

3RD QUARTER • 2022

# ENDOWMENTS QUARTERLY

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

## TRAILING ONE-YEAR RESULTS

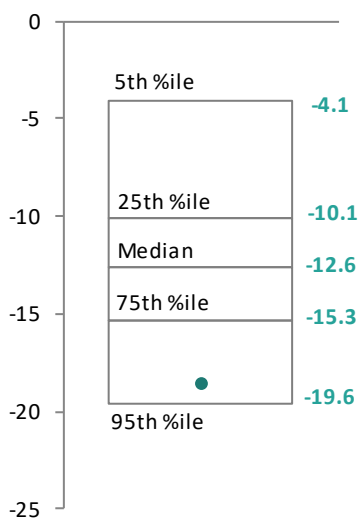
The median return of the endowment and foundation universe was -12.6% for the trailing one-year period (Figure 1) ended September 30, 2022. A blended index return consisting of 70% MSCI ACWI and 30% Bloomberg Aggregate Bond Index earned -18.6% and would have landed within the bottom performance quartile of the respondent group. On average, institutions allocated 40.4% to public equity and 19.7% to private equity/venture capital (PE/VC). Asset size continues to be the key differentiator in the variation of asset allocations across the total participant group. Institutions with portfolios less than \$100 million had the highest mean allocation to public equity (49.4%), while those with portfolios greater than \$3 billion had the highest mean allocation to PE/VC (27.7%).

**FIGURE 1 PERFORMANCE AND ASSET ALLOCATION SNAPSHOT**

Period Ended September 30, 2022 • Percent (%)

### Trailing 1-Yr Return

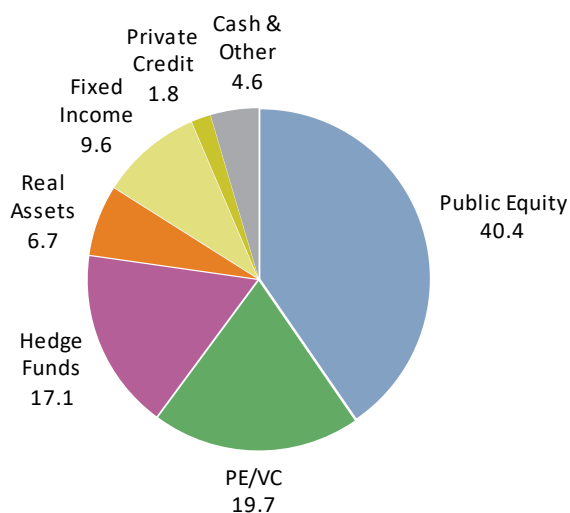
n = 371



● 70% MSCI ACWI/30% BBG Agg

### Mean Average Asset Allocation

n = 369



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.

Figure 2 incorporates performance data that Cambridge Associates (CA) has collected from endowments and foundations for the last 20 years and shows the median one-year return on a rolling basis. There have been dramatic swings in performance across the

past year and a half. The median one-year returns for the first two quarter ends of 2021 were the highest figures calculated across this era. In contrast, the median plunged into negative territory for the one-year period ended June 30, 2022, and dipped even lower for this most recent quarter end. The median return for the one-year period as of September 30 was the lowest return for the peer universe since 2009.

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

Quarters Ended September 30, 2002 – September 30, 2022



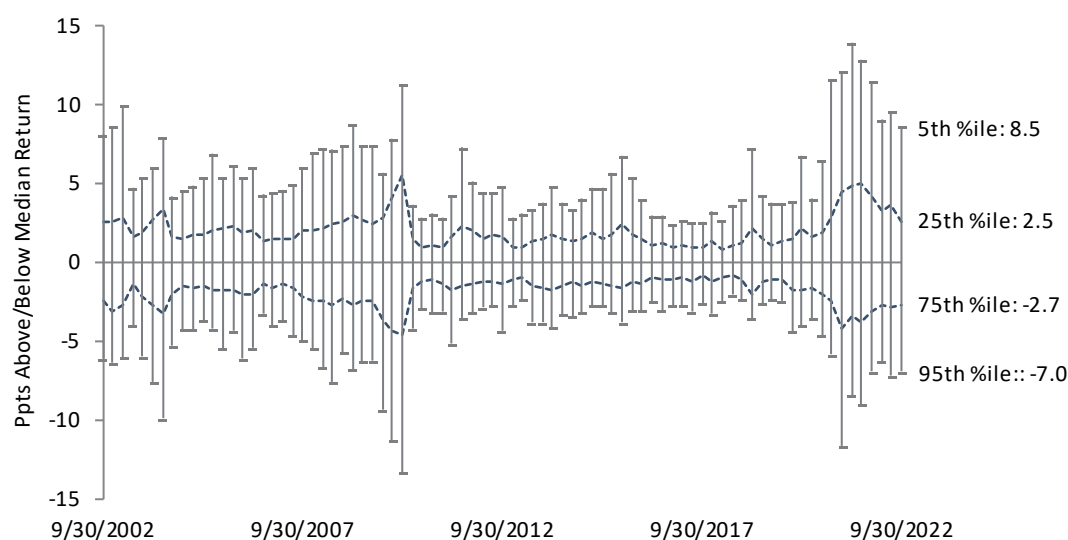
Source: Endowment and foundation data as reported to Cambridge Associates LLC.

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.

The level of dispersion in returns reported across the peer universe continues to be significantly higher than the experiences of the 2010s. 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 (-4.1%) for this most recent one-year period was 8.5 ppts above the median return. The spread between the 5th percentile and the 95th percentile return (-19.6%) was 15.5 ppts.

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

Based on Quarters Ended September 30, 2002 – September 30, 2022



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.

