

2ND QUARTER • 2023

# ENDOWMENTS QUARTERLY

A LOOK AT ASSET ALLOCATION AND TOTAL RETURNS  
FOR US ENDOWMENTS AND FOUNDATIONS

## TRAILING ONE-YEAR RESULTS

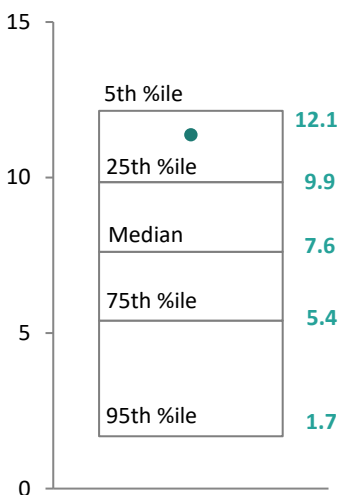
The median return of the endowment and foundation (E&F) universe was 7.6% for the trailing one-year period (Figure 1) ended June 30, 2023. A blended index return consisting of 70% MSCI ACWI and 30% Bloomberg Aggregate Bond Index earned 11.4% and would have landed near the top end of the return distribution for the overall respondent group. This was a stark contrast to how institutional portfolios performed relative to the simple benchmark over recent history. The 70/30 benchmark return was in the bottom quartile of the trailing one-year E&F universe in the prior eight editions of this study. The last time the simple benchmark return was above the bottom quartile mark was the one-year period as of March 31, 2021, and even then, it just barely crossed the threshold.

**FIGURE 1 PERFORMANCE AND ASSET ALLOCATION SNAPSHOT**

Period Ended June 30, 2023 • Percent (%)

### Trailing 1-Yr Return

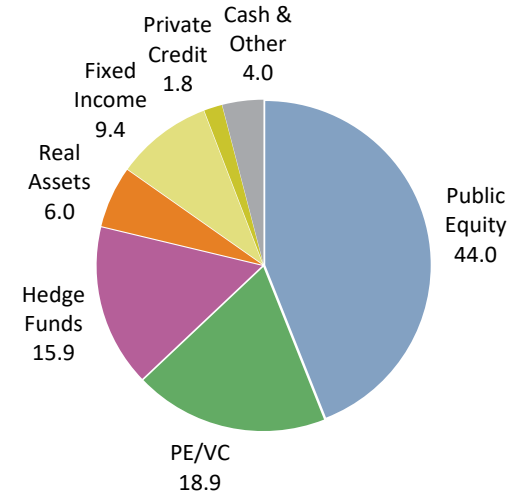
n = 377



● 70% MSCI ACWI/30% BBG Agg

### Mean Average Asset Allocation

n = 378



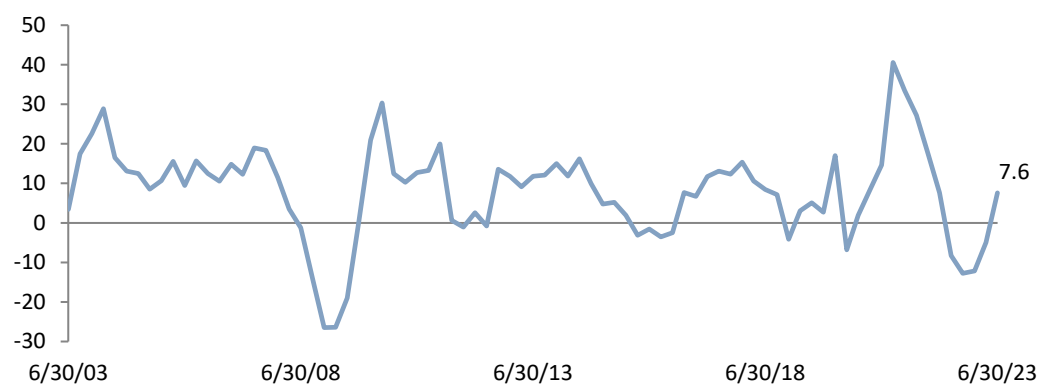
Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

Growth-oriented investments made up the biggest chunk of E&F portfolios. The average combined allocation to public equity and private equity/venture capital (PE/VC) exceeded 60%, although the exact breakdown across these strategies varies. Asset size continued to be the key differentiator in the variation of asset allocations across the total participant group, as larger portfolios tend to have the highest allocations to private investments. The average allocation to hedge funds was approximately 16%, with a little more than one-third of that allocation coming from equity-oriented long/short funds. A detailed breakdown of average asset allocations is displayed for various asset size cohorts and institution types in the appendix of this report.

Figure 2 incorporates performance data that Cambridge Associates (CA) has collected from institutions for the last 20 years and shows the median one-year return on a rolling basis. After the median one-year return was negative for four straight quarters, this metric bounced back into positive territory for the one-year period ended June 30, 2023. The return for this most recent year was toward the middle of the results from the last 20 years, ranking 50 out of the 81 periods displayed in the graph.

**FIGURE 2 TRAILING ONE-YEAR MEDIAN RETURNS**

Quarters Ended June 30, 2003 – June 30, 2023



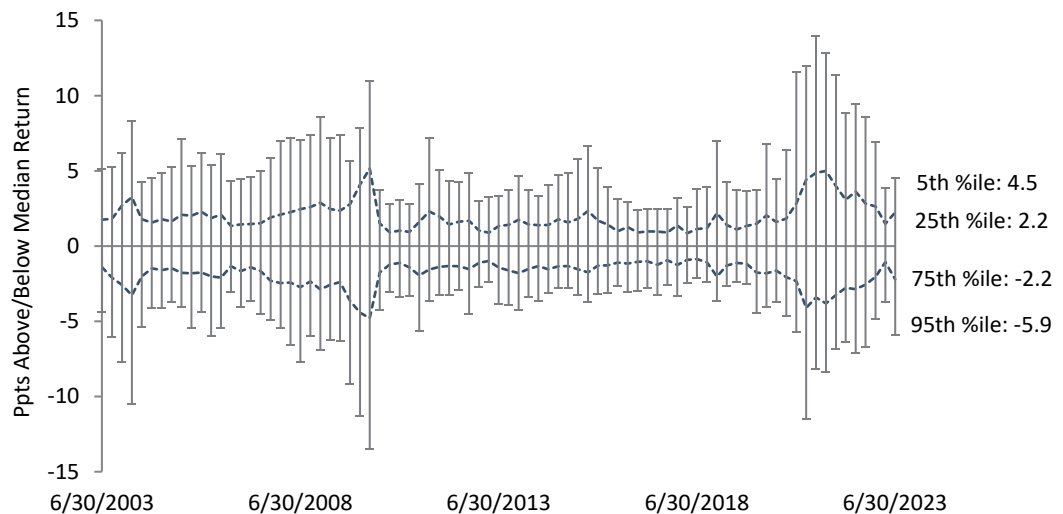
Source: Endowment and foundation data as reported to Cambridge Associates LLC.

Note: The number of institutions included in the median calculation varies from one period to the next and is smaller in earlier years compared to the present day.

Figure 3 shows the percentage points (ppts) above or below the median that certain percentile returns were for trailing one-year periods. For example, the 5th percentile return (12.1%) for the most recent one-year period was 4.5 ppts above the median return. The spread between the 5th percentile and the 95th percentile return (1.7%) was 10.4 ppts. The overall range in returns was slightly higher compared to last quarter's study, but was still markedly lower than the dispersion reported throughout 2021 and 2022.

**FIGURE 3 DISPERSION IN TRAILING 1-YR RETURNS RELATIVE TO THE MEDIAN RETURN**

Based on Quarters Ended June 30, 2003 – June 30, 2023



Source: Endowment and foundation data as reported to Cambridge Associates LLC.

