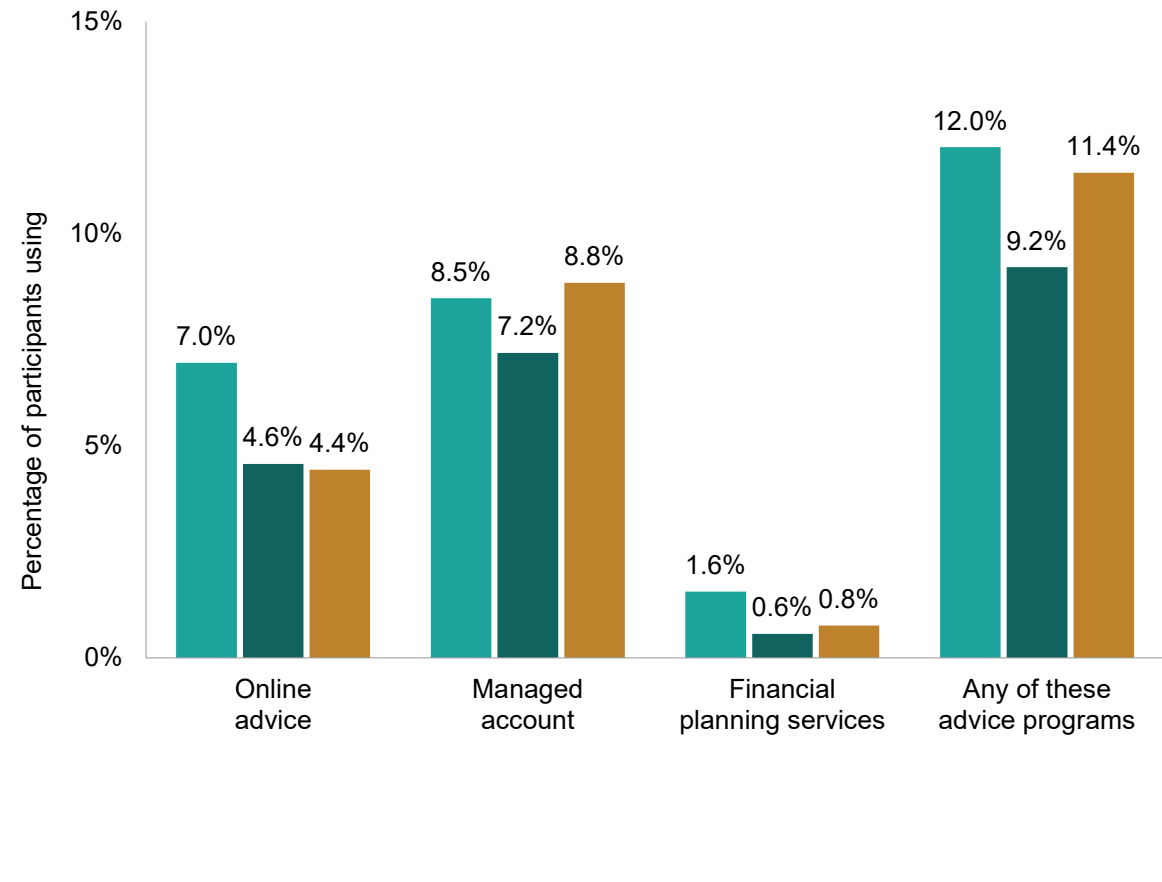


# Advice services

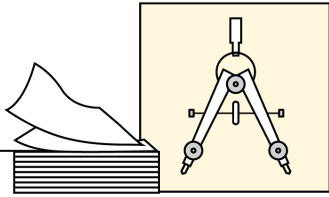
Advice offered



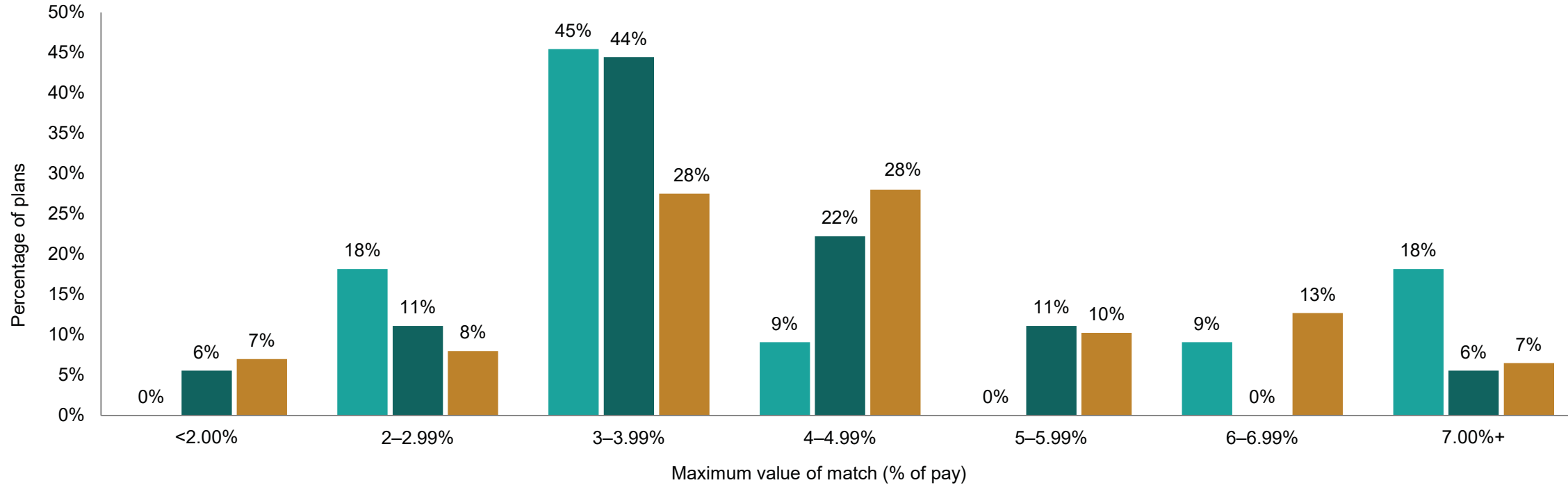
Advice used



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

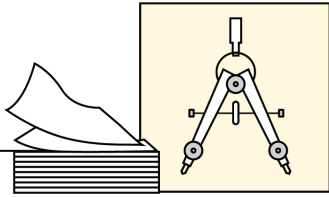