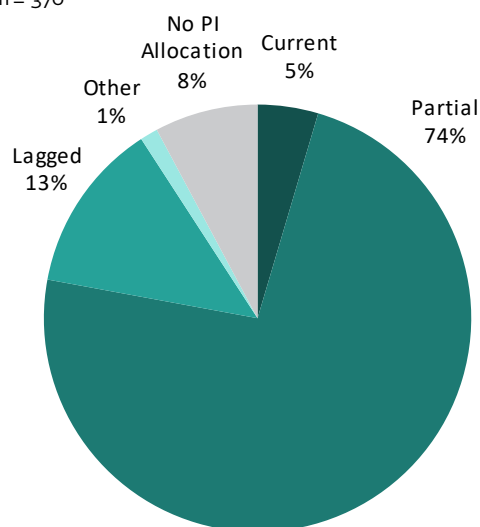
Figure 4 provides an illustration of the most common reporting methodologies used across the peer universe to calculate the one-year return as of September 30. Nearly three-quarters of institutions used what we call the partial basis, meaning only the first three quarters of private returns were incorporated 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 September 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.

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

As of September 30, 2022

**All Endowments & Foundations**

n = 370



**Current Basis**

Trailing one-year period includes private investment performance for October 1, 2021, to September 30, 2022.

Marketable Assets			
4Q21	1Q22	2Q22	3Q22
Private Investments			

**Partial Basis**

Trailing one-year period includes private investment performance for October 1, 2021, to June 30, 2022, and a flat return (0%) for July 1, 2022, to September 30, 2022.

Marketable Assets			
4Q21	1Q22	2Q22	3Q22
Actual Return			0%
Private Investments			

**Lagged Basis**

Trailing one-year period includes private investment performance for July 1, 2021, to June 30, 2022.

Marketable Assets				
3Q21	4Q21	1Q22	2Q22	3Q22
Private Investments				

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

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 13% of participants, private valuations are perpetually lagged by one quarter so that the one-year return represents private investment performance from July 1,

2021, to June 30, 2022. 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 October 1, 2021, to September 30, 2022. Just 5% of institutions used the current basis method when reporting returns for this study. Approximately 8% of the peer universe has little (<1%) or no allocation to private investments.

Figure 5 uses the CA private index returns to demonstrate how the unique attributes of each reporting methodology impact total return calculations for the one year ended September 30. It is what happened in private markets during third quarter 2021 versus third quarter 2022 that is the key point of this discussion. Those using the lagged methodology are the only institutions that incorporated private returns for third quarter 2021, a period in which performance was positive across all strategies. Under the lagged method, a portfolio would calculate a higher return compared to what it would have if it used the partial basis, where private investments are reported with a 0% return for third quarter 2022. Similarly, the lagged method had the comparative advantage over the current basis that captured more muted—perhaps even negative—private returns for third quarter 2022.

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

	One Quarter End-to-End Pooled Return (%)				
	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Preliminary Q3 2022
US Private Equity	6.1	6.0	-0.4	-5.0	NA
Global ex US Private Equity	2.9	3.8	-3.5	-6.1	NA
US Venture Capital	9.5	7.5	-3.9	-9.4	-2.3
Global ex US Venture Capital	2.8	1.0	-2.3	-5.9	-4.0
Private Credit	2.4	2.1	2.0	-1.6	-0.5
Distressed Control - Oriented	7.4	9.3	3.5	-1.1	0.0
Real Estate	7.0	7.5	4.4	-0.5	NA
Natural Resources	4.0	6.8	10.6	3.4	1.7

Lagged Basis
Partial Basis
Current Basis

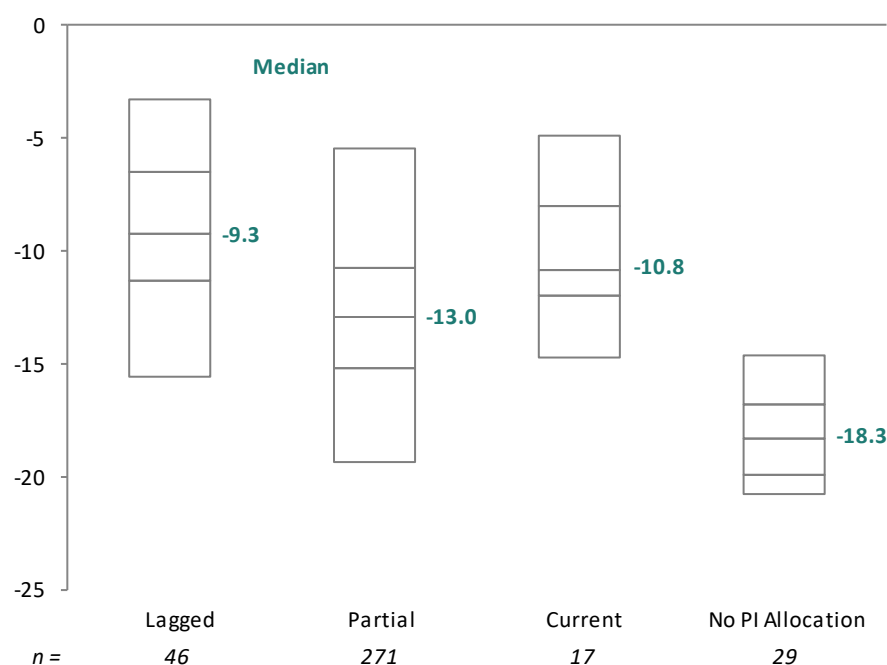
Source: Cambridge Associates LLC.

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

Figure 6 breaks the overall universe out into subgroups based on private reporting methodology. The median trailing one-year return for institutions using the lagged methodology (-9.3%) was higher than the median of the other cohorts. Those with little to no private allocations reported the lowest median return (-18.3%), owing to the fact that public market strategies generally underperformed their private market counterparts over this period.