**PRIVATE INVESTMENT REPORTING METHODOLOGIES.** In each edition of this study, we highlight the different reporting methodologies used to incorporate private investments into the total return calculation. This issue is an important factor to keep in mind when conducting peer performance comparisons for shorter-term periods, and recent market volatility has made this topic particularly noteworthy.

Figure 4 provides an illustration of the most common reporting methodologies used across the peer universe to calculate the one-year return as of June 30. Over three-quarters (77%) of participants used the partial basis, meaning only the first three quarters of private returns were incorporated into the one-year total portfolio return. The unique feature of this methodology is that private investments get carried at a 0% return for the last quarter of the trailing one-year period. As June 30 private valuations become available, the 0% return will be replaced with actual private performance and the trailing one-year return for the total portfolio will be revised.

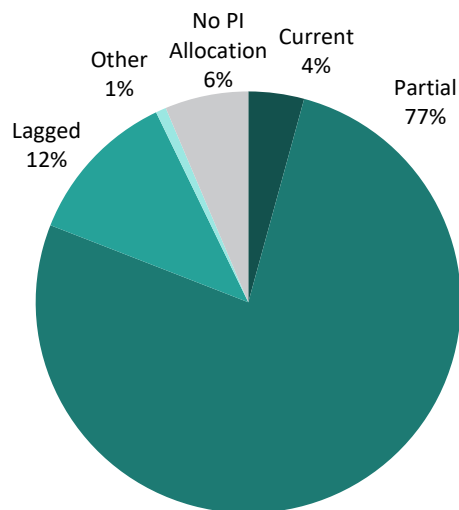
The remaining institutions in the universe are already reporting a total return that incorporates four quarters of private performance. Under the lagged basis, which was cited by 12% of participants, private valuations are perpetually lagged by one quarter so that the one-year return represents private investment performance from April 1, 2022, to March 31, 2023. In contrast, under the current basis, the four quarters of private investment performance are time-matched with other assets in the portfolio and reflect investment activity from July 1, 2022, to June 30, 2023. Just 4% of institutions used the current basis method when reporting returns for this study. Approximately 6% of the peer universe has little (<1%) or no allocation to private investments.

**FIGURE 4 PERFORMANCE REPORTING METHODOLOGIES: PRIVATE INVESTMENTS**

As of June 30, 2023

**All Endowments & Foundations**

n = 378



**Current Basis**

Trailing one-year period includes private investment performance for July 1, 2022, to June 30, 2023.

Marketable Assets			
3Q22	4Q22	1Q23	2Q23
Private Investments			

**Partial Basis**

Trailing one-year period includes private investment performance for July 1, 2022, to March 31, 2023, and a flat return (0%) for April 1, 2023, to June 30, 2023.

Marketable Assets			
3Q22	4Q22	1Q23	2Q23
Actual Return			0%
Private Investments			

**Lagged Basis**

Trailing one-year period includes private investment performance for April 1, 2022, to March 31, 2023.

Marketable Assets				
2Q22	3Q22	4Q22	1Q23	2Q23
Private Investments				

Source: Endowment and foundation data as reported to Cambridge Associates LLC.

Figure 5 uses the CA private index returns to demonstrate how each reporting methodology incorporates private investment performance for the one year ended June 30. With more than three-quarters of the average E&F private investment allocation coming from PE/VC, the performance of these strategies is most impactful when analyzing the different reporting methodologies. Institutions using the lagged methodology are the only peers that incorporated private returns for second quarter 2022, a period that saw significant markdowns for PE/VC. Consequently, the inclusion of that quarter's performance put the lagged methodology at a comparative disadvantage versus the other methodologies for the trailing one-year returns reported in this study.

**FIGURE 5 CAMBRIDGE ASSOCIATES PRIVATE INVESTMENT INDEX RETURNS**

	One Quarter End-to-End Pooled Return (%)				
	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Preliminary
					Q2 2023
US Private Equity	-5.0	-0.1	1.0	2.7	NA
Global ex US Private Equity	-6.3	-5.2	5.5	3.5	NA
US Venture Capital	-9.4	-2.3	-6.9	-0.8	NA
Global ex US Venture Capital	-6.3	-3.9	-0.4	-0.3	NA
Private Credit	-1.6	-0.1	3.8	2.5	NA
Distressed - Control Oriented	-1.1	-0.2	2.3	1.6	NA
Real Estate	-0.4	-1.3	0.1	-0.2	NA
Natural Resources	3.4	1.8	3.2	-0.3	NA

Lagged Basis
Partial Basis
Current Basis

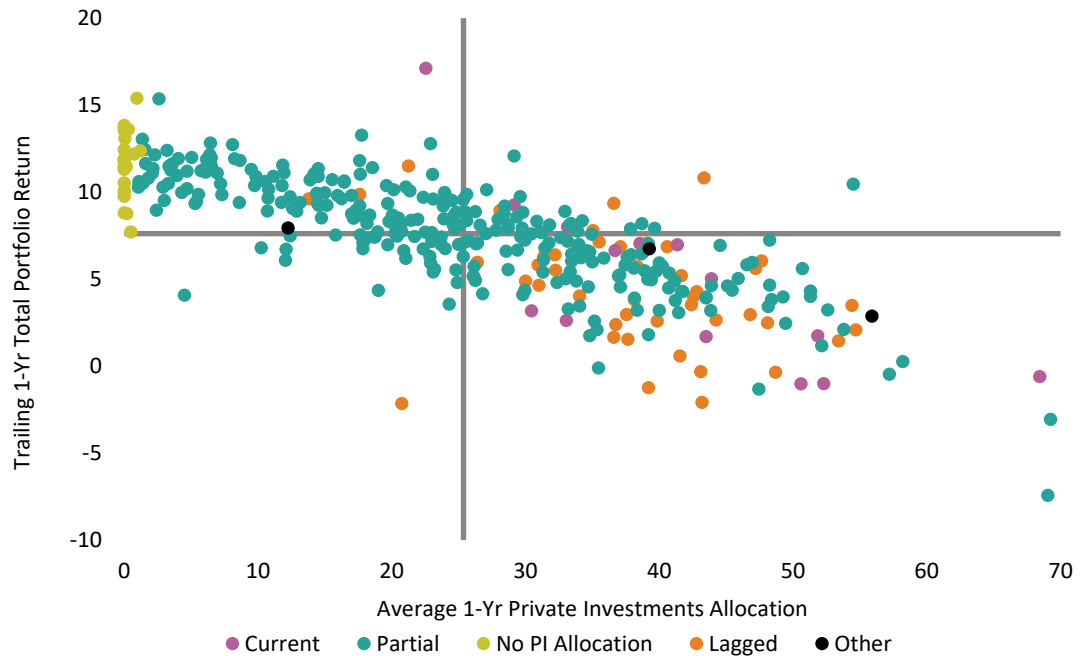
Source: Cambridge Associates LLC.

Note: NA indicates that the sample size was too small at this time to report data.

As Figure 6 shows, most of the institutions using the lagged methodology fell below the median return for the trailing one year. In addition, the graph shows a downward sloping trend from left to right, meaning performance was generally lower for portfolios with the highest private allocations over this period. Institutions that had the highest private allocations and report under the lagged basis will tend to be toward the bottom end of this year's performance universe.

**FIGURE 6 TRAILING 1-YEAR RETURNS VS PRIVATE INVESTMENT ALLOCATIONS**

Period Ended June 30, 2023 • Percent (%) • n = 375



Source: Endowment and foundation data as provided to Cambridge Associates, LLC.