# Matching contributions

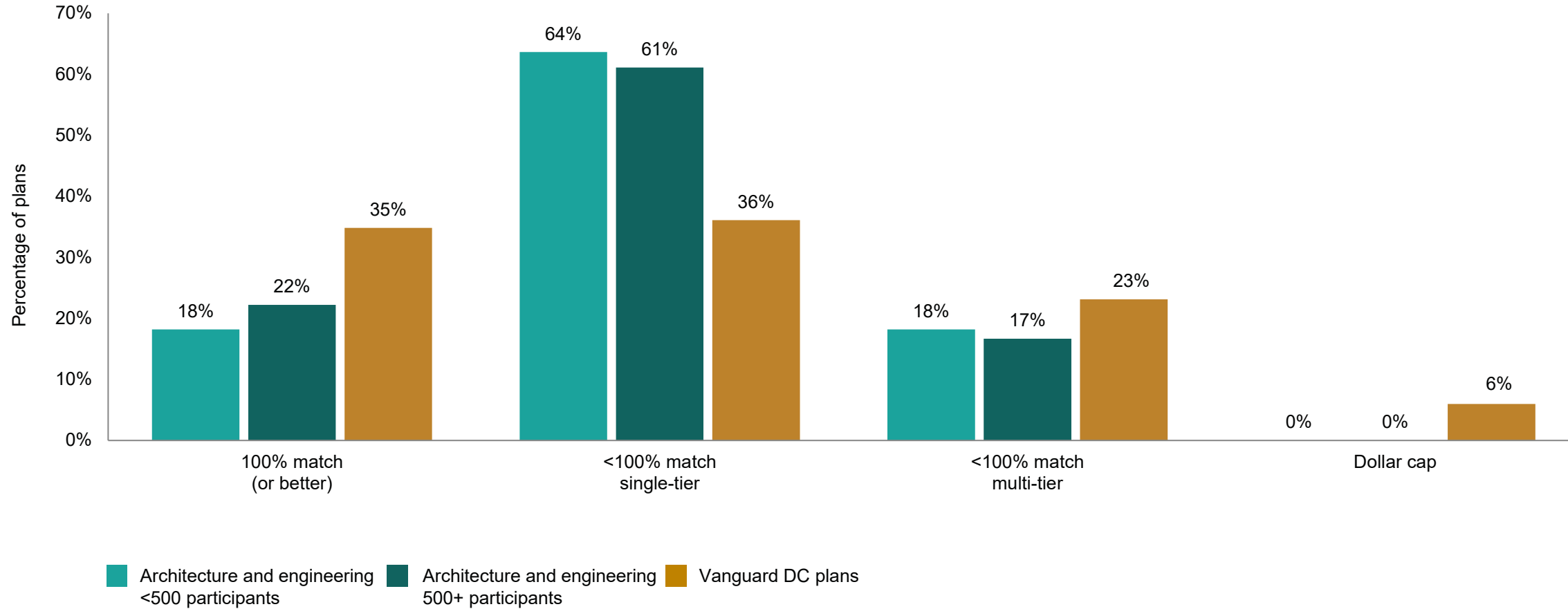


	Average value	Median value
Architecture and engineering <500 participants	5.7%	3.6%
Architecture and engineering 500+ participants	3.5%	3.0%
Vanguard DC plans	4.5%	4.0%

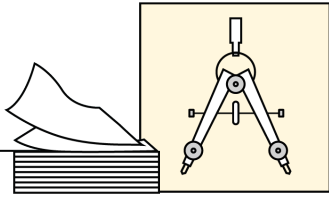
Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