**FIGURE 6 RANGE OF 1-YR RETURNS BY PRIVATE INVESTMENT REPORTING METHODOLOGY**

As of September 30, 2022 • Percent (%)



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

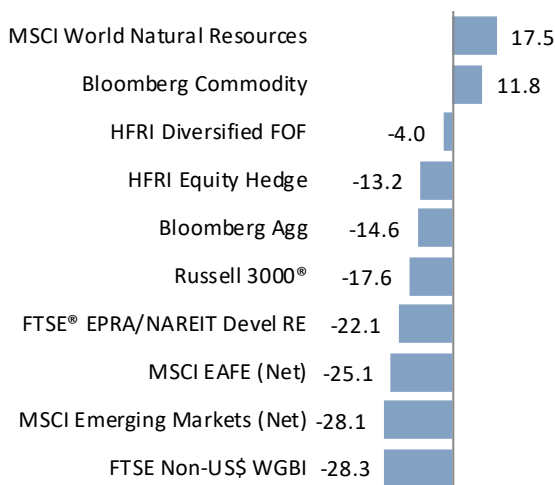
Note: Excluded from this analysis are five institutions that reported reported "Other," which is typically a combination of the Partial and Current methodologies.

**ONE-YEAR ASSET ALLOCATION.** The heat map analysis in Figure 7 explores the relationship between peer asset allocations and performance. The index returns in the top half provide context on the capital market environment for the trailing one-year period. Private investment indexes are pooled horizon internal rates of return (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. Since most participants used the partial methodology to calculate returns for this study, the private investment and mPME indexes are aligned with this methodology and reported for the trailing nine months ended June 30, 2022.

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

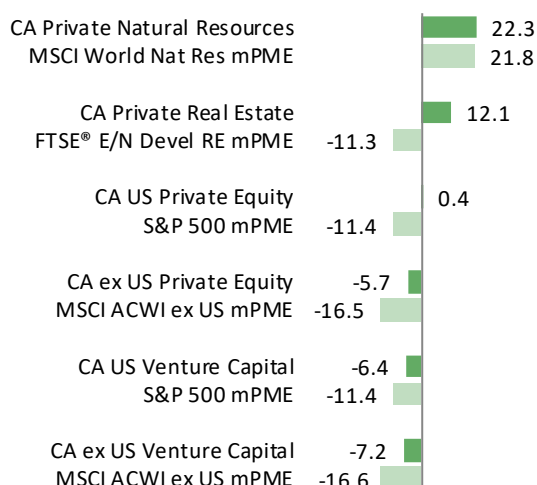
**Public Indexes**

Trailing 1 Year as of 9/30/22



**Private Index IRRs and mPME IRRs**

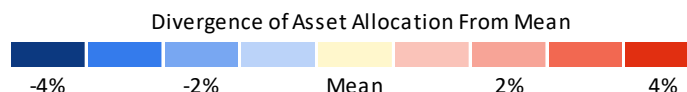
Trailing 9 Months as of 6/30/22



**Mean Asset Allocation by Performance Quartile: September 30, 2021, to September 30, 2022**

*n* = 362

Quartile	Public Equity	PE/VC	Hedge Funds	Real Assets	Fixed Income	Private Credit	Cash	Other
Top Quartile	32.5	25.8	16.7	9.1	7.8	2.5	5.2	0.5
2nd Quartile	40.3	21.0	17.1	7.1	8.6	1.9	3.7	0.3
3rd Quartile	46.0	15.7	17.0	4.9	10.6	1.5	3.4	1.0
Bottom Quartile	55.7	8.1	16.4	3.4	11.9	0.8	3.2	0.5
E&F Universe Mean	43.6	17.6	16.8	6.1	9.7	1.7	3.9	0.6



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.

In the heat map table on the bottom, 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. When we conduct this analysis, we expect the takeaways from the index comparisons to be compatible with the differentials in peer asset allocation data reported in the table. We found connections from a couple of perspectives for this most recent one-year period.

Since most endowments and foundations have the bulk of their portfolios invested in growth-oriented assets, the biggest differentials in peer asset allocations tend to be in the split of public versus private equities. The top quartile of performers reported the highest average allocation to PE/VC in this analysis and the lowest allocations to public equities. The exact opposite was true when looking at average allocations for institutions falling in the bottom performance quartile. These allocation differentials

between the top and bottom performance quartiles are quite large and are not surprising, given that private indexes significantly outperformed the public equity mPMEs over this period.

Another area that stands out from this period's analysis is real assets. Commodities, natural resources, and private real estate produced positive returns in the double digits for this period. The top quartile of performers reported an average allocation to real assets that was notably higher than the other performance quartiles. Since allocations to real assets strategies tend to be much smaller compared to public and private equities, the differentials across the performance quartiles were not nearly as large as what we found in the equity categories. Still, the average real assets allocation of the top performance quartile (9.1%) was nearly triple the average allocation of the bottom performance quartile (3.4%).

#### 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

**371** US endowments and foundations that participated in our quarterly survey  
**\$1.6B** Average market value of participating long-term investment portfolios  
**\$324M** Median value

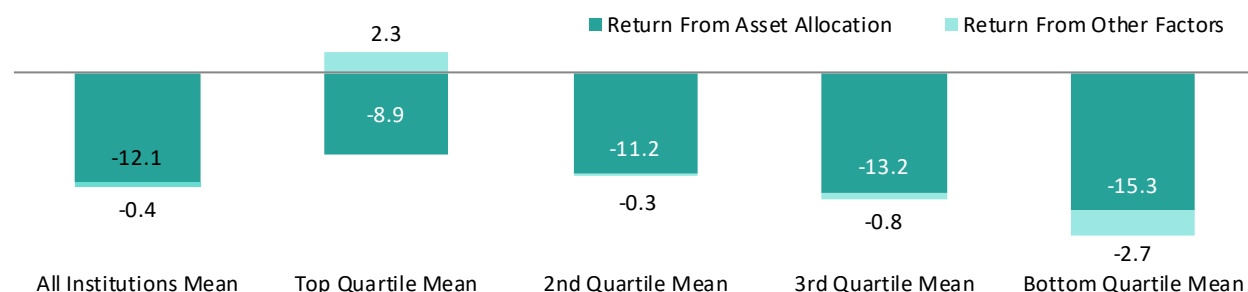
Returns are reported net of external manager fees for 370 of 371 institutions in this universe. Past Cambridge Associates surveys have shown that approximately 10% to 15% of institutions also deduct investment oversight costs in the net of fee calculation.

