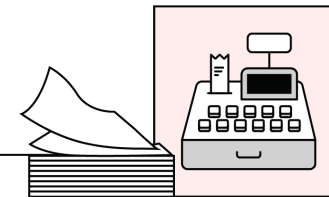


Custom DC plan benchmarks

Retail trade



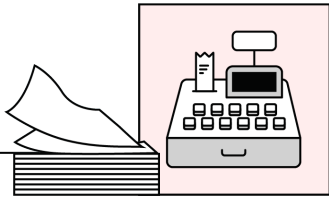


Benchmark population

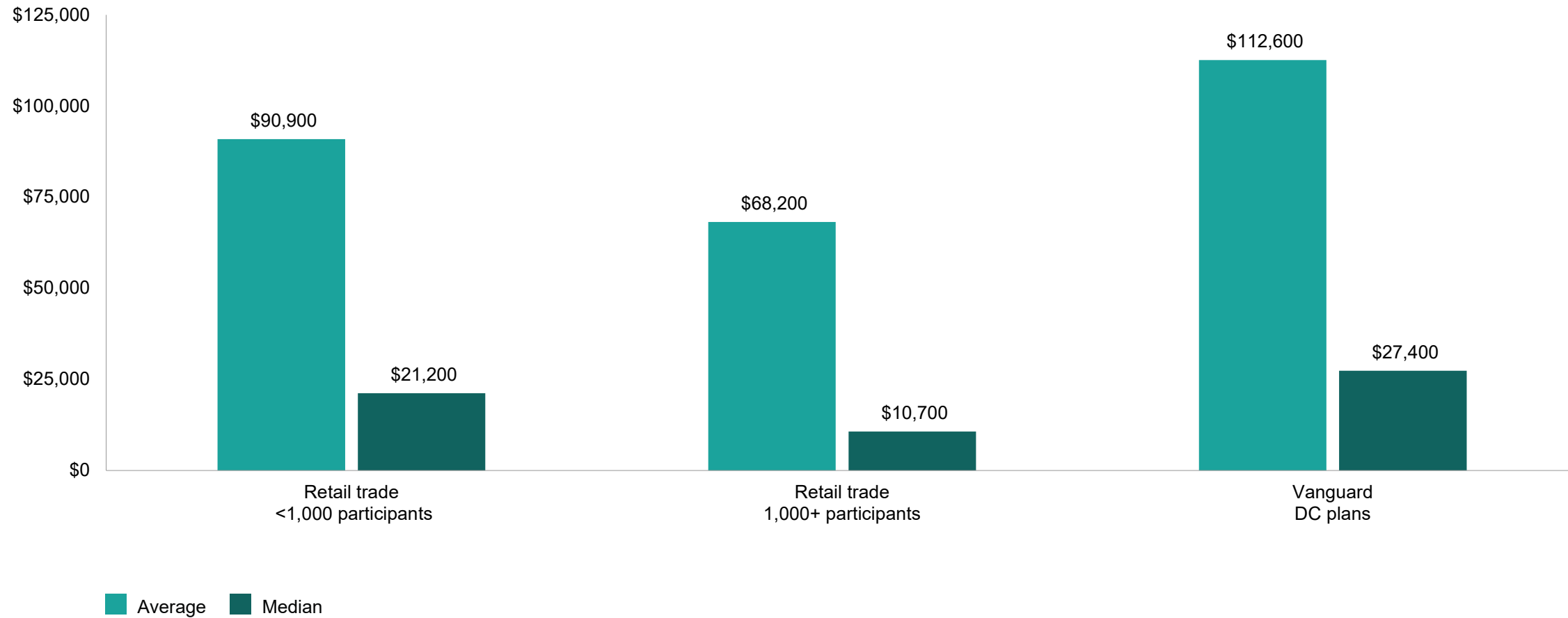
| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|--------------------------------|-------------------------------------|-------------------------------------|----------------------|
| Number of plans | 18 | 20 | 1,650 |
| Number of participants | 7,322 | 469,349 | 4.9 million |
| Average number of participants | 407 | 23,467 | 2,950 |
| Median number of participants | 393 | 5,298 | 565 |
| Amount of assets | \$665.6 million | \$32 billion | \$550.2 billion |
| Average assets | \$37 million | \$1.6 billion | \$333.9 million |
| Median assets | \$31.5 million | \$254.9 million | \$65.5 million |

The retail trade industry is defined by NAICS (North American Industry Classification System) sectors 44-45.

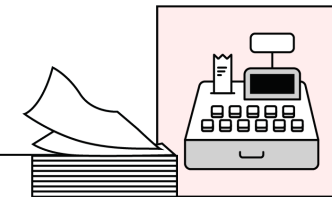
Source: Vanguard, as of December 31, 2022.



Participant balances

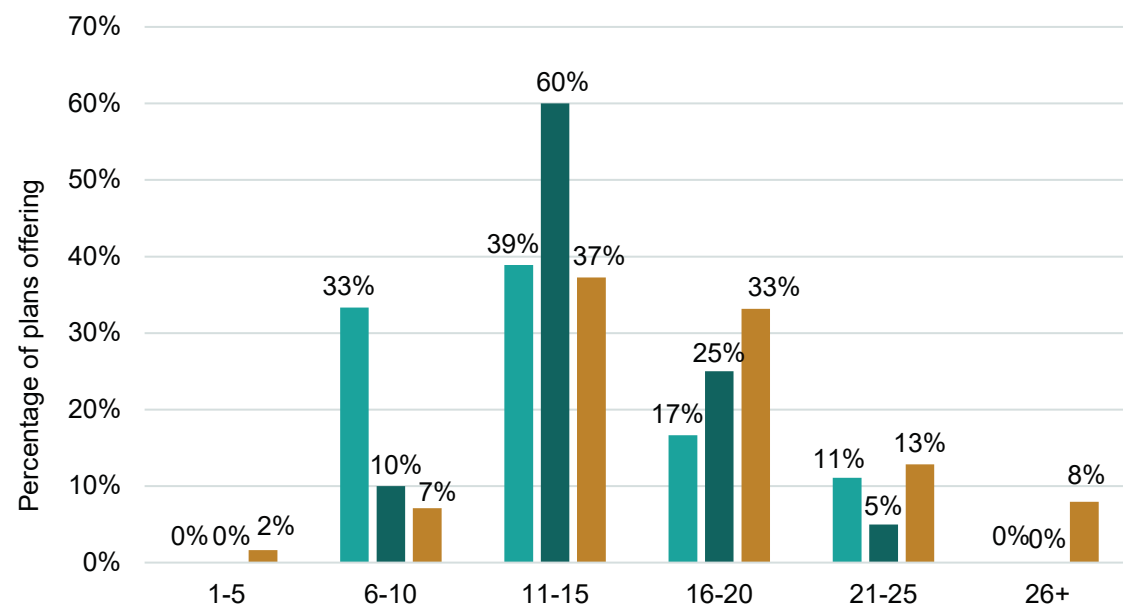


Source: Vanguard, as of December 31, 2022.
Bar chart may not align precisely with percentages due to rounding.

