ANNUAL REVIEW OF ENDOWMENTS

FISCAL YEAR 2019

CAMBRIDGE ASSOCIATES

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Based on Cambridge Associates' (CA) annual survey of our endowment clients, this report summarizes returns, asset allocation, and other investment-related data for 319 institutions for the fiscal year ended June 30, 2019. Included in this year's report are commentary and exhibits spread across six separate sections.

INVESTMENT PORTFOLIO RETURNS highlights performance results for select trailing periods. Larger endowments generally performed better than their smaller counterparts in fiscal year 2019 and over the last decade. This section investigates some of the factors that contributed to the variation of peer returns and what made top performers stand out. Also included are insights into which expenses endowments deduct in their net return calculation.

Performance results of peers can be informative, but they are not necessarily the most effective benchmark for evaluating an endowment's investment performance. Many endowments that underperformed the peer median in this study fared well when evaluated against their policy portfolio benchmark. A new section to this year's report summarizes this and other topics that pertain to **INVESTMENT POLICY**.

ASSET ALLOCATION looks back at changes over the last decade and incorporates data on target asset allocations to lend insights into how institutions are altering their portfolios heading into the future. After considering these observations and trends in uncalled capital commitments, it is evident that endowments are generally increasing their portfolio exposure to private equities.

The number of managers that endowments use for their overall portfolio and within specific asset classes can vary widely. **MANAGER STRUCTURES** explores data on this topic, as well as implementation strategies for traditional assets (i.e., active versus passive management) and alternative assets.

Meanwhile, **ADDITIONS TO AND WITHDRAWALS FROM THE LTIP** contains a set of analyses that look at portfolio inflows and outflows. Included are exhibits on spending policies, the LTIP's support of the operating budgets at instituitons, and liquidity coverage ratios. This section also looks at how target spending rates for market value–based spending rules have changed over the last decade.

Finally, **INVESTMENT OFFICE STAFFING AND GOVERNANCE** examines topics such as the number of personnel in the investment office and investment committee structure. Also included are analyses on how endowments use outside advisors/consultants and who has decision rights for asset allocation policy development and manager selection.

Investment Portfolio Returns

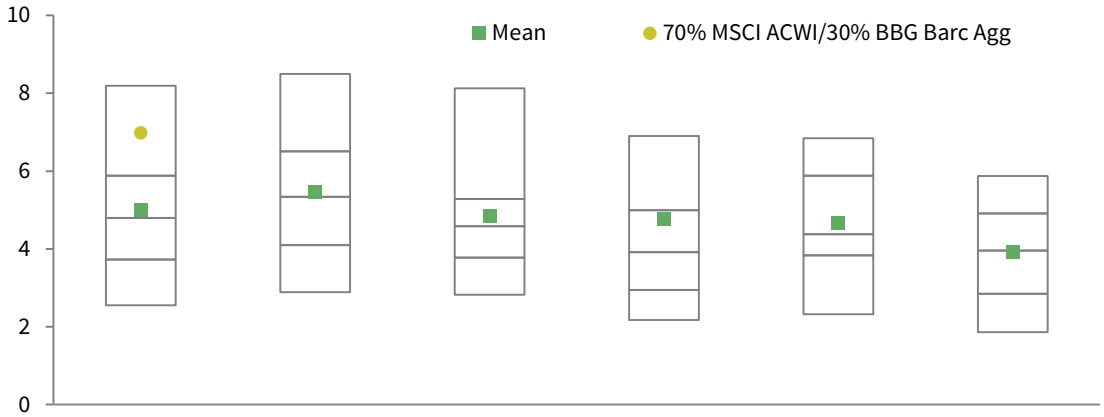
RETURNS IN 2019

Investment performance was mixed across global capital markets in fiscal year 2019. The best returns came from private equities and US public equities once again, whereas performance from global ex US equities and hedge funds were more muted. Commodities and natural resources were among the worst-performing asset classes for the fiscal year. Meanwhile, bonds delivered strong returns with the US aggregate market generally outperforming other geographic regions.

The average return earned by participating endowments was 5.0% in fiscal year 2019. Returns ranged from 8.2% at the 5th percentile to 2.6% at the 95th percentile. Among the various institution types in this study, college and university endowments reported the highest average return (5.5%) for the fiscal year. The average for each of the institution-type peer groups underperformed a simple benchmark consisting of 70% MSCI ACWI and 30% Bloomberg Barclays Aggregate Bond Index, which returned 7.0% (Figure 1).

FIGURE 1 FISCAL YEAR 2019 TOTAL RETURN SUMMARY

Trailing 1-Yr as of June 30, 2019 • Percent (%)



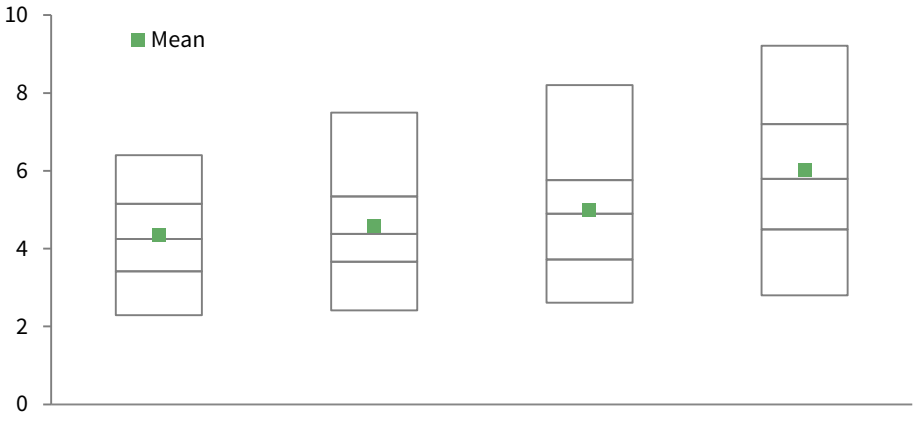
	All Endowments	Colleges & Universities	Cultural & Environmental	Independent Schools	Hospitals	Other Endowments
5th %ile	8.2	8.5	8.1	6.9	6.8	5.9
25th %ile	5.9	6.5	5.3	5.0	5.9	4.9
Median	4.8	5.3	4.6	3.9	4.4	4.0
75th %ile	3.7	4.1	3.8	3.0	3.8	2.8
95th %ile	2.6	2.9	2.8	2.2	2.3	1.9
Mean	5.0	5.5	4.8	4.8	4.7	3.9
n	*319*	*164*	*51*	*29*	*31*	*44*
70/30 Index	7.0					

Sources: Endowment 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.
Note: Total returns for the MSCI ACWI are net of dividend taxes for global ex US securities.