**ONE-YEAR ATTRIBUTION.** Asset allocation is not the only driver of portfolio performance, as implementation of the allocations is another important piece to consider. Our analysis in Figure 8 estimates how much of peer performance can be attributed to asset allocation structures versus that which 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. The average data for the four performance quartiles show that top performers had asset allocation structures that outperformed bottom performers by significant margins.

**FIGURE 8 1-YR RETURN ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE:  
US ENDOWMENTS AND FOUNDATIONS**

As of September 30, 2022 • Percent (%) • n = 364

**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
Private Oil & Gas / Natural Resources	1.7	22.2	0.4
Private Real Estate	1.8	11.8	0.2
Public Energy / Natural Resources	0.9	17.5	0.1
Non-Venture Private Equity	6.1	0.4	0.1
Distressed-Private Equity Structure	0.5	11.9	0.1
Commodities	0.3	11.8	0.0
Private Credit	1.0	2.5	0.0
Cash & Equivalents	3.7	0.6	0.0
Global ex US Bonds	0.1	-28.3	0.0
Other Private Investments	2.1	-1.6	0.0
High Yield Bonds	0.3	-14.1	0.0
Distressed-Hedge Fund Structure	1.0	-4.3	0.0
Inflation-Linked Bonds	0.5	-11.6	-0.1
Global Bonds	0.4	-22.1	-0.1
Public Real Estate	0.4	-22.1	-0.1
Other	0.7	-18.6	-0.1
Absolute Return (ex Distressed)	8.5	-4.0	-0.3
Venture Capital	7.7	-6.4	-0.3
Long/Short Hedge Funds	7.0	-13.2	-0.9
US Bonds	9.1	-14.6	-1.3
Global ex US Equity-Emerging Mkts	5.0	-28.1	-1.4
Global Equity	10.2	-20.4	-2.1
Global ex US Equity-Developed Mkts	10.5	-25.1	-2.7
US Equity	20.5	-17.6	-3.6

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

Note: Private investment benchmark returns are for the period of 10/1/21 to 6/30/22.

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. The attribution analysis estimates top performers added an average of 230 basis points (bps) through implementation, while, on average, the three other performance quartiles lost value.

The table on the bottom of Figure 8 shows each asset class's contribution to the average asset allocation return of the overall universe. Each category'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 in which each institution incorporates private investment performance in their one-year return calculation. The majority of the positive contributions to the average asset class return came from private natural resources and private real estate. However, these contributions were dwarfed by the sum of the negative contributions from long-only public equities, hedge funds, and fixed income strategies. The average asset allocation return for the overall universe was -12.1% for the trailing one-year period.

### TRAILING TEN-YEAR RESULTS

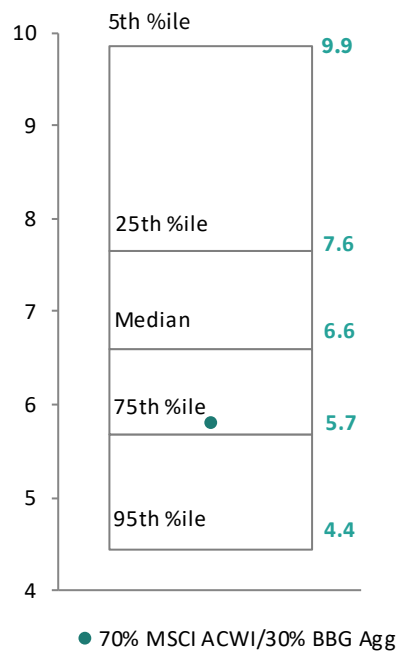
The median trailing ten-year return was 6.6% (Figure 9). Returns ranged from 9.9% at the 5th percentile to 4.4% at the 95th percentile. The simple 70/30 index return earned 5.8% and would have landed near the bottom of the third performance quartile of the respondent group.

**FIGURE 9 10-YR PERFORMANCE AND ASSET ALLOCATION SNAPSHOT**

Percent (%)

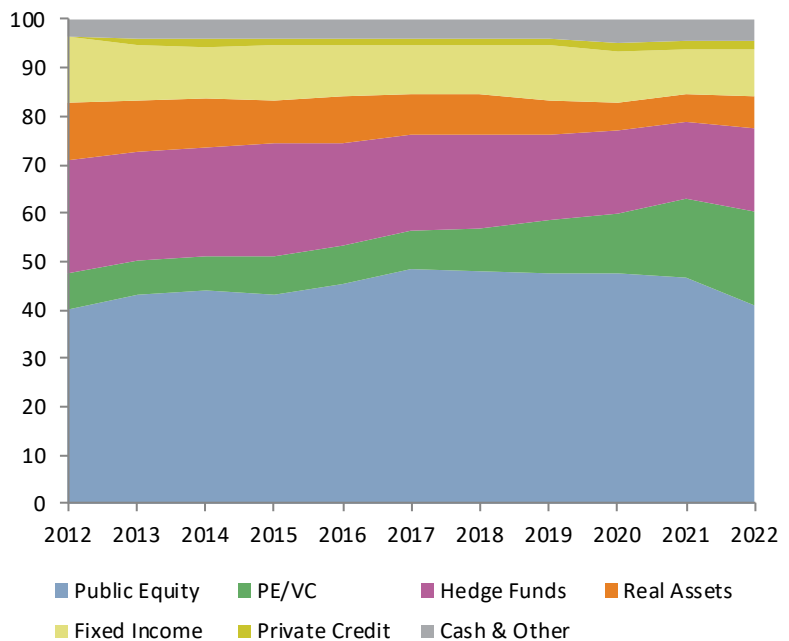
#### Trailing 10-Yr Return

Period Ended September 30, 2022 • n = 339



#### Trend in Mean Average Asset Allocation

Periods Ended September 30 • n = 228



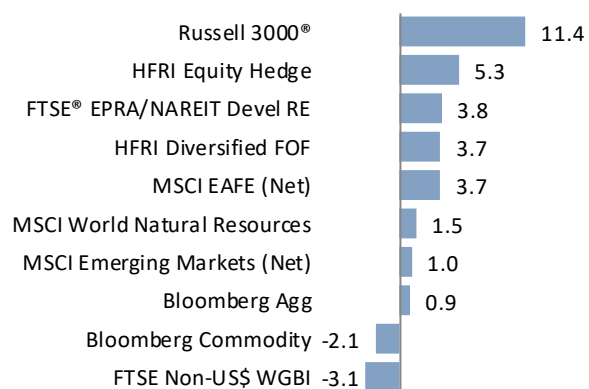
Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