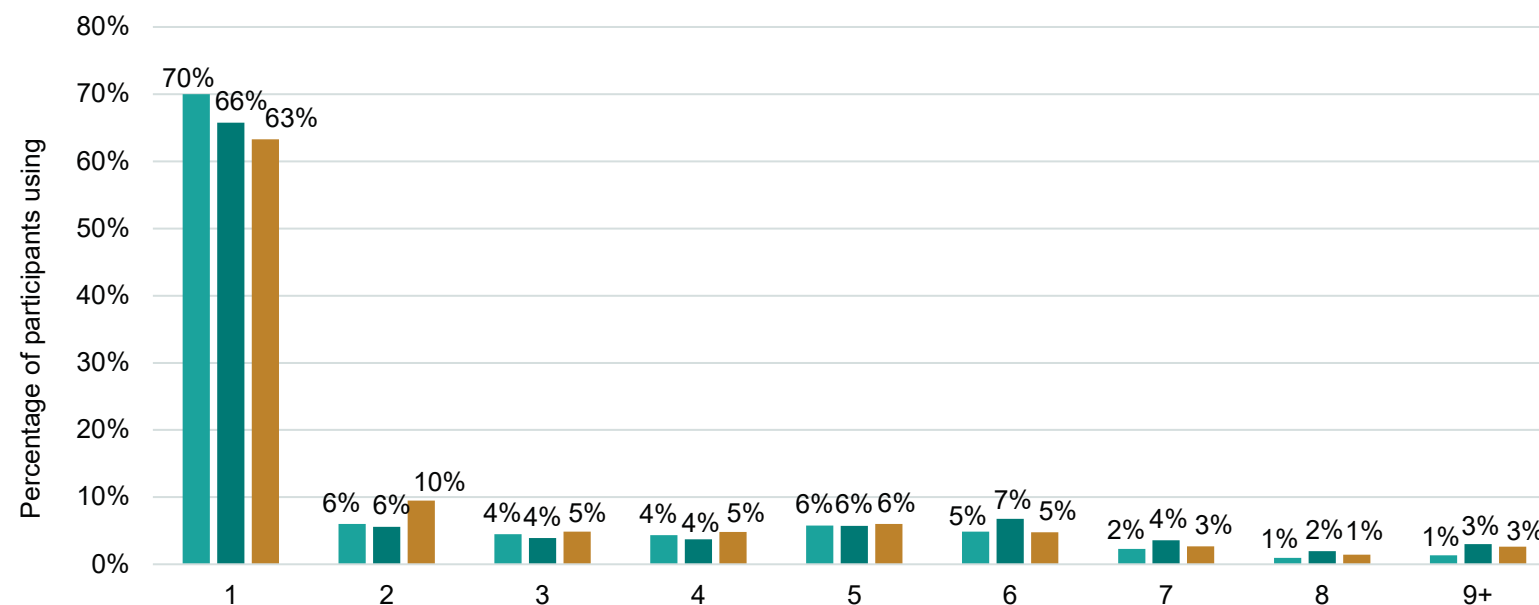


Number of fund options offered and used

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



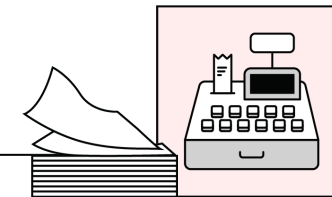
Funds used per participant



| | Average funds offered | Median funds offered | Average funds used | Median funds used |
|------------------------------------|-----------------------|----------------------|--------------------|-------------------|
| ■ Retail trade <1,000 participants | 13.8 | 14 | 2.1 | 1 |
| ■ Retail trade 1,000+ participants | 14.7 | 15 | 2.5 | 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.

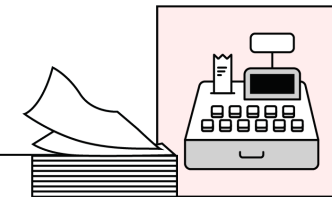


Types of investment options offered and used*

| | Retail trade <1,000 participants | | Retail trade 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% | 12% | 95% | 15% | 99% | 12% |
| Money market | 56 | 6 | 40 | 1 | 70 | 6 |
| Stable value / GIC | 61 | 14 | 80 | 15 | 68 | 10 |
| Bond | 94% | 17% | 95% | 20% | 98% | 17% |
| Active | 61 | 7 | 90 | 7 | 80 | 7 |
| Index | 89 | 14 | 85 | 16 | 89 | 14 |
| Inflation-protected securities | 6 | 3 | 25 | 3 | 35 | 3 |
| Multisector | 0 | 0 | 5 | <0.5 | 8 | 2 |
| High-yield | 22 | 2 | 10 | 5 | 17 | 3 |
| International | 11 | 2 | 10 | 2 | 19 | 3 |
| Emerging markets | 0 | 0 | 0 | 0 | 1 | 2 |
| Balanced funds | 100% | 85% | 100% | 84% | 99% | 87% |
| Traditional balanced | 61 | 15 | 30 | 7 | 62 | 12 |
| Target-risk | 6 | 26 | 5 | 1 | 13 | 10 |
| Target-date | 94 | 80 | 100 | 83 | 96 | 83 |
| Company stock | 0% | 0% | 10% | 25% | 8% | 36% |
| Self-directed brokerage | 0% | 0% | 5% | 1% | 20% | 1% |

*Among participants offered the option.

Source: Vanguard, as of December 31, 2022.

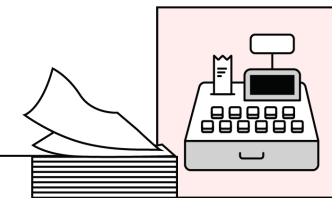


Types of investment options offered and used* (continued)

| | Retail trade <1,000 participants | | Retail trade 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 | 100% | 28% | 100% | 30% | 99% | 30% |
| Domestic equity funds | 100% | 28% | 100% | 29% | 99% | 29% |
| Large-cap index | 100 | 23 | 95 | 10 | 98 | 23 |
| Large-cap active | 78 | 13 | 90 | 25 | 90 | 16 |
| Large-cap value | 89 | 8 | 95 | 11 | 87 | 9 |
| Large-cap growth | 83 | 9 | 90 | 5 | 91 | 13 |
| Large-cap blend | 100 | 22 | 100 | 23 | 98 | 23 |
| Mid-cap index | 94 | 12 | 90 | 17 | 83 | 14 |
| Mid-cap active | 33 | 3 | 65 | 7 | 52 | 7 |
| Small-cap index | 61 | 10 | 70 | 12 | 63 | 11 |
| Small-cap active | 56 | 4 | 60 | 5 | 63 | 7 |
| Socially responsible | 6 | 1 | 15 | 2 | 15 | 5 |
| International equity funds | 100% | 15% | 95% | 22% | 97% | 19% |
| Index international | 56 | 16 | 95 | 17 | 79 | 14 |
| Active international | 78 | 7 | 80 | 7 | 83 | 10 |
| Emerging markets | 17 | 1 | 35 | 19 | 35 | 8 |
| Global equity funds | 11% | 11% | 5% | 10% | 17% | 3% |

*Among participants offered the option.