Figure 2 breaks out the overall participant group by the size of the long-term investment portfolio. The average return for institutions with assets greater than $1 billion was 6.0%, considerably higher than that of the other asset size groups. In fact, the mean and median return of the largest endowments was higher than the top-quartile return for each of the other asset size groups.

FIGURE 2 FISCAL YEAR 2019 TOTAL RETURN SUMMARY BY ASSET SIZE

Trailing 1-Yr as of June 30, 2019 • Percent (%)



	Less than $200M	$200M – $500M	$500M – $1B	More than $1B
5th %ile	6.4	7.5	8.2	9.2
25th %ile	5.2	5.3	5.8	7.2
Median	4.3	4.4	4.9	5.8
75th %ile	3.4	3.7	3.7	4.5
95th %ile	2.3	2.4	2.6	2.8
Mean	4.3	4.6	5.0	6.0
n	*105*	*66*	*51*	*97*

Source: Endowment data as reported to Cambridge Associates LLC.

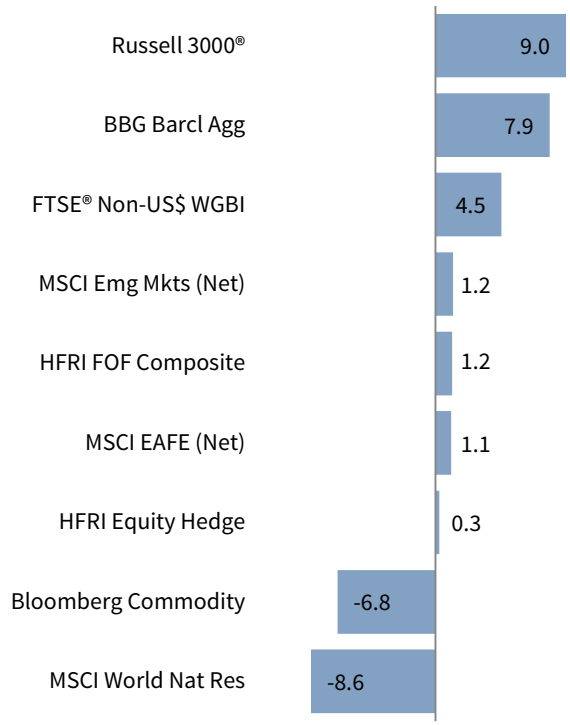
There are many factors that contribute to investor returns and the differentials in returns reported across institutions. These factors include asset allocation policy and the implementation of that policy. In addition, varying performance measurement methodologies may impact the peer performance statistics reported in this study. The commentary and analysis that follow in this section explore these factors and the impact on comparative returns in fiscal year 2019.

ASSET ALLOCATION. Figure 3 looks at the relationship between asset allocation and total portfolio returns in fiscal year 2019. The participant group is broken out into four quartiles based on investment performance, and each endowment's asset allocation was averaged across the beginning and ending points for the trailing one-year period. The four quartiles in the heat map table represent the average asset allocation of the endowments within each quartile. The index returns provide the context of the market environment for the year.

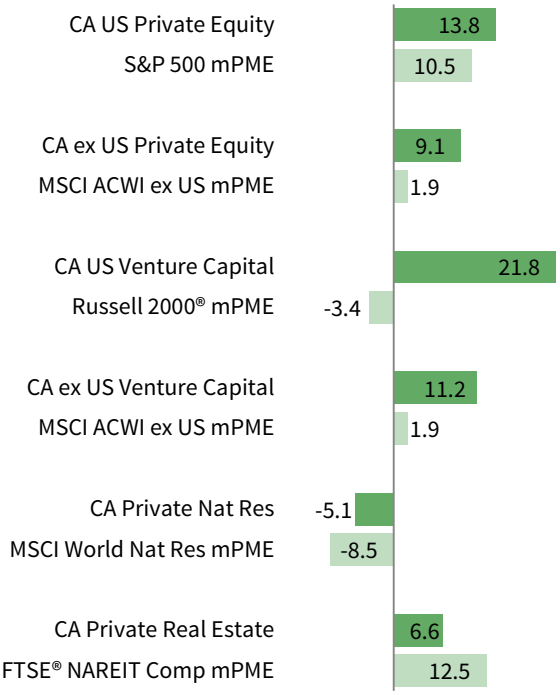
FIGURE 3 1-YR INDEX RETURNS AND ASSET ALLOCATION OF TOP AND BOTTOM PERFORMERS

As of June 30, 2019 • Percent (%)

Public Indexes



Private Index IRRs and mPME IRRs*



Mean Asset Allocation by Performance Quartile: June 30, 2018 to June 30, 2019

Quartile	US Equity	DM ex US Eqty	EM Equity	Bonds	Hedge Funds	Dist Sec	PE/VC	Priv RA	Pub RA & ILBs	Cash	Other
Top Quartile	19.7	12.3	7.3	7.7	17.9	3.2	17.7	7.5	2.8	3.8	0.1
2nd Quartile	22.1	16.7	7.8	9.6	17.6	3.3	10.4	5.7	3.2	2.8	0.7
3rd Quartile	23.5	17.6	7.6	12.0	18.4	2.3	7.1	3.5	3.8	3.6	0.5
Bottom Quartile	23.6	17.9	8.3	11.1	19.6	2.5	4.8	2.8	4.3	4.1	1.0
Endowment Mean	22.2	16.1	7.8	10.1	18.4	2.8	10.1	4.9	3.5	3.6	0.6

Divergence of Asset Allocation from Mean

-4% -2% Mean 2% 4%

* Private indexes are pooled horizon IRRs, net of fees, expenses, and carried interest. The CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns.