There were several meaningful shifts over the past ten years to the average asset allocation mix for participants. Public equity allocations, which represent the largest piece of the average asset allocation of the respondent group, grew considerably over the first half of the past decade. However, these allocations have since declined, and by 2022, were just 0.7 ppts higher than they were ten years ago. In contrast, PE/VC allocations changed little over the first half of this ten-year snapshot but have grown substantially since. The average PE/VC allocation in 2022 was 12.3 ppts higher than it was in 2012. Elsewhere, average allocations to hedge funds and real assets trended down for much of the past decade before ticking back up slightly over the most recent year.

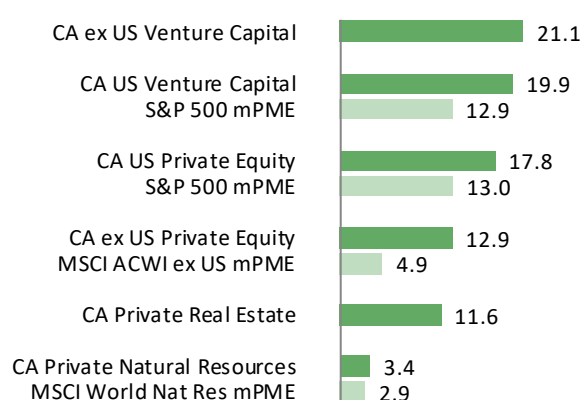
**TEN-YEAR ASSET ALLOCATION.** Figure 10 explores the relationship between peer returns and asset allocations for the trailing ten-year period. In this analysis, the participant group is broken down into four quartiles based on the trailing ten-year investment return. Each institution's asset allocation was averaged across the 11 periods ended September 30 that fell from 2012 to 2022. The four quartiles in the heat map represent the average of the institutions within each quartile.

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

**Public Indexes**



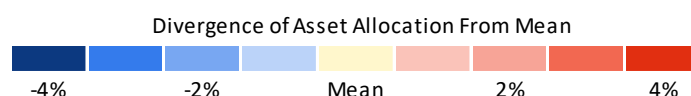
**Private Index IRRs and mPME IRRs**



**Mean Asset Allocation by Performance Quartile: September 30, 2012, to September 30, 2022**

*n* = 227

Quartile	Public Equity	PE/VC	Hedge Funds	Real Assets	Fixed Income	Private Credit	Cash	Other
Top Quartile	38.0	19.0	19.9	10.8	7.6	1.4	3.1	0.2
2nd Quartile	43.7	12.0	20.0	8.8	9.2	1.9	4.2	0.2
3rd Quartile	46.2	7.4	21.8	7.5	11.1	1.2	4.1	0.8
Bottom Quartile	52.1	2.6	18.2	6.7	15.6	0.4	3.9	0.5
E&F Universe Mean	45.0	10.3	20.0	8.4	10.9	1.2	3.8	0.4



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.

Each of the PE/VC indexes outperformed their mPME benchmarks 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 PE/VC that was considerably higher than the other performance quartiles. The average allocation to PE/VC was 19.0% for the top quartile of performers over this ten-year period and just 2.6% for the bottom quartile of performers. In addition, the top quartile's average allocations to public equities (38.0%) and fixed income (7.6%) were significantly lower than that of the bottom quartile, which were 52.1% and 15.6%, respectively.

Figure 11 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 over 30% to private investments was 8.9%, approximately 370 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 ten-year 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. Institutions that benchmark peer performance should consider the subgroup median that aligns with their own private investment allocation as an alternative or complement to the peer medians that they already use.

**FIGURE 11 RANGE OF 10-YR RETURNS BY PRIVATE INVESTMENT ALLOCATION**

As of September 30, 2022 • Percent (%)



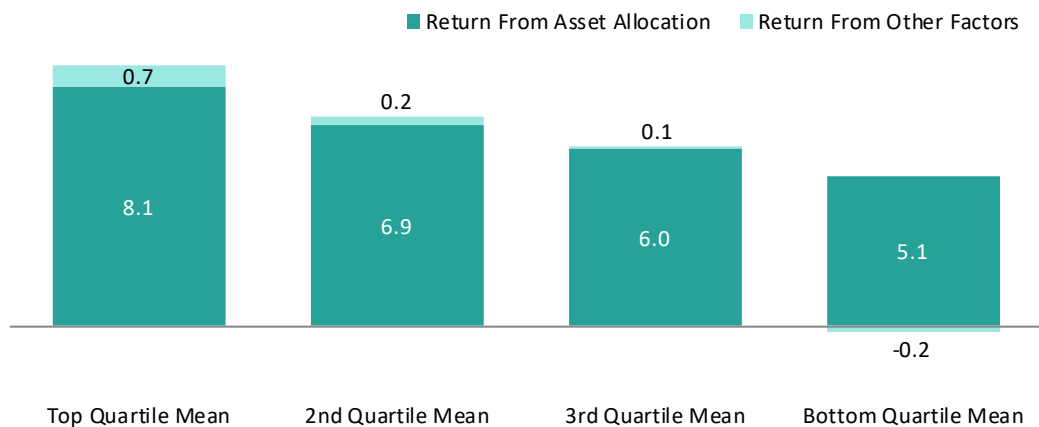
Source: Endowment and foundation data as reported to Cambridge Associates LLC.

Note: Each institution's private investment allocation represents the mean for the 11 September 30 periods from 2012 to 2022.