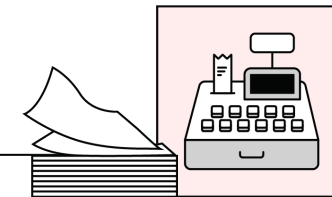
Source: Vanguard, as of December 31, 2022.



Types of investment options offered and used* (continued)

| | Retail trade <1,000 participants | | Retail trade 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 | 39% | 8% | 40% | 6% | 38% | 6% |
| REIT | 28 | 6 | 30 | 7 | 32 | 5 |
| Health care | 17 | 3 | 5 | 8 | 8 | 7 |
| Energy | 17 | 3 | 0 | 0 | 5 | 5 |
| Precious metals | 0 | 0 | 0 | 0 | 2 | 2 |
| Technology | 22 | 3 | 0 | 0 | 3 | 5 |
| Utilities | 6 | 1 | 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 | 6 | 1 | 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.



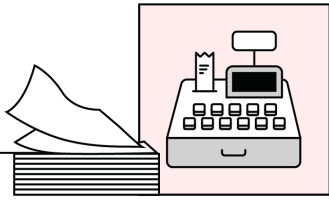
Target-date funds availability and use

| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|--|-------------------------------------|-------------------------------------|----------------------|
| Percentage of plans offering | 94% | 100% | 96% |
| Plan assets invested* | 42% | 32% | 40% |
| Percentage of plan assets* | | | |
| <10% | 6% | 0% | 5% |
| 10–19% | 12% | 0% | 10% |
| 20–29% | 18% | 15% | 17% |
| 30–39% | 35% | 0% | 21% |
| 40–49% | 0% | 30% | 17% |
| 50%+ | 29% | 55% | 30% |
| Percentage of participants using * | 80% | 83% | 83% |
| Percentage of participant assets** | 71% | 52% | 61% |
| Percentage of participant assets in target-date funds** | | | |
| 1–24% | 8% | 10% | 10% |
| 25–49% | 8% | 8% | 8% |
| 50–74% | 2% | 3% | 4% |
| 75–99% | 2% | 4% | 6% |
| 100% | 81% | 75% | 72% |
| Percentage of participants owning** | | | |
| One target-date fund only | 80% | 74% | 71% |
| One target-date fund plus other funds | 18% | 23% | 23% |
| Two or more target-date funds only | 1% | 1% | 2% |
| Two or more target-date funds plus other funds | 2% | 2% | 4% |

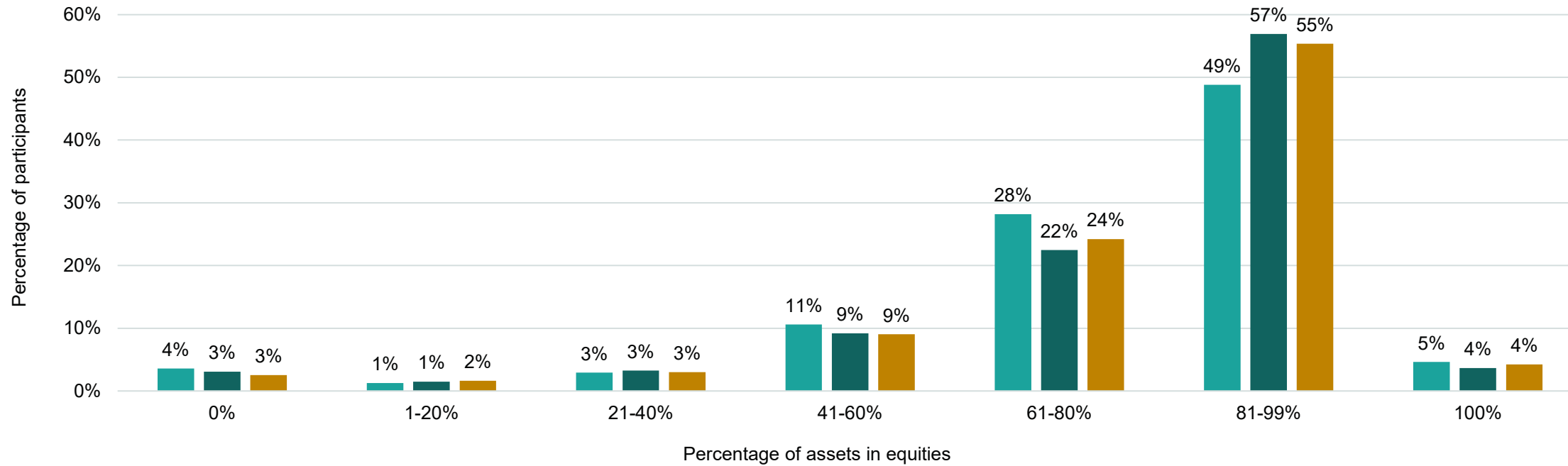
*Among plans offering target-date options.

**Among participants owning target-date options.

Source: Vanguard, as of December 31, 2022.