Sources: Endowment 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.
Note: Analysis includes data for 307 institutions.

The differences in average asset allocations among the four performance quartiles often correlate with the backdrop of the market environment. In fiscal year 2019, private investment strategies stood out from other asset classes in terms of relative performance. The index of each the major private investment strategies, except for real estate, outperformed its mPME[1] benchmark for the trailing one-year period. As one might expect given this context, institutions in the top quartile reported the highest average allocations to private investments and the lowest allocations to public equities. The opposite was true for institutions in the bottom performance quartile.

The differential in average allocations was largest within the private equity/venture capital (PE/VC) category, where the average for top performers (17.7%) was nearly 13 percentage points (ppts) higher than that of the bottom quartile of performers (4.8%). Figure 4 repeats this analysis for each of the last ten fiscal years and shows how influential PE/VC allocations were on the dispersion of returns in 2019 compared to past years. The divergence in PE/VC allocations between top and bottom performers for this most recent year was one of the largest observed over the last decade.

FIGURE 4 MEAN ALLOCATION TO PE/VC BY PERFORMANCE QUARTILE

Percent (%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1-Yr Index Returns										
Global PE/VC (IRR)	16.3	29.6	2.5	13.9	24.5	12.1	4.4	16.2	19.3	13.5
MSCI ACWI (TWR)	12.0	30.5	-6.2	16.9	23.3	1.0	-3.4	19.2	11.1	6.1
Mean Allocation by Quartile										
Top Quartile	8.0	10.0	16.4	8.3	12.1	16.2	11.7	8.6	17.0	17.7
2nd Quartile	7.5	7.9	11.0	11.2	7.5	8.7	9.5	8.6	9.3	10.4
3rd Quartile	7.5	8.4	5.4	8.6	7.8	5.7	7.7	9.3	5.4	7.1
Bottom Quartile	10.7	8.7	3.4	7.2	5.8	3.2	5.4	8.1	3.4	4.8
Endowment Mean	8.4	8.8	9.1	8.8	8.3	8.5	8.6	8.7	8.8	10.1
n	*223*	*239*	*245*	*256*	*261*	*268*	*283*	*285*	*300*	*307*

Divergence of Asset Allocation from Mean

-4% or lower | -3% | -2% | -1% | Mean | 1% | 2% | 3% | 4% or higher

Sources: Endowment data as reported to Cambridge Associates LLC.
Notes: Performance quartiles are calculated separately for each fiscal year. The mean allocations incorporate each institution's beginning and ending points for the respective fiscal-year period.

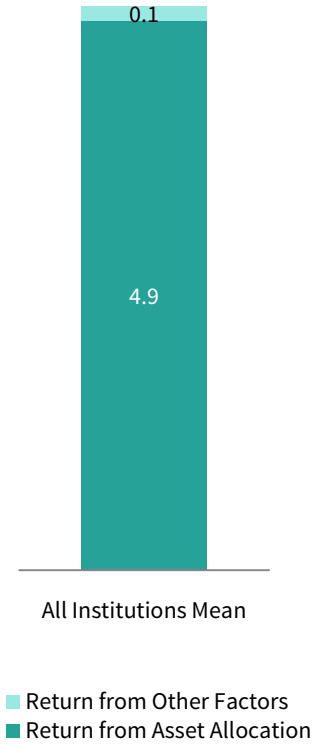
ATTRIBUTION. While asset allocation is a key driver of investment performance, it does not fully account for a portfolio's overall return. The execution or implementation of an asset allocation strategy also contributes to the total returns that portfolios earn. This implementation component can also be used to explain the variation of returns that are reported across different institutions.

1 Under the CA mPME methodology, the public index's share are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME net asset value (NAV) is a function of mPME cash flows and public index returns. The mPME analysis evaluates what return would have been earned had the dollars invested in private investments been invested in the public market instead.

Figure 5 illustrates the results of a basic attribution analysis that considers the contributions of asset allocation and implementation on each endowment's total return. The darker shading on the bar represents the portion of the average endowment return that can be attributed to asset allocation. It is calculated using a blend of representative benchmarks that are weighted according to each endowment's beginning year asset allocation. The lighter shading of the bar is calculated by subtracting the asset allocation return from the total investment return. This other portion of return is principally driven by implementation or execution decisions, which can include effects of active management and manager selection.[2]

2 This model assumes that flows to and from investment managers take place on the last day of the fiscal year. In addition, the analysis uses a standard set of asset class benchmarks that may be more or less representative of the asset allocation policy across different institutions. Therefore, the portion of returns attributed to implementation may also include some residual/unattributable asset allocation effects.