**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 12 shows that the top performance quartile had a mean asset allocation return of 8.1% for the trailing ten-year period, approximately 300 bps higher than the bottom performance quartile. The top performance quartile also added another 0.7% on average from other factors, while the bottom performance quartile lost an average of 0.2%.

**FIGURE 12 10-YR ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE:  
US ENDOWMENTS AND FOUNDATIONS**

As of September 30, 2022 • Percent (%) • n = 229



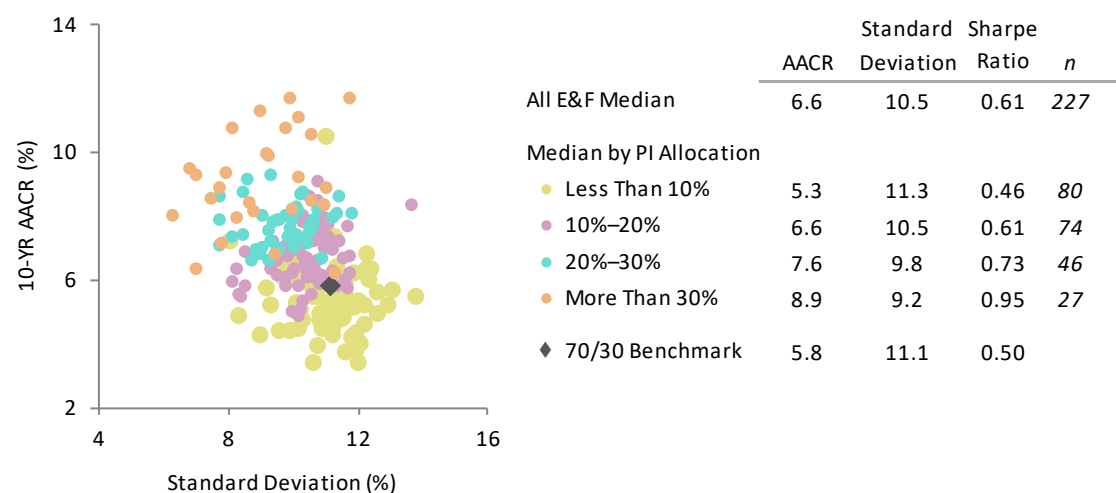
Source: Endowment and foundation data as reported to Cambridge Associates LLC.

**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 13 shows subcategories based on an institution's private investment allocation.

**FIGURE 13 10-YR STANDARD DEVIATION AND SHARPE RATIO**

Periods Ended September 30, 2022



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 0.95 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.

Figure 8: 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 13: 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 September 30 periods from 2012 to 2022. 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 September 30, 2022 • Percent (%)

	Colleges & Universities <i>n</i> = 115	Cultural & Environmental 48	Foundations 102	Healthcare 33	Independent Schools 29	Other Nonprofits 42
	Mean	Mean	Mean	Mean	Mean	Mean
<b>Public Equity</b>	37.6	40.6	39.6	40.6	42.4	48.1
Global	7.3	9.3	8.9	6.9	10.1	12.1
US	17.9	18.9	17.8	19.0	20.8	21.3
Global ex US Developed	8.3	8.9	8.4	10.0	8.2	10.6
Emerging Markets	4.2	3.5	4.5	4.7	3.4	4.1
<b>PE/VC</b>	23.8	18.0	21.7	15.9	15.2	11.8
Venture Capital	11.1	9.2	10.4	7.3	5.4	4.5
Non-Venture Private Equity	10.1	6.3	8.0	7.0	7.1	4.1
Other Private Investments	2.6	2.4	3.4	1.6	2.7	3.3
<b>Hedge Funds</b>	15.8	19.7	14.7	18.2	22.4	19.4
Long/Short	6.2	8.1	5.3	6.8	11.4	6.6
Absolute Return	8.4	10.6	8.5	9.9	10.7	11.5
Distressed	1.1	0.9	0.8	1.5	0.3	1.3
<b>Real Assets &amp; ILBs</b>	8.2	5.2	7.1	6.0	5.3	5.0
Private Real Estate	2.9	1.4	2.6	1.8	0.9	1.3
Public Real Estate	0.5	0.3	0.3	0.5	0.2	0.4
Commodities	0.4	0.3	0.3	0.4	0.7	0.1
Inflation Linked-Bonds	0.4	0.5	0.5	0.8	0.7	0.8
Private O&G/Nat Resources	3.3	1.9	2.6	1.7	1.8	1.4
Public Energy/Nat Resources	0.8	0.6	0.8	0.8	0.9	1.1
<b>Bonds</b>	8.4	9.2	10.1	13.5	6.5	11.3
Global	0.1	0.6	0.4	0.4	0.0	0.8
US	8.0	8.5	9.4	12.7	6.3	10.5
Global ex US	0.0	0.0	0.0	0.1	0.0	0.0
High-Yield Bonds	0.3	0.2	0.2	0.3	0.1	0.0
<b>Private Credit</b>	2.3	1.5	1.8	2.1	2.0	0.9
Distressed - Control Oriented	0.8	0.3	0.6	0.8	0.7	0.2
Private Credit ex Distressed	1.4	1.1	1.3	1.4	1.3	0.6
<b>Cash &amp; Equivalents</b>	3.2	5.7	4.6	3.1	5.4	3.2
<b>Other Assets</b>	0.7	0.1	0.4	0.6	0.8	0.2

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 September 30, 2022 • Percent (%)