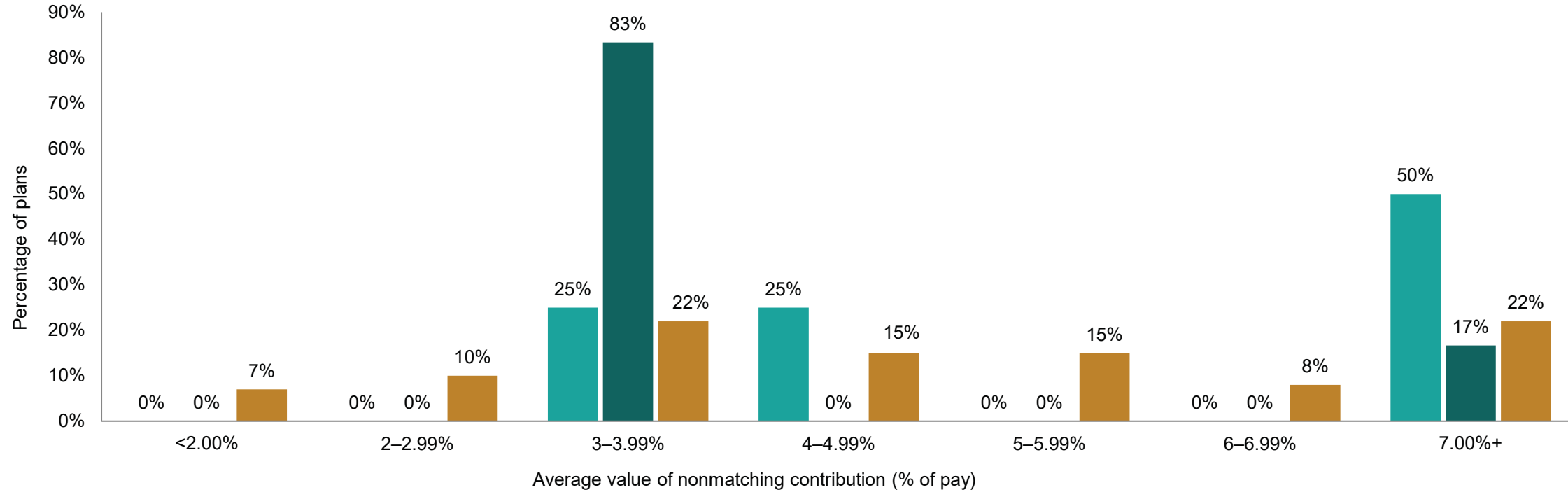
# Matching formulas



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

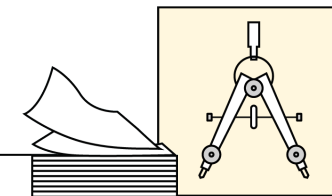


# Nonmatching/Profit-sharing employer contributions



	Average value	Median value
Architecture and engineering <500 participants	9.5%	7.4%
Architecture and engineering 500+ participants	5.2%	3.4%
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

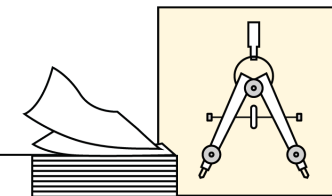
	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
<b>Percentage of plans offering Roth</b> (among plans with elective deferrals)	<b>91%</b>	<b>100%</b>	<b>80%</b>
<b>Percentage of plan assets invested in Roth*</b>	<b>4.6%</b>	<b>4.1%</b>	<b>3.8%</b>
<b>Distribution of percentage of plan assets in Roth</b>			
<1%	19%	3%	19%
1–2%	29%	13%	36%
3–5%	24%	55%	27%
6–9%	29%	26%	13%
10–14%	0%	0%	4%
15%+	0%	3%	2%
<b>Percentage of participants with assets in Roth*</b>	<b>26%</b>	<b>21%</b>	<b>16%</b>
<b>Percentage of participant assets in Roth**</b>	<b>17%</b>	<b>19%</b>	<b>17%</b>
<b>Distribution of participant assets in Roth</b>			
1–24%	48%	46%	54%
25–49%	21%	24%	23%
50–74%	18%	19%	14%
75–99%	9%	8%	6%
100%	3%	4%	3%
<b>Percentage of participants making Roth contributions</b> (past 12 mo)***	<b>27%</b>	<b>23%</b>	<b>15%</b>
<b>Percentage of participant contributions going to Roth**</b>	<b>68%</b>	<b>58%</b>	<b>55%</b>
<b>Distribution of percentage of participant contributions to Roth</b>			
1–24%	11%	18%	22%
25–49%	18%	23%	26%
50–74%	17%	17%	15%