FIGURE 5 ATTRIBUTION ANALYSIS
As of June 30, 2019 • Percent (%)



	Breakdown of Return from Asset Allocation		
Asset Class	Mean Asset Allocation	Asset Class Benchmark Return	Contribution to Asset Class Return
US Equity	21.8	9.0	2.0
Venture Capital	4.0	21.9	0.9
US Bonds	8.8	7.9	0.7
Non-Venture Private Equity	4.3	13.7	0.6
Absolute Return (ex Distressed)	11.4	2.1	0.2
Global ex US Equity: Developed Mkts	16.4	1.1	0.2
Other Private Investments	0.9	15.9	0.1
Private Real Estate	2.0	6.6	0.1
Global ex US Equity: Emerging Mkts	7.8	1.2	0.1
Cash & Equivalents	3.7	2.3	0.1
Public Real Estate	0.5	12.6	0.1
Distressed-Private Equity Structure	1.2	3.8	0.0
Global ex US Bonds: Emerging Mkts	0.4	12.4	0.0
Inflation-Linked Bonds	0.5	4.8	0.0
High-Yield Bonds	0.3	7.5	0.0
Long/Short Hedge Funds	7.5	0.3	0.0
Global ex US Bonds: Developed Mkts	0.4	4.5	0.0
Other	0.5	2.3	0.0
Timber	0.1	3.0	0.0
Distressed-Hedge Fund Structure	1.6	0.2	0.0
Commodities	0.5	-6.8	0.0
Private Oil & Gas/Natural Resources	2.8	-5.1	-0.1
Public Energy/Natural Resources	2.5	-8.6	-0.2

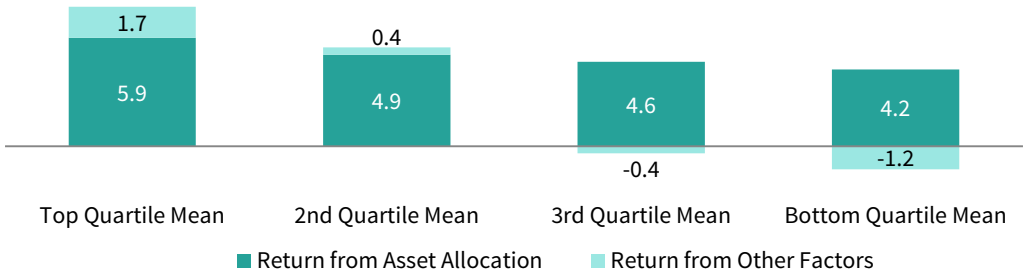
Sources: Endowment data as reported to Cambridge Associates LLC. Index data provided by Bloomberg Index Services Limited, BofA Merrill Lynch, Cambridge Associates LLC, Frank Russell Company, FTSE Fixed Income LLC, FTSE International Limited, Hedge Fund Research, Inc., J.P. Morgan Securities, Inc., MSCI Inc., National Association of Real Estate Investment Trusts, and the National Council of Real Estate Investment Fiduciaries. MSCI data provided "as is" without any express or implied warranties.
Notes: Includes data for 307 institutions that provided beginning fiscal year asset allocation. Mean asset allocation is as of June 30, 2018.
The sum of the contribution to asset class return for all categories in the table equals the amount of the total return that was explained by asset allocation. To be consistent with the methodology in which private investment returns are incorporated into the total portfolio composite calculation, private investment benchmark returns are linked quarterly horizon returns.

An endowment's asset allocation usually explains most of the total return that it earns. For fiscal year 2019, the average asset allocation return among participating endowments was 4.9%, which accounted for nearly all of the average total portfolio return reported by the peer group. Each asset classes' contribution to the average asset class return is a function of its benchmark return as well as the participant group's average allocation to the category. US equities, which returned 9.0% for the fiscal year and had the highest average allocation among the detailed asset classes, had the largest contribution to the average asset class return in this analysis. Venture capital, non-venture private equity, and US bonds also made significant positive contributions to performance for the fiscal year. The effects of implementation were positive for most endowments over this same period, with the analysis estimating an average implementation return of 0.1%.

While asset allocation explained most of the total returns that institutions earned in fiscal year 2019, it did not explain most of the relative performance among the institutions in this study. Figure 6 provides a breakdown of the attribution data for the four performance quartiles of the overall respondent group. The top performance quartile had an average asset allocation return of 5.9%, approximately 170 basis points (bps) more than the average for the bottom performance quartile. The model estimates that there was an even a wider gap between the top and bottom performance quartiles when it came to the performance impact of implementation decisions. On average, the top quartile of performers added 170 bps in performance through implementation, while the bottom quartile lost 120 bps.

FIGURE 6 ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE

Trailing 1-Yr Return • As of June 30, 2019 • Percent (%)



Source: Endowment data as reported to Cambridge Associates LLC.

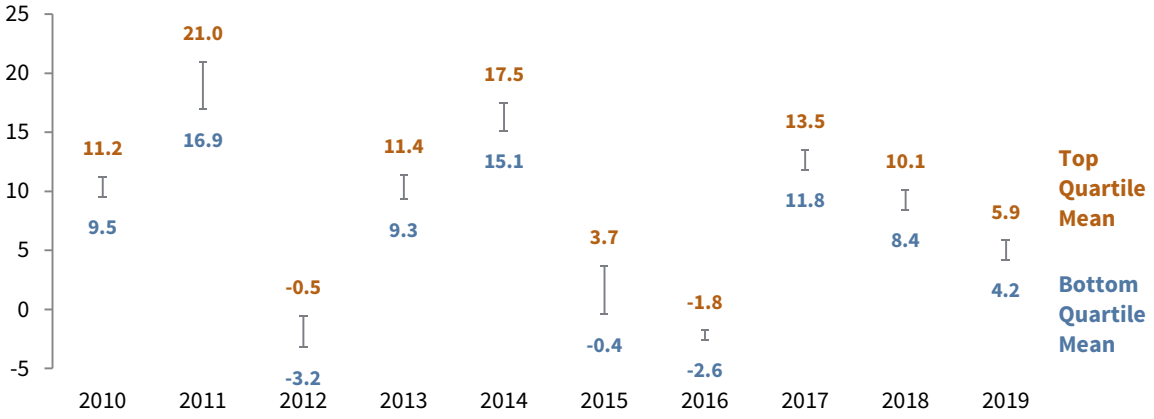
Note: Includes data for 307 institutions that provided beginning fiscal year asset allocation.

Figure 7 shows the results of this attribution analysis for each of the last ten fiscal years. This historical analysis shows a similar relationship between the returns of the top and bottom quartile of performers. While the effects of both asset allocation and implementation help explain differentials in peer returns, the implementation return explained a majority of the difference in most years. Compared to the average asset allocation returns, the differential in implementation returns between the top and bottom performers was larger in eight of the last ten years.