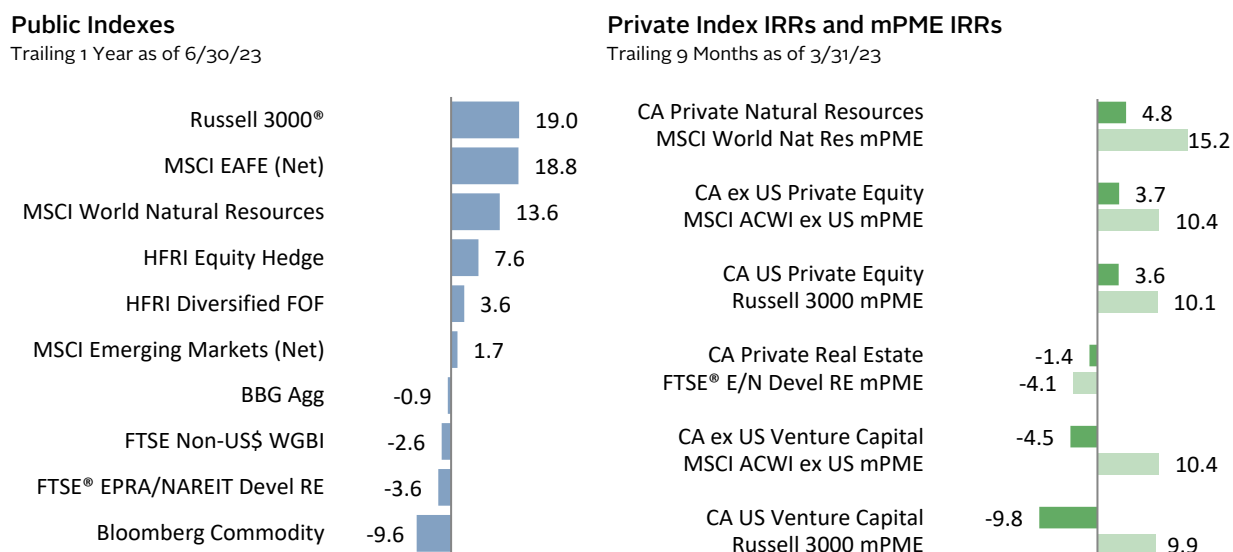
Note: The thicker lines represent where the median private investment allocation intersects with the median trailing one-year return.

**ONE-YEAR HEAT MAP.** The relationship between E&F performance and private investment allocation in the previous graph was a result of public equity markets broadly outperforming private markets over the past year. The index returns in the top half of Figure 7 provide context on the capital market environment for the trailing one-year period. Included alongside the private benchmarks internal rates of return (IRRs) are public market returns on a modified public market equivalent basis (mPME), which allow for appropriate comparisons of private and public market returns. The mPME benchmarks significantly outperformed the private indexes for most strategies shown in this analysis.

In the heat map table on the bottom of Figure 7, each institution's asset allocation was averaged across the beginning and ending points for the trailing one-year period. The four quartiles represent the average asset allocation of the institutions within each quartile. This table captures just how large the differentials were in asset allocations between top and bottom performers over the last year. On average, the top quartile of performers had portfolios with 91% of their assets in marketable strategies and just 9% in private investments. Conversely, the bottom quartile of performers had an average

allocation mix of 59% to marketable strategies and 41% to private investments. When drilling down further into private allocations, we see that by far the largest differentials across peers were reported in PE/VC.

**FIGURE 7 1-YR INDEX RETURNS AND ASSET ALLOCATION OF TOP AND BOTTOM PERFORMERS: US ENDOWMENTS AND FOUNDATIONS**



**Mean Asset Allocation by Performance Quartile: June 30, 2022, to June 30, 2023**

*n* = 375

Quartile	Marketable Assets						Private Investments			
	Total Mktble Assets	Public Equity	Hedge Funds	Public Real Assets	Fixed Income	Cash & Other	Total Private Inv	PE/VC	Private Real Assets	Private Credit
Top Quartile	90.8	57.1	15.9	2.1	11.0	4.8	9.2	6.8	1.5	0.9
2nd Quartile	78.6	46.5	16.3	1.9	10.8	3.2	21.4	16.1	3.5	1.8
3rd Quartile	69.8	38.4	16.9	2.0	8.2	4.3	30.2	22.7	5.1	2.5
Bottom Quartile	58.9	28.1	16.1	1.8	7.9	5.0	41.1	31.6	7.4	2.1
E&F Universe Mean	74.6	42.5	16.3	2.0	9.5	4.3	25.4	19.3	4.4	1.8

Divergence of Asset Allocation From Mean

-4%      -2%      Mean      2%      4%

Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited, Cambridge Associates LLC, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., the National Association of Real Estate Investment Trusts, Standard & Poor's, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

The results from the 2023 heat map analysis were strikingly different than the performance story of recent years. Strong performance from PE/VC led to portfolios with the highest private allocations reporting the best returns over much of the last decade. However, as this past year has shown, there are shorter-term periods where market conditions are such that portfolios more heavily allocated to private growth strategies fall toward the bottom end of the peer performance universe. The best example was the aftermath of the dotcom bubble in the early 2000s, which included a three-year stretch where institutions in the bottom quartile of the performance universe reported the highest average PE/VC allocations (Figure 8).

The rolling heat map analysis also illustrates how the differentials in private allocations across peers have grown in recent years. Exceptional returns from PE/VC strategies throughout 2021 led to a significant bump in these allocations. In addition, our surveys over the last several years have consistently shown that the percentage of peers that increased policy targets to PE/VC far outweighs the tiny fraction that lowered their targets. Still, there are some institutions in our universe that have little to no allocation to these strategies. As a result, it has become common to see a wide gap in the allocations of top and bottom performers in the years where the spread between public and private market returns is significant.

**ONE-YEAR ATTRIBUTION.** The implementation of the asset allocation is another important piece to consider when comparing peer returns. Our analysis in Figure 9 estimates how much of peer performance can be attributed to asset allocation structures versus what can be attributed to the implementation of those allocations. For each participating institution, we have calculated a blend of representative asset class indexes that is weighted according to their beginning year asset allocation. This is the amount of return that can be explained by the institution's asset allocation heading into the one-year period.

**FIGURE 8 ROLLING 1-YEAR HEAT MAP: MEAN PE/VC ALLOCATIONS**

Trailing One-Year Periods as of June 30

	Top Quartile	2nd Quartile	3rd Quartile	Bottom Quartile	All E&F
2023	6.8	16.1	22.7	31.6	19.3
2022	27.4	21.6	17.6	9.5	19.0
2021	28.2	16.8	11.7	6.0	15.7
2020	17.8	12.8	11.6	9.3	12.9
2019	18.1	12.4	8.1	6.6	11.3
2018	18.5	10.2	7.6	3.7	10.0
2017	9.6	8.5	11.0	10.5	9.9
2016	13.9	9.6	9.7	6.0	9.8
2015	17.3	10.2	6.8	3.4	9.4
2014	13.5	8.6	7.9	7.2	9.3
2013	8.0	12.3	10.3	8.4	9.7
2012	17.3	11.5	6.5	5.0	10.1
2011	11.4	9.1	8.9	8.9	9.6
2010	7.5	8.3	9.8	9.9	8.9
2009	6.4	7.4	8.9	10.0	8.2
2008	11.3	8.0	5.4	3.9	7.1
2007	11.8	5.4	4.1	2.1	5.9
2006	8.8	6.2	4.6	1.8	5.3
2005	10.1	4.2	4.2	1.4	5.0
2004	5.5	5.3	4.3	4.0	4.8
2003	4.8	4.1	4.2	5.9	4.8
2002	5.1	4.7	5.2	7.1	5.5
2001	4.9	6.5	9.1	10.3	7.7

Source: Endowment and foundation data as reported to Cambridge Associates LLC.

Notes: Performance quartiles are calculated separately for each one-year period. The number of institutions included varies from one period to the next and is smaller in earlier years compared to the present day.