	All Endow & Fdn <i>n</i> = 369	Less Than \$100M 70	\$100M– \$200M 72	\$200M– \$500M 70	\$500M– \$1B 49	\$1B– \$3B 58	More Than \$3B 50
	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Public Equity</b>	<b>40.4</b>	<b>49.4</b>	<b>42.8</b>	<b>42.9</b>	<b>38.9</b>	<b>32.8</b>	<b>31.1</b>
Global	8.7	10.3	10.4	8.6	6.4	7.8	7.5
US	18.8	23.4	19.2	21.6	18.4	14.3	13.0
Global ex US Developed	8.8	11.4	9.4	8.5	9.4	7.3	5.7
Emerging Markets	4.2	4.3	3.9	4.1	4.6	3.4	5.0
<b>PE/VC</b>	<b>19.7</b>	<b>11.1</b>	<b>16.9</b>	<b>19.0</b>	<b>22.4</b>	<b>25.3</b>	<b>27.7</b>
Venture Capital	9.1	4.8	7.1	8.3	10.0	11.7	15.4
Non-Venture Private Equity	7.8	3.4	5.0	7.5	9.8	12.3	11.3
Other Private Investments	2.8	3.0	4.8	3.3	2.6	1.3	1.0
<b>Hedge Funds</b>	<b>17.1</b>	<b>16.0</b>	<b>18.7</b>	<b>16.1</b>	<b>15.2</b>	<b>19.7</b>	<b>17.0</b>
Long/Short	6.7	6.6	6.9	6.3	5.5	7.7	7.2
Absolute Return	9.4	9.1	11.1	8.8	8.2	10.2	8.5
Distressed	1.0	0.3	0.6	1.0	1.5	1.7	1.4
<b>Real Assets &amp; ILBs</b>	<b>6.7</b>	<b>4.5</b>	<b>5.0</b>	<b>5.9</b>	<b>7.9</b>	<b>7.3</b>	<b>11.6</b>
Private Real Estate	2.2	0.8	0.8	1.4	3.4	2.8	5.2
Public Real Estate	0.4	0.5	0.3	0.3	0.6	0.3	0.3
Commodities	0.4	0.3	0.3	0.3	0.3	0.2	1.0
Inflation Linked–Bonds	0.6	0.5	0.9	0.6	0.4	0.3	0.5
Private O&G/Nat Resources	2.4	1.1	1.9	2.5	2.5	3.0	4.5
Public Energy/Nat Resources	0.8	1.4	0.9	0.8	0.7	0.7	0.2
<b>Bonds</b>	<b>9.6</b>	<b>12.5</b>	<b>10.6</b>	<b>9.8</b>	<b>9.2</b>	<b>7.6</b>	<b>6.8</b>
Global	0.4	0.6	0.4	0.1	0.3	0.6	0.1
US	9.0	11.7	10.2	9.6	8.7	6.7	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	0.2	0.7
<b>Private Credit</b>	<b>1.8</b>	<b>0.9</b>	<b>1.5</b>	<b>1.8</b>	<b>2.5</b>	<b>2.7</b>	<b>2.0</b>
Distressed - Control Oriented	0.6	0.3	0.4	0.6	0.9	0.9	0.7
Private Credit ex Distressed	1.2	0.6	1.2	1.2	1.6	1.8	1.3
<b>Cash &amp; Equivalents</b>	<b>4.2</b>	<b>5.0</b>	<b>4.2</b>	<b>3.6</b>	<b>3.7</b>	<b>4.5</b>	<b>3.2</b>
<b>Other Assets</b>	<b>0.5</b>	<b>0.6</b>	<b>0.2</b>	<b>0.9</b>	<b>0.2</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 September 30, 2022 • Percent (%)

	Latest Qtr	Calendar YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>All Endowments &amp; Foundations</b>						
5th %ile	-1.5	-7.6	-4.1	12.2	10.3	9.9
25th %ile	-2.7	-12.9	-10.1	8.4	7.2	7.6
Median	-3.6	-15.9	-12.6	6.4	5.6	6.6
75th %ile	-4.4	-18.4	-15.3	4.2	4.2	5.7
95th %ile	-5.8	-21.9	-19.6	1.5	2.5	4.4
Mean	-3.6	-15.5	-12.4	6.5	5.8	6.7
<i>n</i>	371	371	371	369	364	338
<b>Less Than \$100M</b>						
5th %ile	-2.0	-13.2	-8.1	9.4	7.5	7.4
25th %ile	-3.4	-16.3	-13.3	6.1	4.8	6.3
Median	-4.5	-19.1	-16.4	2.9	3.4	5.5
75th %ile	-5.4	-21.4	-18.8	2.0	2.9	4.8
95th %ile	-6.6	-22.9	-20.7	0.3	1.4	3.8
Mean	-4.4	-18.5	-15.6	3.9	3.9	5.6
<i>n</i>	70	70	70	69	68	59
<b>\$100M–\$200M</b>						
5th %ile	-1.7	-9.5	-5.5	8.4	7.3	7.5
25th %ile	-3.0	-15.2	-11.6	6.8	5.9	6.6
Median	-3.8	-16.3	-13.4	5.3	5.0	5.9
75th %ile	-4.7	-18.6	-15.4	4.1	3.9	5.3
95th %ile	-5.5	-21.0	-19.2	1.7	2.7	4.5
Mean	-3.7	-16.4	-13.3	5.4	4.9	5.9
<i>n</i>	72	72	72	72	71	66
<b>\$200M–\$500M</b>						
5th %ile	-2.1	-11.2	-6.2	9.7	8.4	8.2
25th %ile	-3.0	-13.8	-10.6	8.4	6.8	7.2
Median	-3.7	-16.4	-12.6	6.4	5.7	6.3
75th %ile	-4.2	-18.4	-14.9	4.8	4.5	5.8
95th %ile	-5.3	-21.4	-18.8	2.8	3.0	4.7
Mean	-3.6	-16.2	-12.7	6.4	5.7	6.5
<i>n</i>	70	70	70	70	69	68
<b>\$500M–\$1B</b>						
5th %ile	-1.9	-9.8	-5.8	10.6	8.2	8.2
25th %ile	-2.8	-12.9	-10.0	8.1	7.4	7.5
Median	-3.5	-14.7	-11.8	6.8	5.8	7.0
75th %ile	-4.1	-17.9	-14.4	5.3	4.9	6.3
95th %ile	-5.4	-20.4	-18.9	3.2	3.5	5.3
Mean	-3.5	-15.1	-12.0	6.9	6.2	6.9
<i>n</i>	50	50	50	50	50	47
<b>\$1B–\$3B</b>						
5th %ile	-1.0	-7.2	-4.0	13.8	11.5	10.2
25th %ile	-2.3	-11.7	-8.3	9.9	8.2	8.6
Median	-2.9	-14.4	-11.1	7.6	7.0	7.4
75th %ile	-3.5	-16.7	-13.2	5.5	5.2	6.8
95th %ile	-4.8	-18.7	-16.0	2.7	3.7	5.5
Mean	-2.9	-14.0	-10.9	7.9	7.0	7.6
<i>n</i>	58	58	58	58	57	53
<b>More Than \$3B</b>						
5th %ile	-1.0	-4.9	-2.7	15.2	12.4	11.2
25th %ile	-2.2	-8.8	-5.9	11.8	10.1	9.6
Median	-2.9	-11.6	-8.2	8.9	8.0	8.5
75th %ile	-4.1	-13.6	-11.4	6.8	6.3	7.2
95th %ile	-4.9	-17.8	-15.3	4.9	4.8	6.3
Mean	-3.1	-11.3	-8.6	9.5	8.3	8.6
<i>n</i>	51	51	51	50	49	45