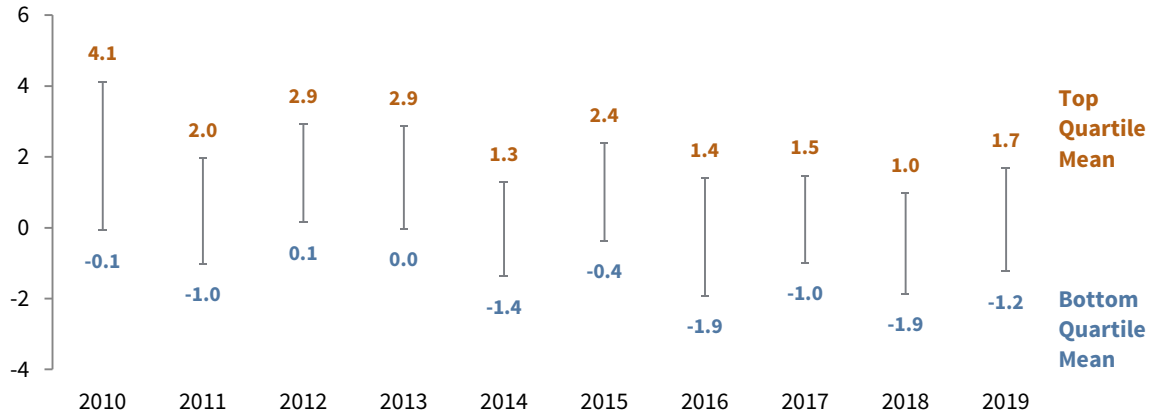
FIGURE 7 ANNUAL ATTRIBUTION ANALYSIS: 2010–19

Based on Trailing 1-Yr Returns as of June 30

Mean Asset Allocation Return: Top Quartile vs Bottom Quartile



Mean Implementation Return: Top Quartile vs Bottom Quartile



Source: Endowment data as reported to Cambridge Associates LLC.

Note: Performance quartiles are calculated separately for each fiscal year.

ASSET CLASS RETURNS. Data on asset class returns of participating endowments are displayed in Figures 8 through 11. The marketable asset class returns are reported as time-weighted returns, and the private investment data are horizon internal rates of return.[3] Median data for the four asset size groups and the various institutions types are included for each of the asset class categories for fiscal year 2019.

3 A time-weighted return (TWR) captures the total return earned over time on the initial investment and eliminates the impact of future cash flows. TWRs are appropriate where the investor controls the timing of cash flows. An internal rate of return (IRR) extracts a return from a cash flow stream composed of the beginning NAV for the time horizon, all inflows and outflows within the period, and the final NAV of the period. IRRs are more appropriate for investments where the fund managers control the decisions of when to call and return capital.

FIGURE 8 DISPERSION OF PARTICIPANTS' ASSET CLASS RETURNS: MARKETABLE INVESTMENTS

Trailing 1-Yr as of June 30, 2019 • Percent (%)

	Public Equity[1]	Global Equity[2]	US Equity	DM ex US Equity	EM Equity	Bonds	Hedge Funds	Public Real Assets[3]	Commodities and Natural Resources	Public Real Estate
All Endowments										
5th Percentile	7.3	13.9	12.3	3.8	6.3	9.1	6.8	6.4	3.5	13.3
25th Percentile	5.2	9.2	10.8	1.0	3.4	7.5	4.0	0.6	-1.9	10.7
Median	4.3	5.8	9.3	-1.1	1.5	6.6	2.6	-3.8	-6.1	8.7
75th Percentile	3.2	1.6	7.5	-2.5	-0.6	5.3	1.1	-7.3	-13.6	5.0
95th Percentile	1.6	-5.5	4.0	-4.8	-2.4	2.9	-1.6	-25.9	-31.1	-0.5
Mean	4.3	5.6	8.9	-0.7	1.6	6.3	2.6	-5.5	-9.4	8.4
n	*250*	*178*	*249*	*241*	*248*	*249*	*249*	*169*	*172*	*62*
Median by Asset Size										
Less than $200M	4.4	5.8	9.6	-0.4	1.7	6.4	2.1	-3.3	-6.0	8.7
n	*94*	*68*	*94*	*91*	*94*	*94*	*92*	*71*	*69*	*18*
$200M – $500M	4.4	4.1	10.0	-1.2	1.7	7.1	2.6	-3.6	-5.6	8.7
n	*59*	*45*	*60*	*59*	*60*	*58*	*58*	*49*	*47*	*9*
$500M – $1B	3.8	5.6	9.2	-1.1	0.7	6.4	2.7	-3.9	-8.1	8.7
n	*41*	*25*	*41*	*41*	*40*	*42*	*44*	*25*	*24*	*14*
More than $1B	4.2	7.5	7.9	-1.5	0.8	6.7	3.7	-4.7	-11.3	8.7
n	*56*	*40*	*54*	*50*	*54*	*55*	*55*	*24*	*32*	*21*
Median by Institution Type										
Colleges & Universities	4.4	5.4	9.2	-1.2	0.9	6.7	2.7	-2.9	-6.0	8.9
n	*127*	*82*	*125*	*120*	*124*	*129*	*129*	*79*	*83*	*37*
Cultural & Environmental	4.4	7.0	10.2	-1.3	2.7	6.5	2.9	-2.0	-4.8	8.7
n	*46*	*31*	*46*	*44*	*45*	*44*	*43*	*31*	*31*	*7*
Independent Schools	3.9	4.8	10.6	-1.6	1.5	6.1	3.6	-6.4	-6.7	3.2
n	*27*	*25*	*27*	*26*	*27*	*25*	*27*	*20*	*19*	*1*
Hospitals	3.6	7.5	9.1	-0.6	2.3	7.1	1.1	-2.1	-7.5	7.0
n	*14*	*11*	*16*	*16*	*16*	*15*	*15*	*13*	*13*	*8*
Other Endowments	3.9	5.3	9.2	-0.3	0.8	6.5	2.1	-4.3	-6.8	7.8
n	*36*	*29*	*35*	*35*	*36*	*36*	*35*	*26*	*26*	*9*

Source: Endowment data as reported to Cambridge Associates LLC.