#### CA US ENDOWMENT & FOUNDATION UNIVERSE AT A GLANCE

The Cambridge Associates US endowment and foundation universe includes colleges and universities, cultural and environmental institutions, healthcare institutions, independent schools, and other endowed nonprofit institutions as well as foundations. This report provides asset allocation and return analyses for

**378** US endowments and foundations that participated in our quarterly survey

**\$1.7B** Average market value of participating long-term investment portfolios

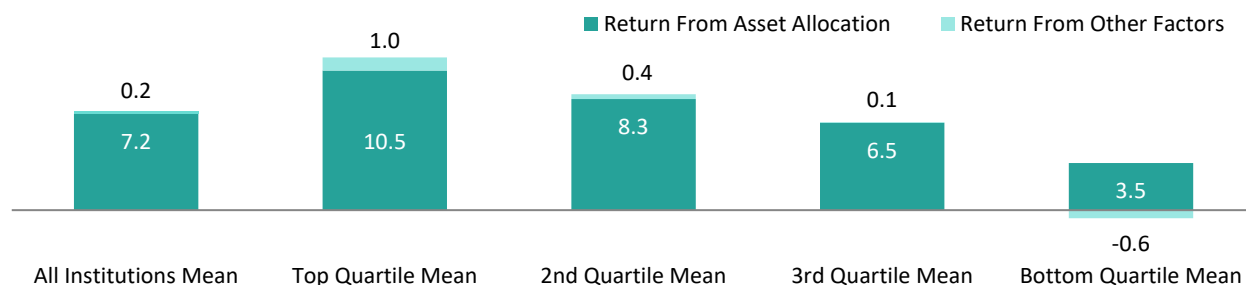
**\$362M** Median value

Returns are reported net of external manager fees for 377 of 378 institutions in this universe. Past Cambridge Associates surveys have shown that approximately 10% to 15% of institutions also deduct investment oversight costs in the net of fee calculation.

## FIGURE 9 1-YR RETURN ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE: US ENDOWMENTS AND FOUNDATIONS

As of June 30, 2023 • Percent (%) • n = 375

### 1-Yr Return Attribution Analysis by Quartile



### Breakdown of Return From Asset Allocation

Asset Class	Mean Beginning Year Asset Allocation	Asset Class Benchmark Return	Contribution to Asset Class Return
US Equity	18.6	19.0	3.5
Global ex US Equity - Developed Mkts	9.3	18.8	1.7
Global Equity	9.0	16.9	1.5
Long/Short Hedge Funds	6.5	7.6	0.5
Absolute Return (ex Distressed)	9.2	3.6	0.3
Non-Venture Private Equity	7.6	3.5	0.2
Cash & Equivalents	4.2	3.6	0.1
Private Oil & Gas/Natural Resources	2.4	4.7	0.1
Public Energy/Natural Resources	0.8	13.6	0.1
Global ex US Equity - Emerging Mkts	4.4	1.7	0.1
Private Credit	1.2	6.3	0.1
Other	0.4	11.4	0.0
Distressed - Private Equity Structure	0.6	3.7	0.0
High Yield Bonds	0.2	9.1	0.0
Distressed - Hedge Fund Structure	1.0	1.6	0.0
Global ex US Bonds	0.0	-2.6	0.0
Inflation-Linked Bonds	0.6	-1.4	0.0
Global Bonds	0.4	-2.5	0.0
Other Private Investments	2.9	0.0	0.0
Public Real Estate	0.4	-3.6	0.0
Private Real Estate	2.1	-1.4	0.0
Commodities	0.4	-9.6	0.0
US Bonds	9.1	-0.9	-0.1
Venture Capital	9.0	-9.8	-1.0

Source: Endowment and foundation data as reported to Cambridge Associates LLC.

Note: Private investment benchmark returns are for the period of 7/1/22 to 3/31/23.

The portion of return that comes from other factors is calculated by subtracting the asset allocation return from the actual total return that the institution earned. This “other” portion of returns is mostly driven by implementation or execution decisions, which can include active management and manager selection. In addition, this other portion of return will account for any decision to modify the asset allocation structure or rebalance the portfolio allocations throughout the course of the one-year period.

Our attribution analysis points to asset allocation being the dominant factor in explaining the dispersion of peer returns for the trailing one-year period. The average



asset allocation return for the top performance quartile was 10.5%, while the average for the bottom quartile was just 3.5%. This differential was far greater than what our model estimated for the return from other factors. Top performers added an average of 1.0% through implementation, which was 160 basis points (bps) higher than the average for the bottom quartile (-0.6%).

The table on the bottom of Figure 9 shows the breakdown of the average asset allocation return of the overall universe. Each asset class's contribution is a function of its benchmark return for the one-year period, as well as the participant group's average allocation to the category. This analysis also accounts for the method that each institution incorporates private investment performance in their one-year return calculation. The positive effect from asset allocation over the past year was largely attributable to the performance of public equity asset classes.

### TRAILING TEN-YEAR RESULTS

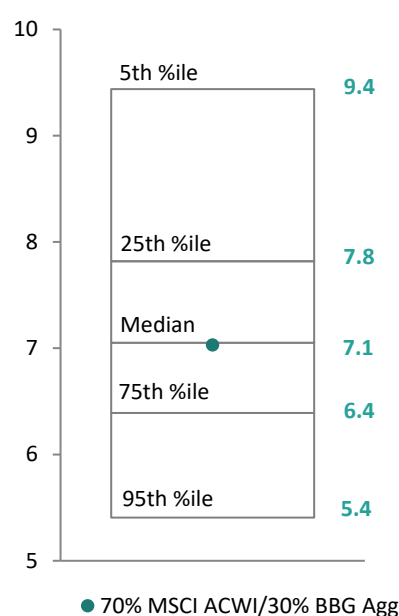
The median trailing ten-year return of 7.1% was just a tick above the simple 70/30 index return of 7.0% (Figure 10). Returns for the E&F universe ranged from 9.4% at the 5th percentile to 5.4% at the 95th percentile. The average PE/VC allocation among respondents more than doubled over the last decade, going from 8% in 2013 to 20% in 2023. While allocations to public equity fluctuated quite a bit over this period, the average allocation in 2023 was slightly higher than it was ten years ago. Each of the other asset classes in Figure 10 saw a decline in allocations over the past decade, with hedge fund strategies experiencing the largest decrease (from 23% to 16%).

**FIGURE 10 10-YR PERFORMANCE AND ASSET ALLOCATION SNAPSHOT**

Percent (%)