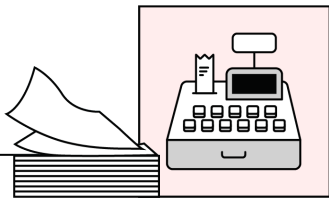


Participant equity exposure

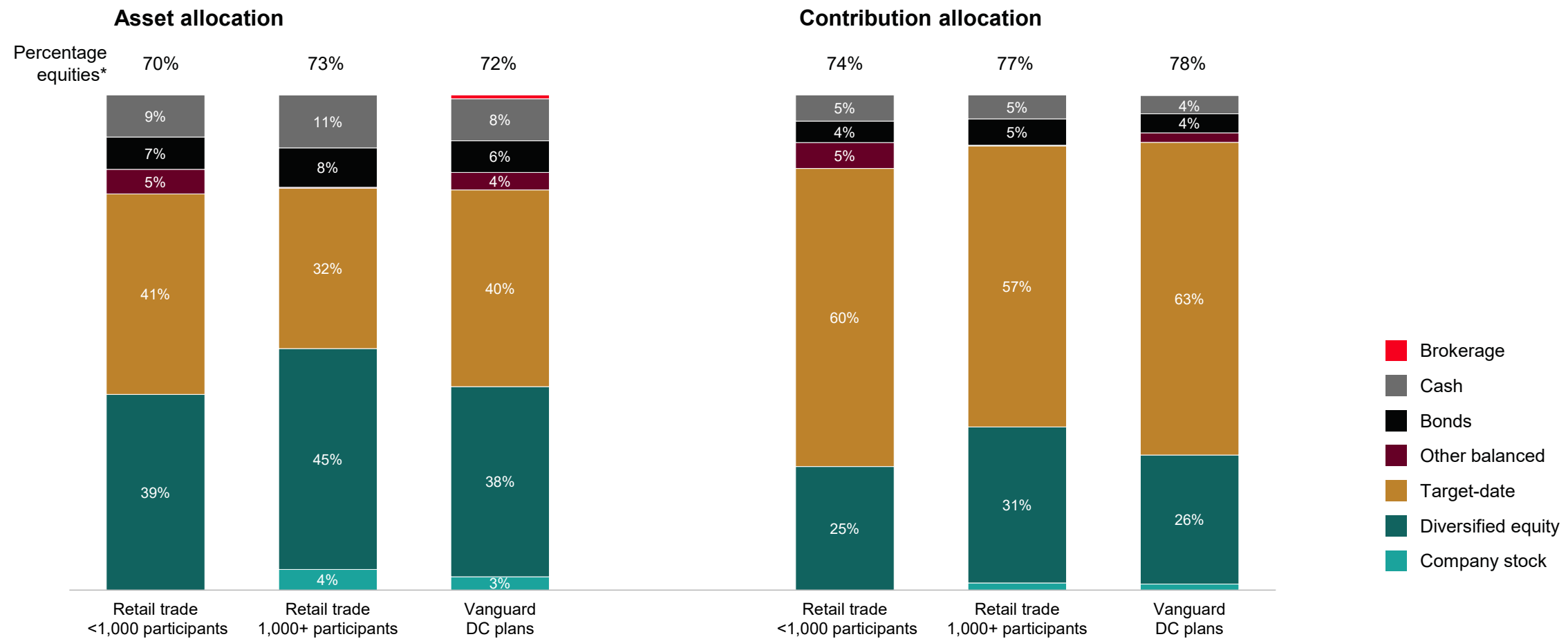


| | Average percentage in equities | Median percentage in equities |
|------------------------------------|--------------------------------|-------------------------------|
| ■ Retail trade <1,000 participants | 75% | 83% |
| ■ Retail trade 1,000+ participants | 76% | 86% |
| ■ Vanguard DC plans | 77% | 86% |

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



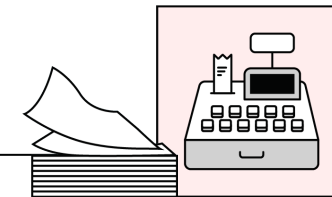
Asset and contribution allocations



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

Source: Vanguard, as of December 31, 2022.

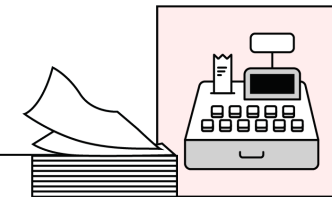
Bar chart may not align precisely with percentages due to rounding.



Participants with professionally managed allocations

| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|--|-------------------------------------|-------------------------------------|----------------------|
| All participants | | | |
| Single target-date fund | 63% | 62% | 59% |
| Single balanced fund | 3% | <0.5% | <0.5% |
| Managed account program | 7% | 10% | 7% |
| Total | 73% | 72% | 66% |
| New plan entrants during the year | | | |
| Single target-date fund | 90% | 91% | 87% |
| Single balanced fund | <0.5% | 0% | <0.5% |
| Managed account program | 2% | 2% | 2% |
| Total | 92% | 93% | 89% |

Source: Vanguard, as of December 31, 2022.

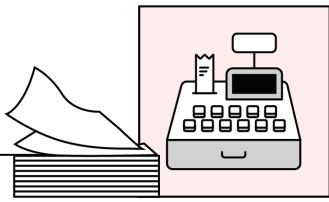


Automatic enrollment options*

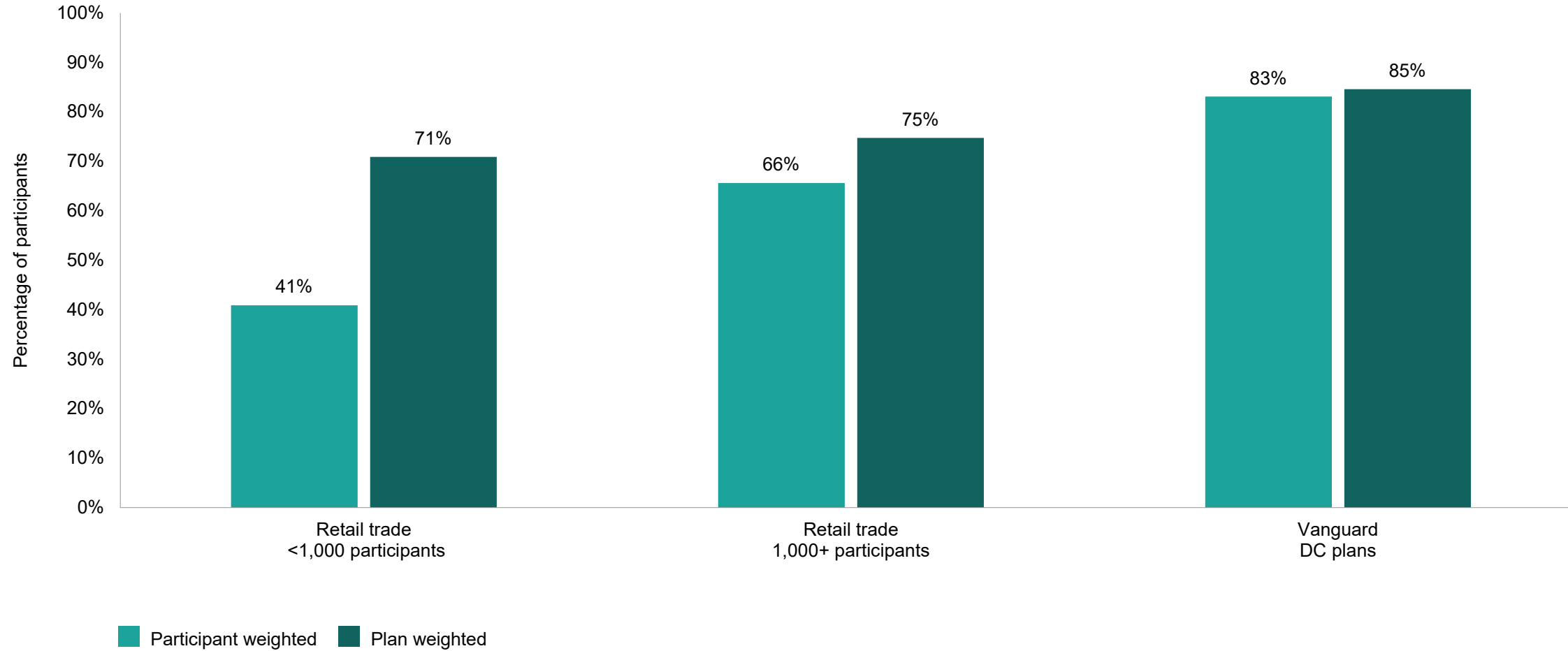
| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|--|-------------------------------------|-------------------------------------|----------------------|
| Automatic enrollment* | | | |
| Number of plans | 8 | 12 | 884 |
| Percentage of plans | 44% | 60% | 58% |
| Default automatic enrollment rate | | | |
| 1 percent | 0% | 0% | 2% |
| 2 percent | 0% | 17% | 5% |
| 3 percent | 50% | 50% | 34% |
| 4 percent | 0% | 17% | 14% |
| 5 percent | 13% | 0% | 17% |
| 6 percent or more | 38% | 17% | 28% |
| Default automatic increase rate | | | |
| 1 percent | 88% | 83% | 66% |
| 2 percent | 13% | 0% | 3% |
| Voluntary election | 0% | 17% | 25% |
| Service feature not offered | 0% | 0% | 6% |
| Default automatic increase cap | | | |
| <6 percent | 0% | 0% | 2% |
| 6 to 9 percent | 25% | 30% | 17% |
| 10 to 14 percent | 25% | 20% | 48% |
| 15 to 19 percent | 25% | 30% | 22% |
| 20+ percent | 25% | 10% | 6% |
| No cap | 0% | 10% | 5% |
| Default fund | | | |
| 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.