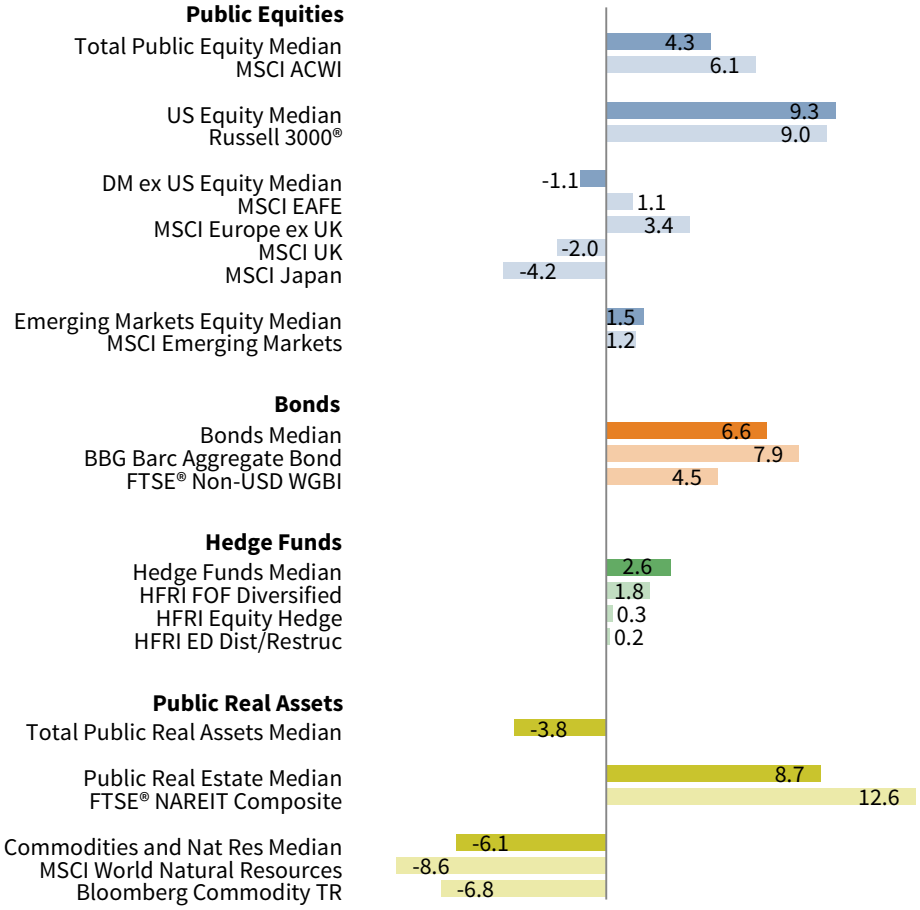
Notes: Public equity is a composite of global equity, US equity, developed markets ex US equity, and emerging markets equity. Global equity includes only investment vehicles that have a mandate to invest in US and international markets. Public real assets is a composite of public real estate, commodities and natural resources, and inflation-linked bonds.

In public equities, the median total public equity composite return for fiscal year 2019 was just 4.3%, which was 180 bps lower than the return of the MSCI ACWI (Figure 9). When looking across the geographic regions, much of this underperformance can be attributed to global ex US equities, where the median return of -1.1% was significantly lower than that of the MSCI EAFE Index (1.1%). The two countries with the largest

weightings in the index, Japan and the United Kingdom, produced negative returns in USD terms for the fiscal year. Since our survey's asset allocation framework does not drill down to the country level, it is unknown how much of the underperformance in global ex US equity developed equities was attributable to an overweight to these countries.

FIGURE 9 MEDIAN MARKETABLE ASSET CLASS RETURNS VS INDEX RETURNS

Trailing 1-Yr as of June 30, 2019 • Percent (%)



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

For private investments, there is typically a wide range of composite returns reported across participating endowments. The return distribution in these categories is somewhat illustrative of the J-curve effect, as returns in the bottom end of the distribution tend to come from endowments with low private investment allocations and presumably less mature private programs. In addition, private investment funds have also exhibited large variations in returns even when comparing funds of the same vintage year, which underscores the importance of manager selection within these asset classes.

Endowments greater than $1 billion reported a total private equity composite IRR of 19.2%, which was considerably higher than that of the other asset size groups (Figure 10). PE/VC comprises a substantial portion of the overall portfolio for these larger endowments,[4] and the superior performance earned in private equity was a key factor in the outperformance of large endowments at the total portfolio level.

4 As displayed in Figure 31, the combined average allocation to PE/VC was 18.0% at the end of the fiscal year for endowments greater than $1 billion.

FIGURE 10 DISPERSION OF PARTICIPANTS' ASSET CLASS RETURNS: PRIVATE INVESTMENTS

Trailing 1-Yr as of June 30, 2019 • Percent (%)