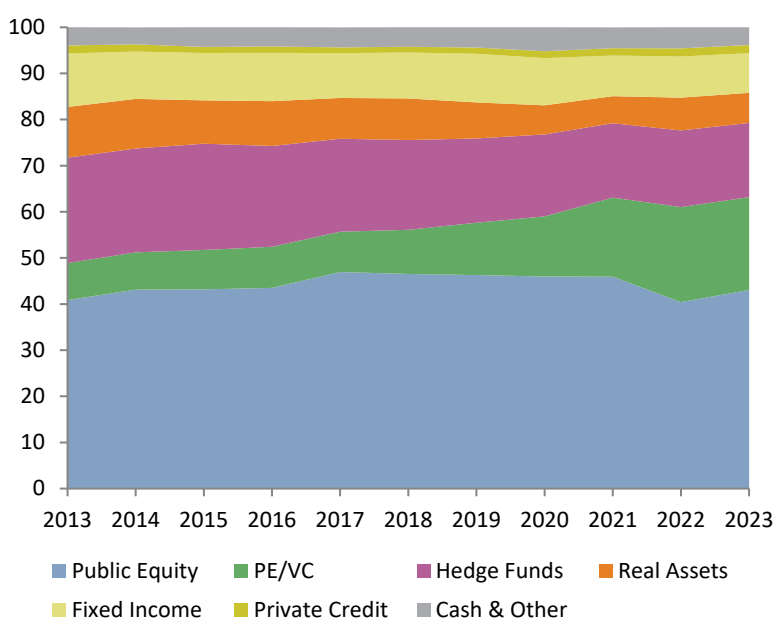
#### Trailing 10-Yr Return

Period Ended June 30, 2023 • n = 348



#### Trend in Mean Average Asset Allocation

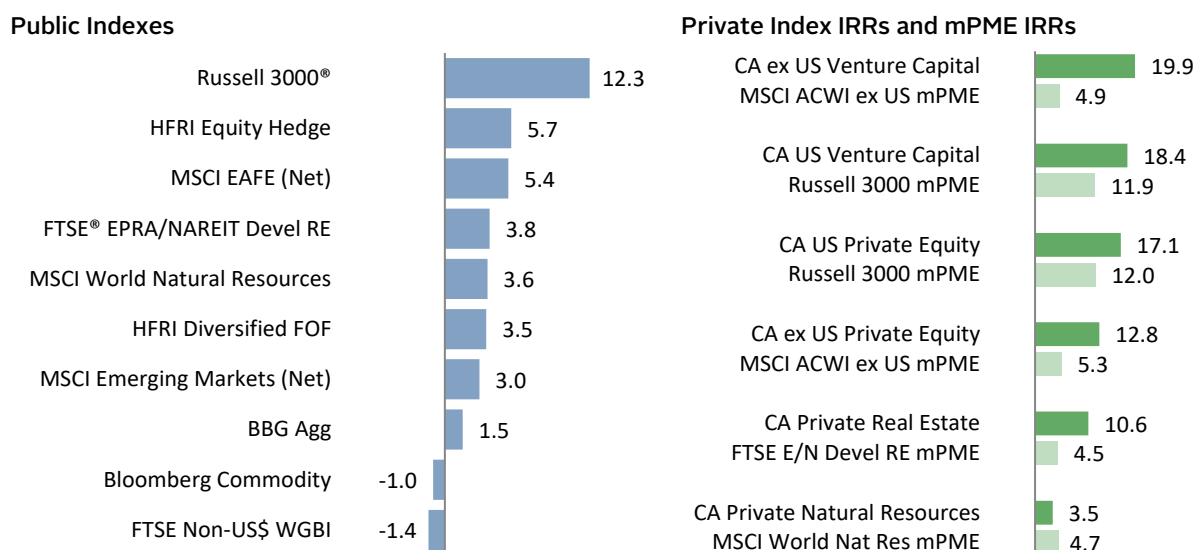
Periods Ended June 30 • n = 244



Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

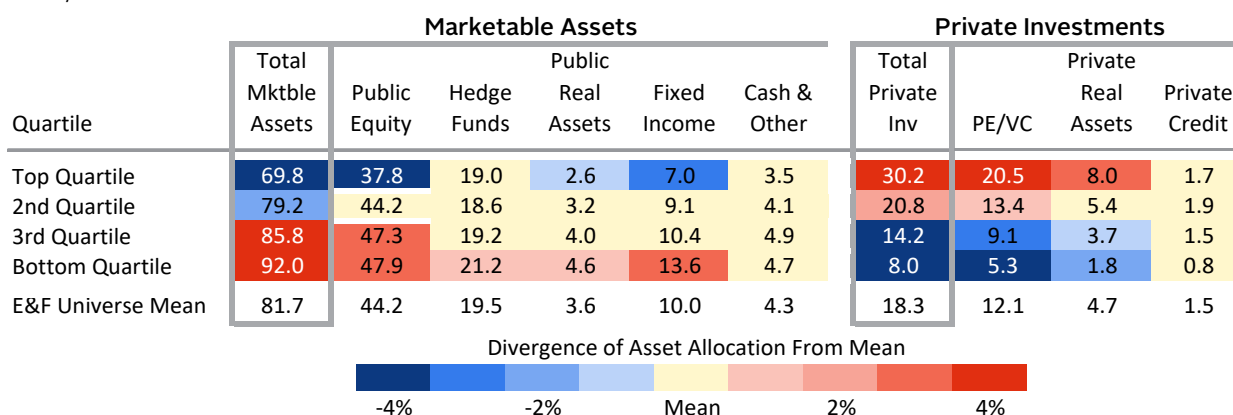
**TEN-YEAR HEAT MAP.** Figure 11 explores the relationship between peer returns and asset allocations for the trailing ten-year period. The participant group is broken down into four quartiles based on the trailing ten-year investment return. Each institution's asset allocation was averaged across the 11 periods ended June 30 that fell from 2013 to 2023. The four quartiles in the heat map represent the average of the institutions within each quartile.

**FIGURE 11 10-YR INDEX RETURNS AND ASSET ALLOCATION OF TOP AND BOTTOM PERFORMERS: US ENDOWMENTS AND FOUNDATIONS**



**Mean Asset Allocation by Performance Quartile: June 30, 2013, to June 30, 2023**

*n = 241*



Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited, Cambridge Associates LLC, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., the National Association of Real Estate Investment Trusts, Standard & Poor's, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Most of the private investment indexes outperformed their mPME benchmarks by significant margins over the past decade. As would be expected, given the market backdrop, the top quartile of performers over this period reported an average allocation to private investments that was considerably higher than the other performance quartiles. The average private investment allocation was 30% for the top quartile of performers over this ten-year period and just 8% for the bottom quartile of performers.

Relatedly, the top quartile's average allocations to public equities (38%) and fixed income (7%) were much lower than that of the bottom quartile, which were 48% and 14%, respectively.

Figure 12 organizes participants into five subgroups based on each institution's trailing ten-year average allocation to total private investments. The median ten-year return for portfolios with an allocation of more than 30% to private investments was 8.6%, approximately 260 bps higher than the median return reported by portfolios with little to no private investment allocation. The distribution of returns for the five subgroups shows a wide range of results, a disclaimer that not all portfolios with the highest private allocations earn top performance. However, these analyses show that allocations to private investments generally are a key factor in a portfolio's relative performance within the overall participant group over the long term.

**FIGURE 12 RANGE OF 10-YR RETURNS BY PRIVATE INVESTMENT ALLOCATION**

As of June 30, 2023 • Percent (%)



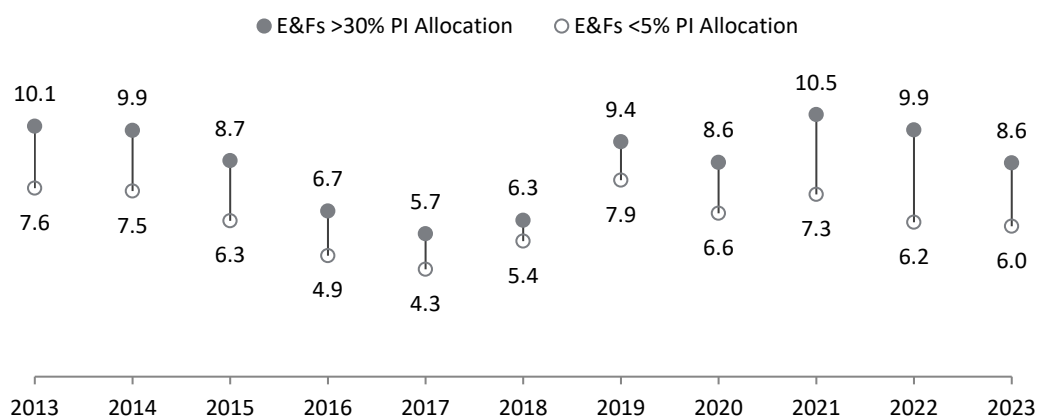
Source: Endowment and foundation data as reported to Cambridge Associates LLC.

Note: Each institution's private investment allocation represents the mean for the 11 June 30 periods from 2013 to 2023.

The relationship between private investment allocations and overall portfolio performance has persisted over long-term periods. The graph in Figure 13 compares the median return for the over 30% cohort versus the median return for the less than 5% cohort on a rolling ten-year basis. The highest allocation group outperformed the lowest allocation group across each of the periods in this analysis. In addition, the spread in median returns was significant across most of the rolling periods. The median ten-year return for the over 30% cohort was at least 200 bps or higher than the lowest allocation group in seven of the 11 periods in this analysis.