75–99%	7%	7%	7%
100%	46%	35%	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

	Architecture and engineering <500 participants	Architecture and engineering 500+ participants	Vanguard DC plans
<b>Outstanding loans*</b>			
Percentage of participants with outstanding loans	5%	7%	12%
Percentage of account balance in loans	7%	9%	11%
Average loan balance	\$14,837	\$11,771	\$10,369
<b>Number of outstanding loans per participant*</b>			
No loans	95%	93%	88%
One loan	5%	7%	10%
Two loans	1%	0%	2%
Three+ loans	0%	0%	0%
<b>Loans issued past 12 months*</b>			
Average per 1,000 active participants	33	63	93
Average loan amount	\$19,198	\$13,259	\$10,701
<b>Nonhardship withdrawals taken past 12 months**</b>			
Average per 1,000 active participants	37	99	93
Average withdrawal amount	\$100,095	\$29,366	\$17,560
<b>Hardship withdrawals taken past 12 months**</b>			
Average per 1,000 active participants	3	19	49
Average withdrawal amount	\$18,244	\$6,775	\$5,126

\*Among plans allowing loans.

\*\*Among participants allowed in-service withdrawals.

Source: Vanguard, as of December 31, 2022.

# 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.

*A stable value investment is neither insured nor guaranteed by the U.S. government. There is no assurance that the investment will be able to maintain a stable net asset value, and it is possible to lose money in such an investment.*

**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.**

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