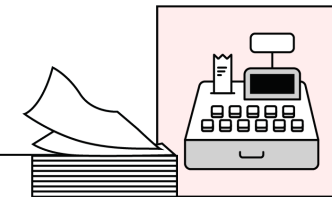
Source: Vanguard, as of December 31, 2022.



Participation rates



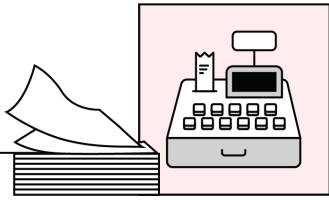
Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



Participant deferral rates

| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|------------------------------|-------------------------------------|-------------------------------------|----------------------|
| Deferral rates | | | |
| Average | 7.6% | 5.5% | 7.4% |
| Median | 6.4% | 4.9% | 6.4% |
| Distribution of rates | | | |
| <4.0% | 22% | 44% | 25% |
| 4.0% – 6.0% | 21% | 24% | 19% |
| 6.1% – 9.9% | 33% | 19% | 32% |
| 10.0% – 14.9% | 16% | 9% | 17% |
| 15.0%+ | 8% | 4% | 7% |

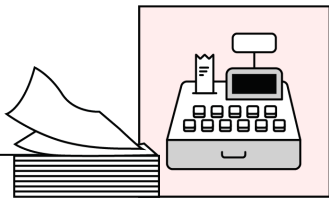
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.



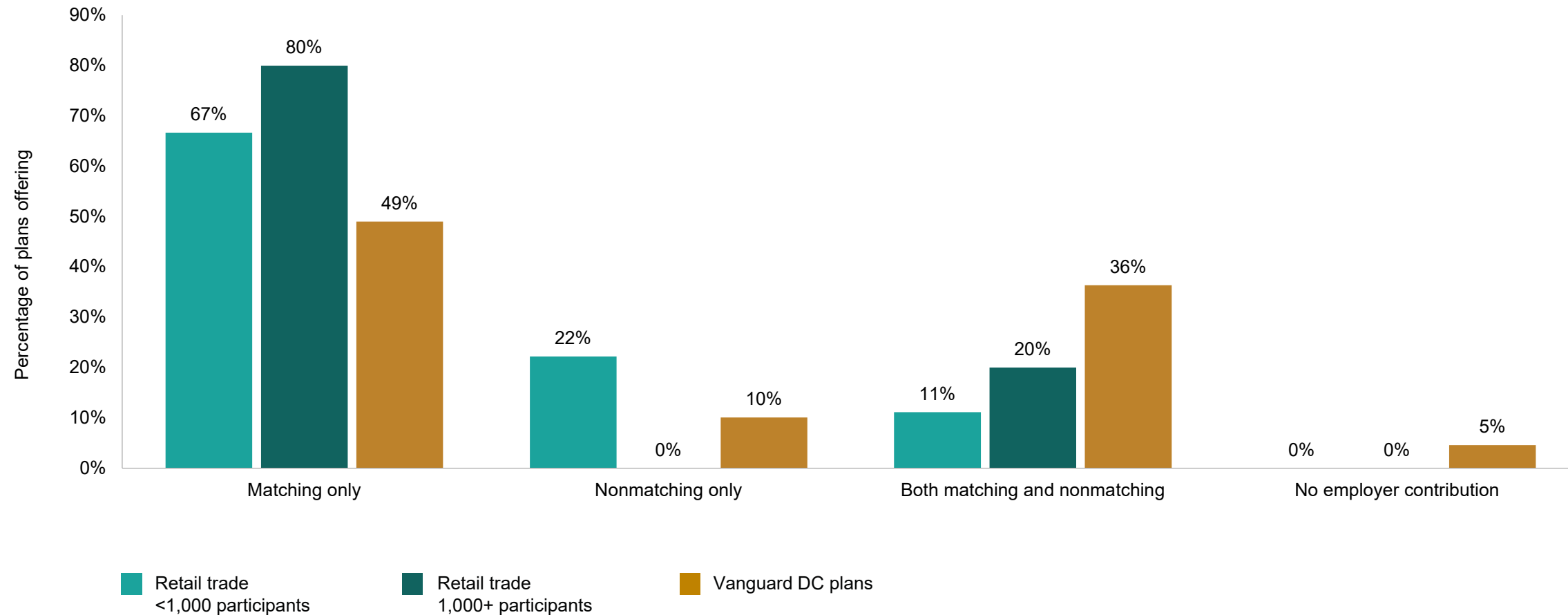
Aggregate participant and employer contribution rates

| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|------------------------------|-------------------------------------|-------------------------------------|----------------------|
| Total saving rate | | | |
| Average | 12.4% | 7.8% | 11.3% |
| Median | 12.0% | 6.6% | 10.6% |
| Distribution of rates | | | |
| <5.0% | 16% | 41% | 18% |
| 5.0% – 8.9% | 16% | 17% | 20% |
| 9.0% – 11.9% | 16% | 23% | 21% |
| 12.0% – 14.9% | 19% | 9% | 17% |
| 15.0% + | 32% | 10% | 23% |

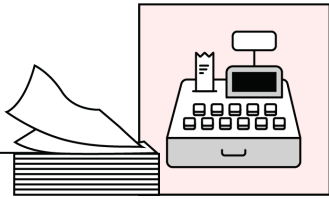
Source: Vanguard active plans with nondiscrimination testing completed during the past two years.