**FIGURE 13 MEDIAN ROLLING 10-YEAR RETURNS BY PRIVATE INVESTMENT ALLOCATION**

As of June 30, 2023 • Percent (%)



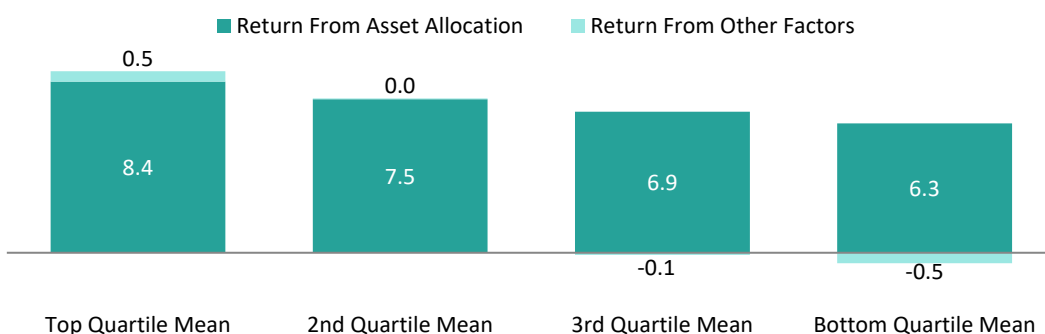
Source: Endowment and foundation data as reported to Cambridge Associates LLC.

Notes: Each institution's private investment allocation represents the mean across the respective ten-year period. For example, the 2023 data represent the average across the 11 June 30 periods from 2013 to 2023.

**TEN-YEAR ATTRIBUTION.** The attribution model also indicates asset allocation factors were the primary reason that top performers separated themselves from the rest of the peer universe over the trailing ten-year period. Figure 14 shows that the top performance quartile had a mean asset allocation return of 8.4% for the trailing ten-year period, approximately 210 bps higher than the bottom performance quartile. The top performance quartile also added another 0.5% on average from other factors, while the bottom performance quartile lost an average of 0.5%.

**FIGURE 14 10-YR ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE: US ENDOWMENTS AND FOUNDATIONS**

As of June 30, 2023 • Percent (%) • n = 241



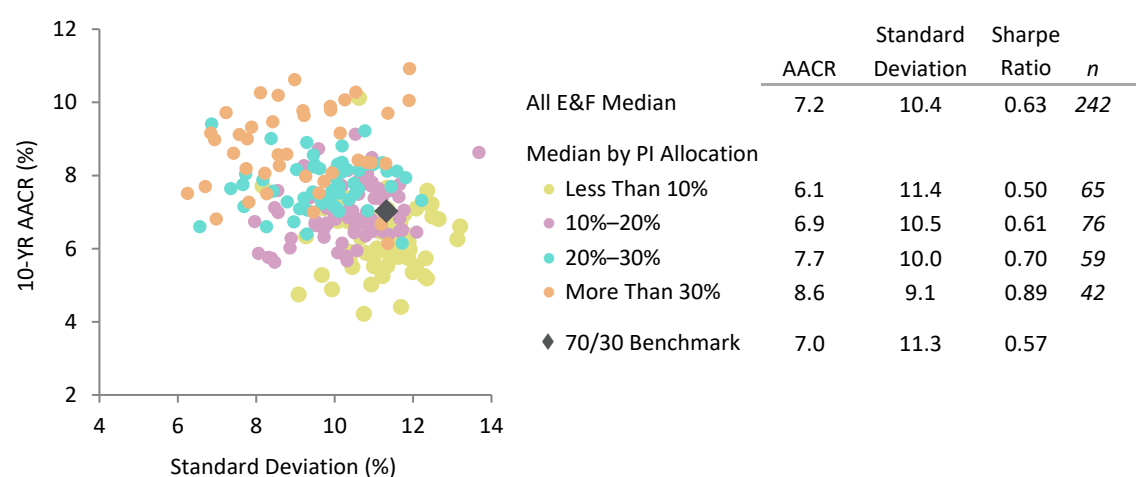
Source: Endowment and foundation data as reported to Cambridge Associates LLC.

**SHARPE RATIO.** Risk-adjusted performance is important to evaluate, as it measures the total return relative to the total amount of risk taken by the portfolio. The most common approach to measuring risk-adjusted performance is by the Sharpe ratio, which shows how much return above the risk-free rate (T-bills) the investor has earned per unit of risk (defined as the standard deviation of returns). The higher the Sharpe ratio, the more the investor has been compensated for each unit of risk taken.

Risk-adjusted performance comparisons can be impacted when portfolios have significant allocations to private investments. The frequency and timing of private investment valuations can lead to a lower standard deviation of returns for these assets. Thus, a portfolio with high allocations to private investments can yield a lower volatility statistic relative to portfolios that have higher public equity allocations. For this reason, Figure 15 shows subcategories based on an institution's private investment allocation.

**FIGURE 15 10-YR STANDARD DEVIATION AND SHARPE RATIO**

Periods Ended June 30, 2023



Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

The median Sharpe ratio was 0.89 for institutions that had an allocation of more than 30% to private investments over the last ten years. This cohort's ratio was higher than that of the other subgroups with smaller private allocations, and the blended global benchmark. While the higher Sharpe ratio was partly a function of a higher median return, it was also attributable to fact that this group had the lowest median standard deviation. ■

## NOTES ON THE DATA

Returns for periods greater than one year are annualized.

The 70/30 simple portfolio benchmarks are calculated assuming rebalancing occurs on the final day of each quarter.

The MSCI Indexes contained in this report are net of dividend taxes for global ex US securities.

Hedge Fund Research data are preliminary for the preceding five months.

Figures 4 and 6: Institutions with no significant private investment allocations (less than 1% of the total portfolio) are reflected in the No PI Allocation category.

Figures 7 and 11: Private investment indexes are pooled horizon IRRs net of fees, expenses, and carried interest, and public indexes are time-weighted returns. Included alongside the private benchmark IRRs are public market returns on a modified public market equivalent basis (mPME). The CA mPME replicates private investment performance under public market conditions and allows for an appropriate comparison of private and public market returns. The mPME analysis evaluates what return would have been earned had the dollars invested in private investments been invested in the public market index instead.

Figure 9: To be consistent with the methodology in which private investment returns are incorporated into the total portfolio composite calculation, private investment benchmark data represent quarterly end-to-end returns that have been compounded.

Figure 15: Analysis includes only institutions that provided underlying quarterly returns and asset allocation for the ten years. Each institution's private investment allocation represents the mean for the 11 June 30 periods from 2013 to 2023. The Global 70/30 benchmark is composed of 70% MSCI ACWI/30% Bloomberg Aggregate Bond Index.