	Private Equity[1]	Non-Venture Private Equity[2]	Venture Capital	Private Real Assets[3]	Private Real Estate	Private Natural Resources
All Endowments						
5th Percentile	30.8	30.0	37.0	14.6	25.1	11.5
25th Percentile	19.4	15.2	27.9	5.6	11.0	2.0
Median	15.6	10.5	23.1	-0.2	6.6	-4.1
75th Percentile	9.6	6.4	13.0	-5.6	0.5	-9.9
95th Percentile	1.1	-1.0	-3.3	-19.4	-12.5	-21.0
Mean	15.2	11.5	21.5	-0.1	6.7	-4.0
n	*227*	*222*	*195*	*194*	*174*	*191*
Median by Asset Size						
Less than $200M	14.1	9.3	23.2	1.3	6.0	-4.0
n	*71*	*70*	*53*	*56*	*34*	*49*
$200M – $500M	14.4	10.3	21.2	-1.3	4.2	-3.6
n	*61*	*61*	*53*	*54*	*44*	*50*
$500M – $1B	15.6	10.5	23.9	-1.3	6.5	-4.5
n	*41*	*39*	*36*	*40*	*39*	*40*
More than $1B	19.2	14.4	23.7	1.4	7.1	-4.3
n	*54*	*52*	*53*	*44*	*57*	*52*
Median by Institution Type						
Colleges & Universities	16.3	12.2	23.6	1.0	6.6	-3.7
n	*116*	*114*	*107*	*103*	*105*	*107*
Cultural & Environmental	12.2	8.9	19.9	-1.1	9.5	-4.1
n	*41*	*39*	*33*	*32*	*29*	*31*
Independent Schools	14.2	9.9	23.2	-3.9	5.6	-4.0
n	*26*	*26*	*22*	*22*	*13*	*19*
Hospitals	14.7	11.1	21.3	1.3	7.6	0.5
n	*16*	*17*	*13*	*15*	*15*	*12*
Other Endowments	16.2	10.7	23.0	-2.2	2.9	-9.0
n	*28*	*26*	*20*	*22*	*12*	*22*

Source: Endowment data as reported to Cambridge Associates LLC.

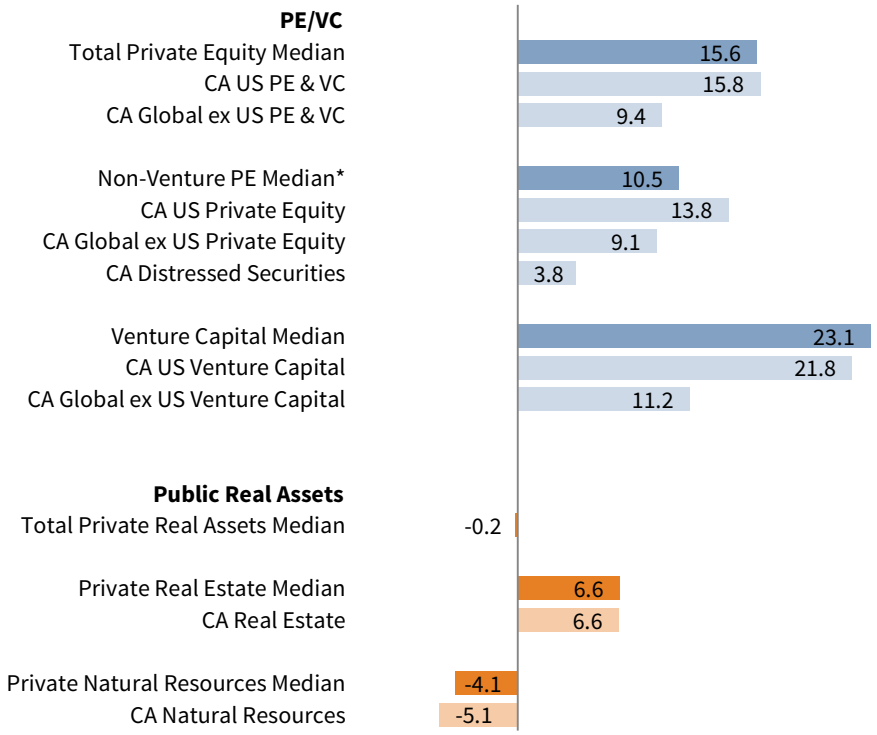
Notes: Private investment return statistics are reported as horizon internal rates of return (IRRs).

1. Private equity is a composite of non-venture private equity and venture capital.

2. Non-venture private equity also includes distressed securities that are invested through a private investment vehicle.

3. Private real assets is a composite of private real estate and private natural resources.

FIGURE 11 MEDIAN PRIVATE INVESTMENT ASSET CLASS IRRs VS INDEX IRRs
Trailing 1-Yr as of June 30, 2019 • Percent (%)



Sources: Endowment data as reported to Cambridge Associates LLC. Index data are provided by Cambridge Associates LLC.
Notes: Non-venture private equity also includes distressed securities that are invested through a private investment vehicle. Private investment return statistics are reported as horizon internal rates of return (IRRs).

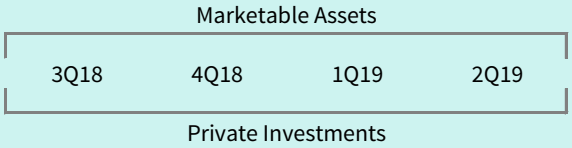
RETURN CALCULATION METHODOLOGIES. The methodology endowments use to account for private investments in their total portfolio return calculation can have an impact on relative peer performance. The most frequently used approach among all participants was to report private investment returns on a current basis. The second most frequently used methodology was the lagged basis.

Under the current basis, the total portfolio return incorporates all investment activity for private investments for the entire fiscal year. In contrast, under the lagged basis, private investment valuations lag other assets in the portfolio by one quarter. In essence, the private investment portion of the fiscal year 2019 total return represents performance for the period of April 1, 2018, to March 31, 2019. When assessing the impact of these two methodologies, it is important to consider private investment returns for both second quarter 2018 and second quarter 2019. With the lagged basis methodology, performance for the former period will be included in the one-year total return calculation, and performance for the latter period will be excluded.

PERFORMANCE REPORTING METHODOLOGIES

Current Basis

Total investment pool return for 2019 includes marketable asset and private investment performance for July 1, 2018, to June 30, 2019.



Lagged Basis

Total investment pool return for 2019 includes marketable asset performance for July 1, 2018, to June 30, 2019, and private investment performance for April 1, 2018, to March 31, 2019.