Types of employer contributions

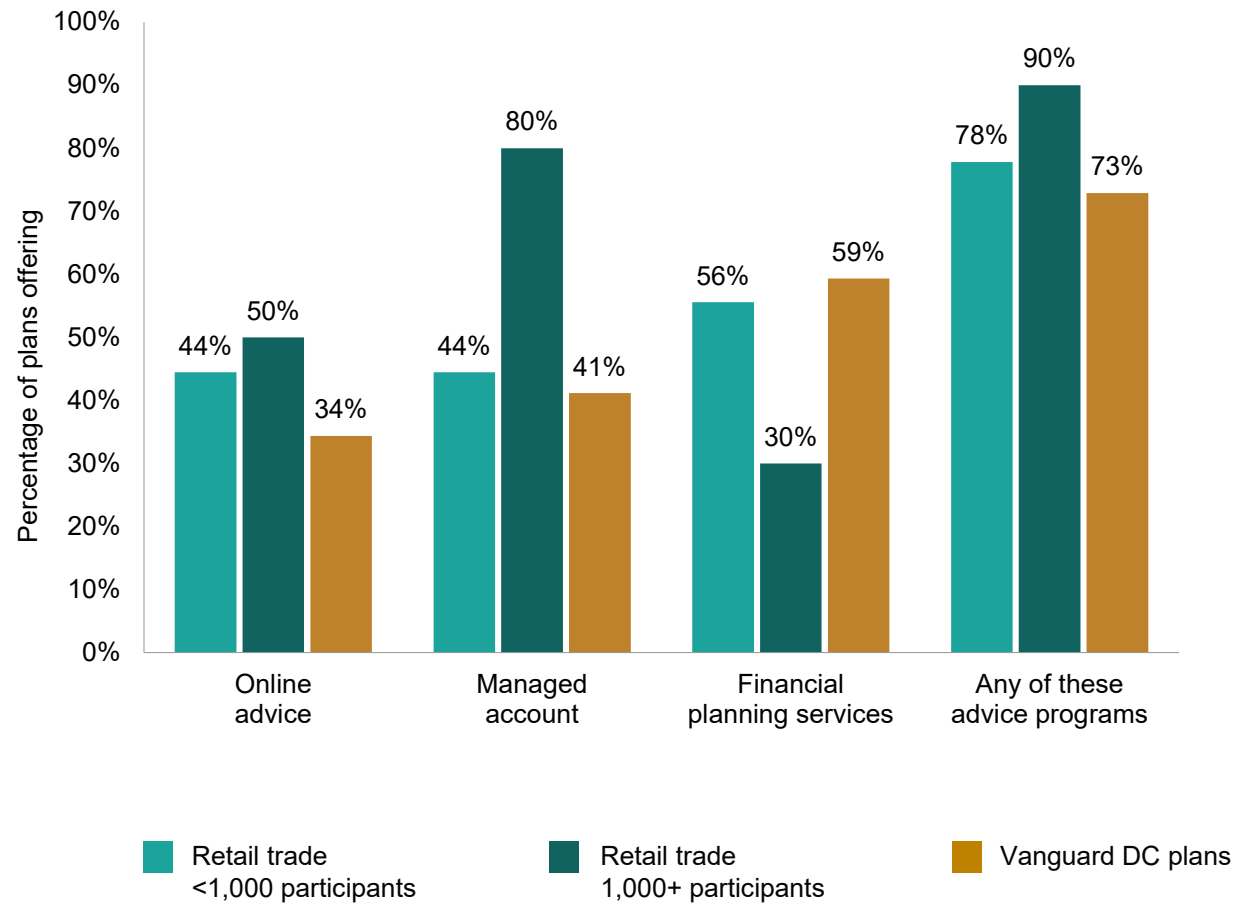


Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.