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 September 30, 2022 • Percent (%)

	Latest Qtr	Calendar YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Colleges &amp; Universities</b>						
5th %ile	-1.2	-7.3	-3.7	13.8	11.4	10.3
25th %ile	-2.6	-11.8	-8.2	9.6	8.0	8.1
Median	-3.3	-14.8	-11.5	7.5	6.7	7.2
75th %ile	-4.0	-17.1	-14.1	6.0	5.4	6.3
95th %ile	-5.8	-21.1	-18.2	2.5	3.5	5.3
Mean	-3.4	-14.5	-11.2	7.9	6.9	7.4
<i>n</i>	116	116	116	115	115	111
<b>Cultural &amp; Environmental</b>						
5th %ile	-1.1	-6.6	-2.3	12.4	10.3	9.3
25th %ile	-2.3	-13.3	-10.5	7.8	6.3	7.3
Median	-3.5	-16.4	-13.1	5.6	5.1	6.4
75th %ile	-4.5	-19.3	-16.6	3.2	3.3	5.4
95th %ile	-5.4	-22.1	-20.6	2.0	2.7	4.3
Mean	-3.3	-15.9	-12.8	6.0	5.4	6.5
<i>n</i>	49	49	49	49	48	47
<b>Foundations</b>						
5th %ile	-1.4	-8.1	-5.8	12.2	10.0	9.9
25th %ile	-2.9	-13.7	-10.6	8.6	7.3	7.7
Median	-3.6	-16.0	-12.8	6.5	5.6	6.7
75th %ile	-4.6	-18.5	-15.3	4.3	4.4	5.8
95th %ile	-5.8	-21.9	-19.3	1.5	2.1	4.6
Mean	-3.6	-15.6	-12.7	6.6	5.9	6.9
<i>n</i>	102	102	102	102	100	90
<b>Healthcare</b>						
5th %ile	-2.3	-9.4	-6.6	10.4	9.5	8.5
25th %ile	-2.9	-11.6	-9.7	6.7	6.2	6.9
Median	-3.9	-16.3	-13.2	5.3	4.7	6.2
75th %ile	-4.8	-17.7	-15.0	3.7	3.9	5.2
95th %ile	-5.5	-20.4	-18.2	1.8	2.7	4.6
Mean	-3.9	-15.3	-12.4	5.4	5.2	6.2
<i>n</i>	33	33	33	33	32	29
<b>Independent Schools</b>						
5th %ile	-1.6	-7.2	-3.7	9.0	7.9	7.6
25th %ile	-2.7	-14.1	-11.1	7.6	5.9	6.7
Median	-3.4	-17.2	-13.8	5.4	4.7	6.2
75th %ile	-4.2	-19.4	-17.1	3.6	3.9	5.1
95th %ile	-5.2	-21.7	-19.9	1.2	2.3	4.3
Mean	-3.4	-16.3	-13.3	5.4	5.0	6.1
<i>n</i>	29	29	29	29	28	27
<b>Other Nonprofits</b>						
5th %ile	-2.3	-9.9	-5.7	8.0	7.0	7.4
25th %ile	-3.3	-14.5	-11.3	6.9	5.7	6.6
Median	-4.2	-16.5	-13.3	3.8	4.2	5.7
75th %ile	-5.2	-20.2	-17.4	2.4	3.0	4.8
95th %ile	-6.6	-22.4	-19.8	0.8	1.9	3.7
Mean	-4.2	-16.9	-13.8	4.4	4.3	5.6
<i>n</i>	42	42	42	41	41	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 September 30, 2022

### By Asset Size

	Current Basis	Partial Basis	Lagged Basis	Other	No PI Allocation
Less Than \$100M	—	70%	—	—	30%
<i>n</i>		49			21
\$100M–\$200M	—	94%	—	—	6%
<i>n</i>		68			4
\$200M–\$500M	—	94%	1%	—	4%
<i>n</i>		66	1		3
\$500M–\$1B	4%	82%	12%	—	2%
<i>n</i>	2	41	6		1
\$1B–\$3B	14%	62%	22%	2%	—
<i>n</i>	8	36	13	1	
More Than \$3B	14%	24%	55%	8%	—
<i>n</i>	7	12	28	4	

### By Institution Type

	Current Basis	Partial Basis	Lagged Basis	Other	No PI Allocation
Colleges & Universities	9%	65%	20%	3%	3%
<i>n</i>	11	75	23	4	3
Cultural & Environmental	2%	82%	4%	—	12%
<i>n</i>	1	40	2		6
Foundations	4%	75%	13%	1%	8%
<i>n</i>	4	76	13	1	8
Healthcare	—	67%	24%	—	9%
<i>n</i>		22	8		3
Independent Schools	—	97%	—	—	3%
<i>n</i>		28			1
Other Nonprofits	2%	74%	5%	—	16%
<i>n</i>	1	31	2		8

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

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