## Appendix: Figures A–E

**FIGURE A DETAILED ASSET ALLOCATION BY PEER GROUP: US ENDOWMENTS AND FOUNDATIONS**

As of June 30, 2023 • Percent (%)

	Colleges & Universities <i>n</i> = 121	Cultural & Environmental 52	Foundations 102	Healthcare 33	Independent Schools 31	Other Nonprofits 39
	Mean	Mean	Mean	Mean	Mean	Mean
<b>Public Equity</b>	<b>41.6</b>	<b>44.2</b>	<b>42.5</b>	<b>44.7</b>	<b>47.9</b>	<b>51.5</b>
Global	8.7	10.0	10.0	6.4	11.0	13.4
US	19.7	20.8	18.9	20.7	23.9	22.6
Global ex US Developed	9.4	10.0	9.1	13.4	9.6	11.6
Emerging Markets	3.8	3.5	4.5	4.2	3.4	3.8
<b>PE/VC</b>	<b>22.3</b>	<b>17.0</b>	<b>21.9</b>	<b>14.5</b>	<b>13.8</b>	<b>10.8</b>
Venture Capital	9.5	7.8	9.9	6.4	4.0	3.7
Non-Venture Private Equity	10.0	6.9	8.4	6.3	6.9	3.9
Other Private Investments	2.8	2.3	3.5	1.9	2.9	3.2
<b>Hedge Funds</b>	<b>15.0</b>	<b>18.4</b>	<b>13.7</b>	<b>16.2</b>	<b>19.6</b>	<b>17.8</b>
Long/Short	5.8	7.3	4.9	6.0	9.6	5.8
Absolute Return	7.8	9.7	7.7	8.6	8.9	9.9
Distressed	1.3	1.3	1.2	1.6	1.1	2.2
<b>Real Assets &amp; ILBs</b>	<b>7.2</b>	<b>4.9</b>	<b>6.6</b>	<b>5.0</b>	<b>4.3</b>	<b>4.7</b>
Private Real Estate	2.7	1.6	2.4	1.7	0.7	1.1
Public Real Estate	0.4	0.3	0.3	0.3	0.2	0.4
Commodities	0.3	0.2	0.3	0.2	0.5	0.1
Inflation Linked-Bonds	0.4	0.6	0.6	0.5	0.8	0.9
Private O&G/Nat Resources	2.9	1.9	2.3	1.6	1.4	1.3
Public Energy/Nat Resources	0.5	0.3	0.7	0.8	0.6	1.0
<b>Bonds</b>	<b>8.2</b>	<b>8.5</b>	<b>10.2</b>	<b>12.7</b>	<b>8.3</b>	<b>10.2</b>
Global	0.1	0.5	0.4	0.2	0.0	0.7
US	7.9	7.9	9.5	12.1	8.1	9.5
Global ex US	0.0	0.0	0.0	0.1	0.0	0.0
High-Yield Bonds	0.2	0.1	0.2	0.2	0.2	0.0
<b>Private Credit</b>	<b>2.1</b>	<b>1.6</b>	<b>1.8</b>	<b>2.1</b>	<b>1.7</b>	<b>0.9</b>
Distressed - Control Oriented	0.7	0.3	0.5	0.6	0.5	0.2
Private Credit ex Distressed	1.3	1.3	1.3	1.4	1.2	0.7
<b>Cash &amp; Equivalents</b>	<b>3.0</b>	<b>5.4</b>	<b>2.9</b>	<b>4.3</b>	<b>3.9</b>	<b>3.9</b>
<b>Other Assets</b>	<b>0.7</b>	<b>0.1</b>	<b>0.4</b>	<b>0.5</b>	<b>0.5</b>	<b>0.2</b>

Source: Endowment and foundation data as reported to Cambridge Associates LLC.

**FIGURE B DETAILED ASSET ALLOCATION BY ASSET SIZE: US ENDOWMENTS AND FOUNDATIONS**

As of June 30, 2023 • Percent (%)

	All Endow & Fdn <i>n</i> = 378	Less Than \$100M 61	\$100M– \$200M 68	\$200M– \$500M 84	\$500M– \$1B 42	\$1B– \$3B 69	More Than \$3B 54
	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Public Equity</b>	<b>44.0</b>	<b>52.4</b>	<b>49.1</b>	<b>46.3</b>	<b>41.1</b>	<b>38.1</b>	<b>34.4</b>
Global	9.7	14.0	9.7	9.8	6.7	8.7	8.2
US	20.5	22.4	24.0	22.7	19.9	17.0	14.5
Global ex US Developed	10.0	12.4	11.8	9.8	10.0	8.8	6.8
Emerging Markets	4.0	3.7	3.6	3.9	4.6	3.6	4.9
<b>PE/VC</b>	<b>18.9</b>	<b>12.2</b>	<b>13.7</b>	<b>17.5</b>	<b>22.4</b>	<b>23.6</b>	<b>26.4</b>
Venture Capital	8.1	5.0	5.1	6.5	9.6	10.1	13.9
Non-Venture Private Equity	7.9	3.9	4.4	7.2	10.0	11.8	11.4
Other Private Investments	2.9	3.2	4.2	3.8	2.8	1.7	1.1
<b>Hedge Funds</b>	<b>15.9</b>	<b>14.1</b>	<b>16.5</b>	<b>15.6</b>	<b>15.0</b>	<b>17.3</b>	<b>16.3</b>
Long/Short	6.1	5.8	5.5	6.1	5.1	6.9	6.9
Absolute Return	8.4	7.7	9.7	8.1	8.2	8.6	8.0
Distressed	1.4	0.6	1.3	1.4	1.8	1.8	1.4
<b>Real Assets &amp; ILBs</b>	<b>6.0</b>	<b>4.2</b>	<b>4.3</b>	<b>4.7</b>	<b>7.0</b>	<b>6.6</b>	<b>10.8</b>
Private Real Estate	2.1	0.7	0.7	1.3	2.9	2.8	5.0
Public Real Estate	0.3	0.5	0.3	0.3	0.5	0.2	0.4
Commodities	0.3	0.2	0.2	0.2	0.3	0.2	0.7
Inflation Linked–Bonds	0.6	0.7	0.9	0.5	0.5	0.3	0.5
Private O&G/Nat Resources	2.2	1.0	1.4	2.0	2.3	2.6	4.1
Public Energy/Nat Resources	0.6	1.0	0.9	0.5	0.4	0.6	0.3
<b>Bonds</b>	<b>9.4</b>	<b>12.2</b>	<b>10.5</b>	<b>9.8</b>	<b>9.3</b>	<b>7.6</b>	<b>6.5</b>
Global	0.3	0.3	0.2	0.1	0.4	0.6	0.1
US	8.9	11.7	10.2	9.7	8.6	6.9	5.7
Global ex US	0.0	0.0	0.0	0.0	0.0	0.0	0.2
High-Yield Bonds	0.2	0.3	0.1	0.0	0.2	0.1	0.5
<b>Private Credit</b>	<b>1.8</b>	<b>1.0</b>	<b>1.3</b>	<b>1.6</b>	<b>2.2</b>	<b>2.5</b>	<b>2.4</b>
Distressed - Control Oriented	0.5	0.2	0.3	0.4	0.8	0.8	0.8
Private Credit ex Distressed	1.2	0.8	1.0	1.2	1.4	1.7	1.6
<b>Cash &amp; Equivalents</b>	<b>3.7</b>	<b>3.4</b>	<b>4.1</b>	<b>3.7</b>	<b>2.9</b>	<b>4.0</b>	<b>2.8</b>
<b>Other Assets</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.8</b>	<b>0.1</b>	<b>0.2</b>	<b>0.5</b>

Source: Endowment and foundation data as reported to Cambridge Associates LLC.