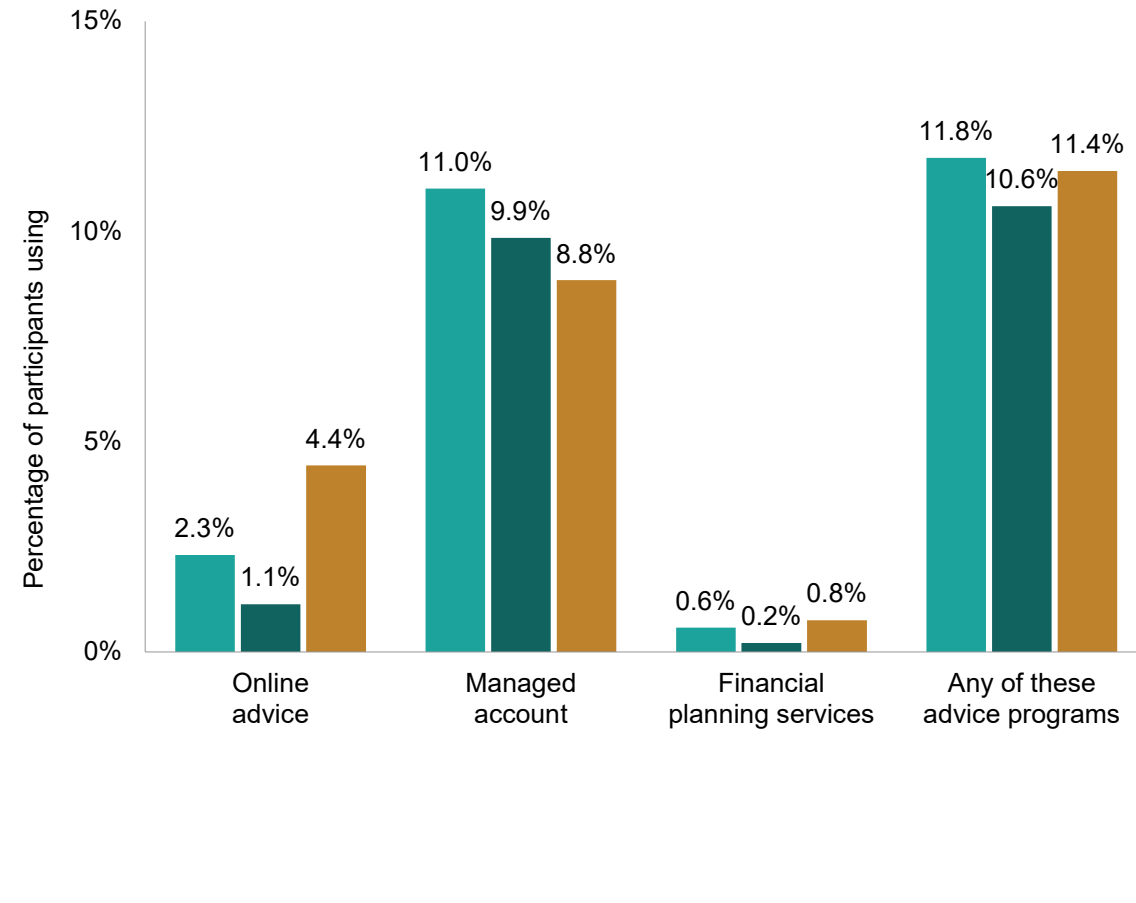


Advice services

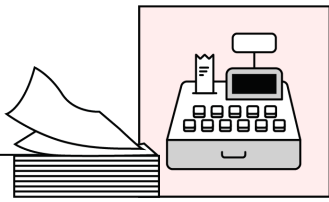
Advice offered



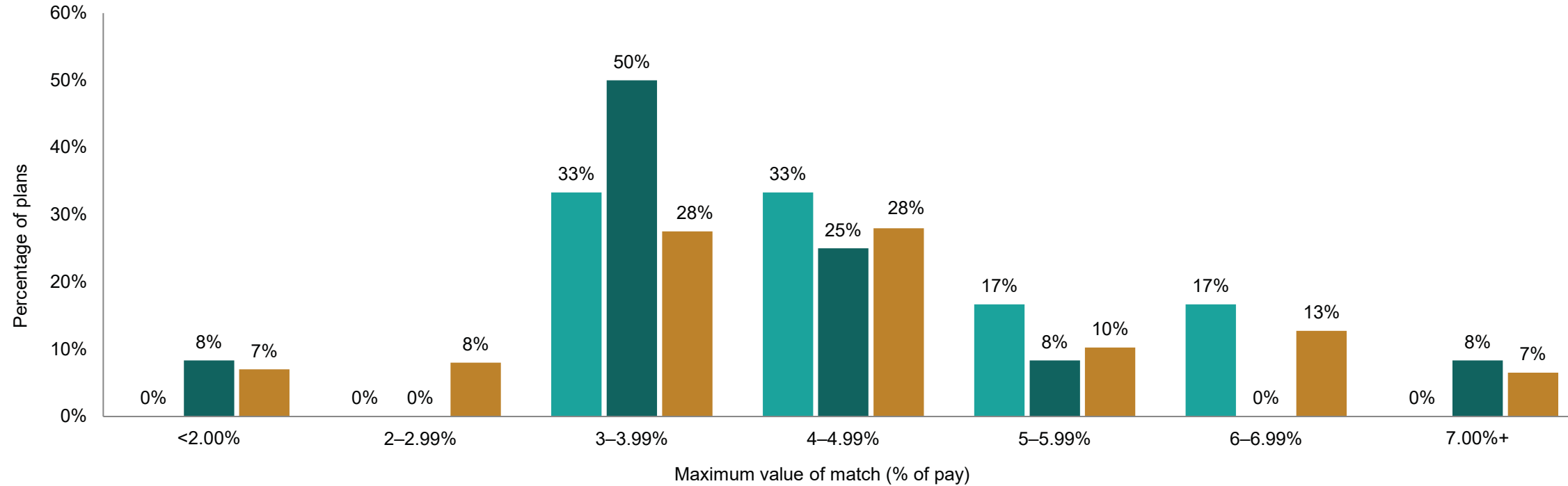
Advice used



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

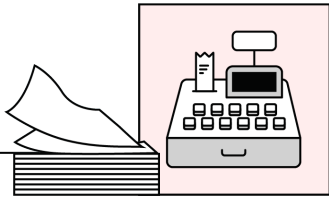


Matching contributions

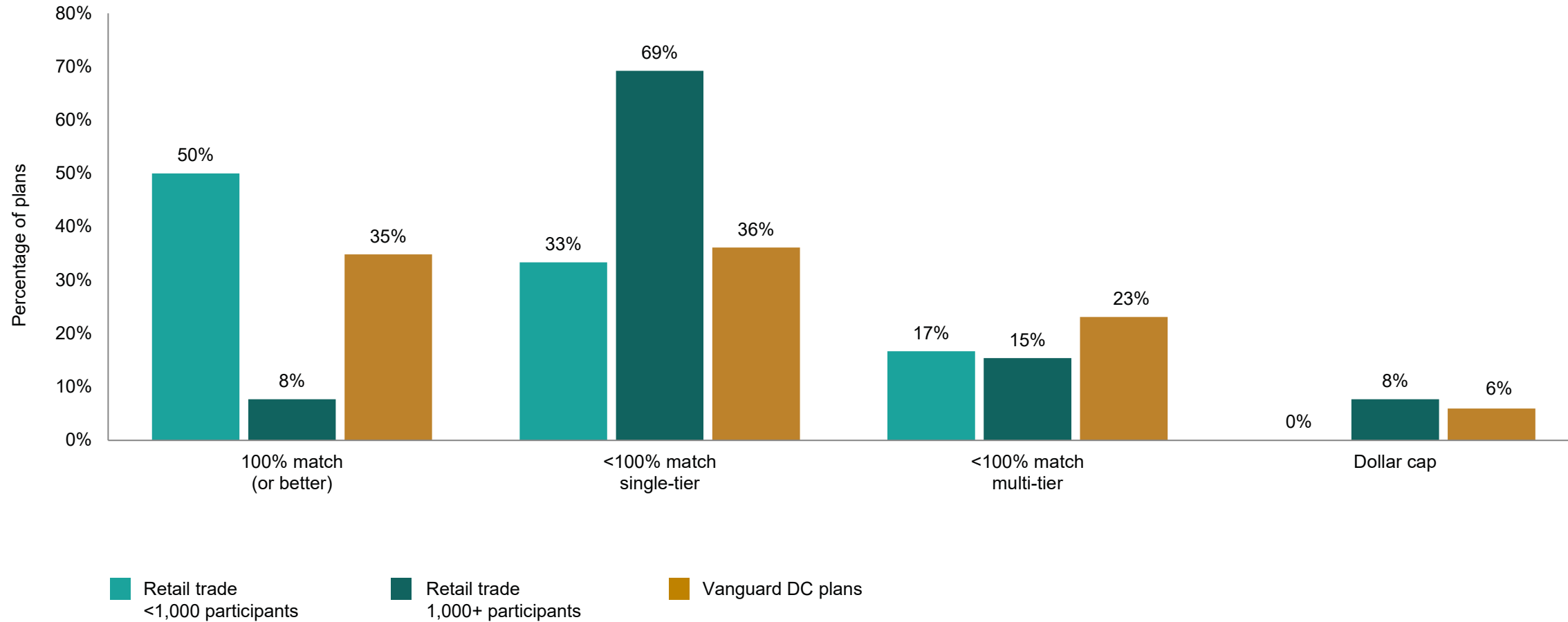


| | Average value | Median value |
|------------------------------------|---------------|--------------|
| ■ Retail trade <1,000 participants | 4.2% | 4.0% |
| ■ Retail trade 1,000+ participants | 3.8% | 3.5% |
| ■ Vanguard DC plans | 4.5% | 4.0% |

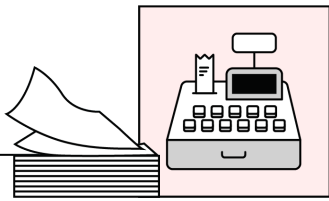
Source: Vanguard active plans with nondiscrimination testing completed during the past two years. Bar chart may not align precisely with percentages due to rounding.