# FIGURE C NOMINAL TOTAL RETURN SUMMARY BY ASSET SIZE: US ENDOWMENTS AND FOUNDATIONS

Periods Ended June 30, 2023 • Percent (%)

	Latest Qtr	Calendar YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>All Endowments &amp; Foundations</b>						
5th %ile	4.4	10.1	12.1	13.3	10.0	9.4
25th %ile	3.4	8.2	9.9	11.2	8.1	7.8
Median	2.9	6.9	7.6	9.5	6.9	7.1
75th %ile	2.3	5.6	5.4	8.0	6.1	6.4
95th %ile	1.3	3.1	1.7	6.2	4.6	5.4
Mean	2.9	6.8	7.4	9.6	7.1	7.2
<i>n</i>	378	377	377	373	368	347
<b>Less Than \$100M</b>						
5th %ile	5.2	11.6	13.6	12.0	8.4	7.9
25th %ile	3.9	9.3	11.3	9.2	6.6	6.8
Median	3.3	7.8	9.0	7.9	6.0	6.3
75th %ile	2.7	6.7	6.3	7.0	5.3	5.5
95th %ile	2.0	5.2	3.2	4.3	3.9	4.9
Mean	3.3	8.0	8.8	8.1	6.0	6.3
<i>n</i>	61	60	60	58	57	49
<b>\$100M–\$200M</b>						
5th %ile	4.2	9.7	12.1	11.2	7.9	7.6
25th %ile	3.7	8.8	10.6	9.8	7.3	7.1
Median	3.1	7.7	8.9	8.8	6.7	6.5
75th %ile	2.6	6.8	7.2	8.0	5.9	6.0
95th %ile	1.8	4.6	4.1	5.5	4.4	5.3
Mean	3.1	7.5	8.6	8.7	6.5	6.6
<i>n</i>	68	68	68	66	65	62
<b>\$200M–\$500M</b>						
5th %ile	4.4	10.4	11.9	12.2	8.9	8.3
25th %ile	3.5	8.6	10.0	10.8	7.8	7.4
Median	3.1	7.4	8.4	9.6	6.8	6.8
75th %ile	2.5	6.4	6.7	8.3	6.1	6.3
95th %ile	1.9	4.6	4.4	6.2	5.0	5.6
Mean	3.0	7.4	8.3	9.5	6.9	6.9
<i>n</i>	84	84	84	84	84	80
<b>\$500M–\$1B</b>						
5th %ile	3.8	9.3	10.8	13.2	9.4	8.3
25th %ile	3.2	7.4	9.1	11.1	8.1	7.8
Median	2.7	6.7	7.4	9.7	7.0	7.2
75th %ile	2.3	5.7	6.0	8.3	6.5	6.8
95th %ile	1.3	4.4	3.2	7.2	5.8	5.8
Mean	2.7	6.5	7.2	10.0	7.4	7.3
<i>n</i>	42	42	42	42	42	42
<b>\$1B–\$3B</b>						
5th %ile	4.1	9.2	11.7	13.3	10.6	9.6
25th %ile	3.1	6.9	8.7	11.9	8.8	8.4
Median	2.6	6.3	7.0	10.7	7.8	7.6
75th %ile	2.0	4.8	4.6	9.1	6.7	7.0
95th %ile	1.3	2.7	1.6	6.8	5.6	6.0
Mean	2.6	6.1	6.7	10.4	7.9	7.7
<i>n</i>	69	69	69	69	68	64
<b>More Than \$3B</b>						
5th %ile	3.5	7.9	9.8	14.7	10.5	10.1
25th %ile	2.7	6.0	6.1	13.1	9.7	9.3
Median	2.1	4.5	3.9	10.8	8.2	8.3
75th %ile	1.4	3.3	1.8	9.2	6.9	7.5
95th %ile	0.1	0.9	-1.1	7.8	5.9	6.5
Mean	2.1	4.7	4.1	11.1	8.3	8.4
<i>n</i>	54	54	54	54	52	50

Source: Endowment and foundation data as reported to Cambridge Associates LLC.

# FIGURE D NOMINAL TOTAL RETURN SUMMARY BY PEER GROUP: US ENDOWMENTS AND FOUNDATIONS

Periods Ended June 30, 2023 • Percent (%)

	Latest Qtr	Calendar YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Colleges &amp; Universities</b>						
5th %ile	4.1	9.5	11.8	13.9	10.1	9.7
25th %ile	3.2	7.6	8.6	12.0	8.8	8.2
Median	2.8	6.5	7.0	10.7	7.8	7.5
75th %ile	2.2	5.3	4.9	9.4	6.8	6.9
95th %ile	1.4	3.0	2.1	7.3	5.9	6.1
Mean	2.7	6.4	6.8	10.7	7.8	7.6
<i>n</i>	121	121	121	119	118	115
<b>Cultural &amp; Environmental</b>						
5th %ile	4.5	10.3	12.2	12.6	9.3	8.9
25th %ile	3.7	8.3	10.8	10.3	7.6	7.6
Median	3.0	7.4	8.2	9.1	6.7	7.0
75th %ile	2.5	6.0	6.2	7.2	5.5	6.2
95th %ile	1.2	1.9	1.8	5.9	4.5	5.4
Mean	2.9	7.0	7.9	9.0	6.8	7.0
<i>n</i>	52	52	52	52	52	50
<b>Foundations</b>						
5th %ile	5.3	11.3	11.9	13.3	10.4	9.9
25th %ile	3.3	7.9	9.4	11.0	8.0	7.8
Median	2.6	6.7	7.2	9.2	6.8	7.1
75th %ile	2.0	5.2	4.3	8.1	6.3	6.4
95th %ile	0.8	2.8	0.3	6.4	4.7	5.6
Mean	2.7	6.6	6.7	9.5	7.2	7.3
<i>n</i>	102	102	102	102	100	91
<b>Healthcare</b>						
5th %ile	4.0	9.3	11.6	12.2	9.4	8.6
25th %ile	3.5	8.7	9.9	9.5	7.0	7.1
Median	2.9	7.1	7.6	8.4	6.3	6.5
75th %ile	2.3	4.9	5.1	7.6	5.6	6.0
95th %ile	1.7	3.5	1.0	6.1	4.9	5.4
Mean	2.9	6.7	7.3	8.7	6.5	6.7
<i>n</i>	33	33	33	32	32	30
<b>Independent Schools</b>						
5th %ile	4.2	9.4	12.3	12.3	8.2	8.0
25th %ile	3.7	8.7	10.6	10.1	7.3	7.0
Median	3.1	7.2	8.7	9.2	6.5	6.8
75th %ile	2.7	6.8	7.0	7.5	6.1	6.2
95th %ile	1.8	5.4	5.1	4.6	3.8	5.3
Mean	3.1	7.5	8.7	8.9	6.7	6.7
<i>n</i>	31	30	30	29	28	27
<b>Other Nonprofits</b>						
5th %ile	4.8	11.3	13.1	10.9	7.7	7.8
25th %ile	3.8	9.1	11.4	9.7	6.9	7.1
Median	3.3	7.9	10.4	8.5	6.1	6.3
75th %ile	2.7	6.3	7.7	7.4	5.2	5.5
95th %ile	1.8	4.6	4.2	6.3	4.5	4.9
Mean	3.3	7.9	9.5	8.6	6.1	6.3
<i>n</i>	39	39	39	39	38	34

Source: Endowment and foundation data as reported to Cambridge Associates LLC.

## FIGURE E PRIVATE INVESTMENT PERFORMANCE REPORTING METHODOLOGIES BY ASSET SIZE AND INSTITUTION TYPE

As of June 30, 2023

### By Asset Size

	Current Basis	Partial Basis	Lagged Basis	Other	No PI Allocation
Less Than \$100M	—	70%	—	—	30%
<i>n</i>		43			18
\$100M–\$200M	—	97%	—	1%	1%
<i>n</i>		66		1	1
\$200M–\$500M	—	93%	1%	—	6%
<i>n</i>		78	1		5
\$500M–\$1B	—	90%	10%	—	—
<i>n</i>		38	4		
\$1B–\$3B	10%	67%	22%	1%	—
<i>n</i>	7	46	15	1	
More Than \$3B	17%	35%	46%	2%	—
<i>n</i>	9	19	25	1	

### By Institution Type

	Current Basis	Partial Basis	Lagged Basis	Other	No PI Allocation
Colleges & Universities	7%	71%	17%	2%	2%
<i>n</i>	9	86	21	2	3
Cultural & Environmental	2%	83%	6%	—	10%
<i>n</i>	1	43	3		5
Foundations	5%	78%	12%	—	5%
<i>n</i>	5	80	12		5
Healthcare	—	70%	24%	—	6%
<i>n</i>		23	8		2
Independent Schools	—	90%	—	3%	6%
<i>n</i>		28		1	2
Other Nonprofits	3%	77%	3%	—	16%
<i>n</i>	1	30	1		7

Source: Endowment and foundation data as reported to Cambridge Associates LLC.

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