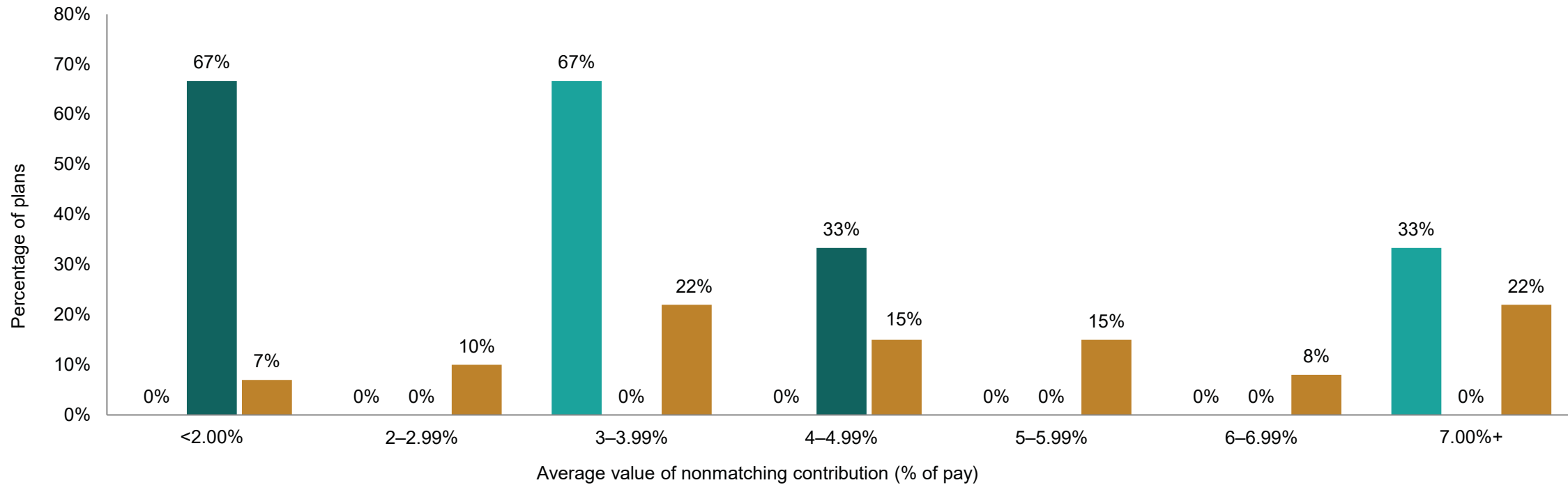
Matching formulas



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

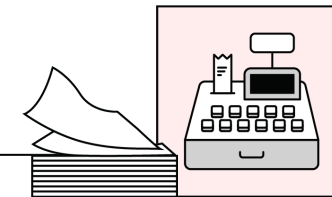


Nonmatching/Profit-sharing employer contributions



| | Average value | Median value |
|---|---------------|--------------|
| ■ Retail trade <1,000 participants | 6.8% | 3.3% |
| ■ Retail trade 1,000+ participants | 1.6% | 0.2% |
| ■ 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

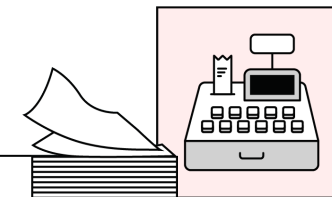
| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|---|-------------------------------------|-------------------------------------|----------------------|
| Percentage of plans offering Roth (among plans with elective deferrals) | 67% | 95% | 80% |
| Percentage of plan assets invested in Roth* | 2.0% | 2.8% | 3.8% |
| Distribution of percentage of plan assets in Roth | | | |
| <1% | 42% | 16% | 19% |
| 1–2% | 25% | 53% | 36% |
| 3–5% | 25% | 16% | 27% |
| 6–9% | 8% | 11% | 13% |
| 10–14% | 0% | 5% | 4% |
| 15%+ | 0% | 0% | 2% |
| Percentage of participants with assets in Roth* | 15% | 14% | 16% |
| Percentage of participant assets in Roth** | 15% | 14% | 17% |
| Distribution of participant assets in Roth | | | |
| 1–24% | 47% | 53% | 54% |
| 25–49% | 23% | 24% | 23% |
| 50–74% | 24% | 17% | 14% |
| 75–99% | 4% | 4% | 6% |
| 100% | 2% | 2% | 3% |
| Percentage of participants making Roth contributions (past 12 mo)*** | 19% | 13% | 15% |
| Percentage of participant contributions going to Roth** | 55% | 51% | 55% |
| Distribution of percentage of participant contributions to Roth | | | |
| 1–24% | 17% | 22% | 22% |
| 25–49% | 26% | 29% | 26% |
| 50–74% | 25% | 17% | 15% |
| 75–99% | 6% | 6% | 7% |
| 100% | 27% | 26% | 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

| | Retail trade <1,000 participants | Retail trade 1,000+ participants | Vanguard DC plans |
|---|-------------------------------------|-------------------------------------|----------------------|
| Outstanding loans* | | | |
| Percentage of participants with outstanding loans | 14% | 13% | 12% |
| Percentage of account balance in loans | 12% | 13% | 11% |
| Average loan balance | \$10,199 | \$8,898 | \$10,369 |
| Number of outstanding loans per participant* | | | |
| No loans | 86% | 87% | 88% |
| One loan | 10% | 9% | 10% |
| Two loans | 4% | 4% | 2% |
| Three+ loans | 0% | 0% | 0% |
| Loans issued past 12 months* | | | |
| Average per 1,000 active participants | 186 | 114 | 93 |
| Average loan amount | \$8,815 | \$7,905 | \$10,701 |
| Nonhardship withdrawals taken past 12 months** | | | |
| Average per 1,000 active participants | 147 | 54 | 93 |
| Average withdrawal amount | \$19,471 | \$18,176 | \$17,560 |
| Hardship withdrawals taken past 12 months** | | | |
| Average per 1,000 active participants | 97 | 46 | 49 |
| Average withdrawal amount | \$4,791 | \$5,148 | \$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.

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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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