Methodologies Used by Participants

Asset Size	Current Basis	Lagged Basis	Other	No PI Allocation
Less than $200M	72%	0%	2%	26%
n	*76*	*0*	*2*	*27*
$200M – $500M	98%	0%	0%	2%
n	*65*	*0*	*0*	*1*
$500M – $1B	84%	16%	0%	0%
n	*43*	*8*	*0*	*0*
More than $1B	71%	26%	2%	1%
n	*69*	*25*	*2*	*1*
All Institutions	79%	10%	1%	9%
n	*253*	*33*	*4*	*29*

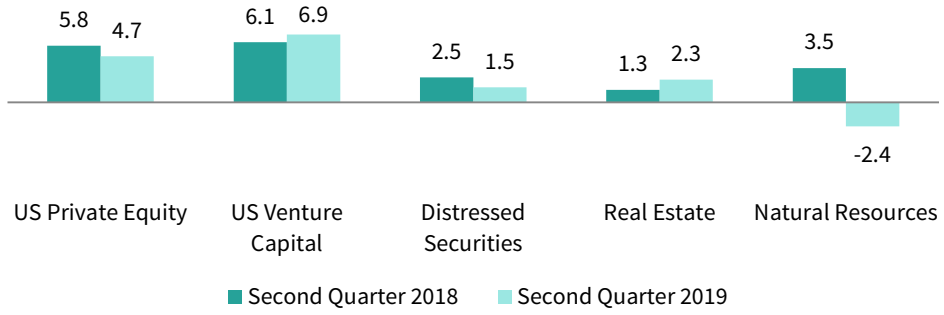
Source: Endowment data as reported to Cambridge Associates LLC.

Notes: Private investments include non-venture private equity, venture capital, distressed securities (private equity structure), private oil & gas/natural resources, timber, private real estate, and other private investments. Institutions with no significant private investment allocations (<1% of their total investment portfolios) are reflected in the right-hand column.

The differential in returns between these two periods was relatively minor in most of the private investment asset classes (Figure 12). The exception was for natural resources, where the second quarter 2018 return was 3.5% while the second quarter 2019 return was -2.4%. For institutions with large allocations to natural resources, the lagged reported methodology could result in a higher total portfolio return compared to the current basis for fiscal year 2019.

FIGURE 12 CAMBRIDGE ASSOCIATES' PRIVATE INVESTMENT INDEX RETURNS

Percent (%)



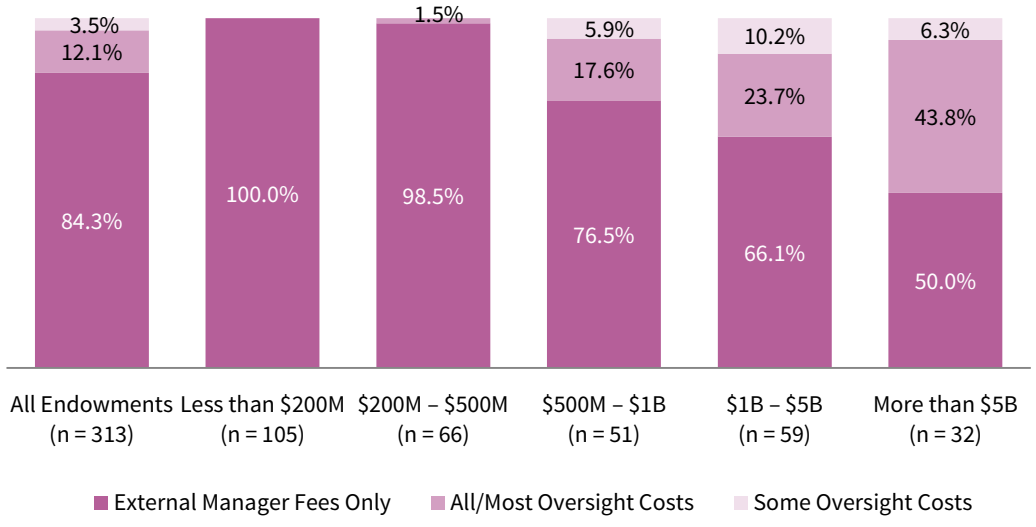
Source: Cambridge Associates LLC.

Note: Private investment return statistics are reported as horizon internal rates of return.

Another reporting issue that can impact peer returns is the method in which net returns are calculated. Each endowment in this study provided performance on a net-of-fees basis. However, the types of fees deducted in the net return calculation differ among participants. The vast majority of respondents (84%) reported returns net of external manager fees only for fiscal year 2019 (Figure 13). Another 12% of respondents deduct external manager fees plus all or most of investment oversight expenses. The main drivers of these costs tend to be staff compensation for those institutions that have internal investment offices or consultant/advisor fees for those that rely heavily on external investment advisors. The remaining 4% of respondents deduct external manager fees plus some additional costs but are gross of the major oversight cost expenses.

FIGURE 13 TYPES OF FEES DEDUCTED IN FY 2019 NET RETURN CALCULATION

As of June 30, 2019 • Percent (%)



Source: Endowment data as reported to Cambridge Associates LLC.

Notes: Institutions in the All/Most Oversight Costs category net out all or the majority of oversight costs, including the major cost drives (e.g., investment staff compensation). Institutions in the Some Oversight Costs category deduct external manager fees and some investment oversight costs, but are gross of the major cost drivers.

Smaller endowments are much less likely to deduct oversight costs compared to larger endowments. Just one endowment less than $500 million deducts all investment oversight costs in their net return calculation. In contrast, 44% of endowments with asset sizes greater than $5 billion reported returns net of all or most oversight expenses, including investment staff compensation. Past CA surveys and empirical evidence have shown that the scale of assets can impact costs in relative terms, as costs in basis points tend to be lower for larger portfolios compared to smaller portfolios. Thus, smaller endowments seem to be more reluctant to adopt a reporting method that would result in them taking a bigger haircut to returns compared to larger endowments.

LONGER-TERM RETURNS

The average endowment return underperformed the 70/30 benchmark return by 40 bps for the trailing three- and ten-year periods and by 50 bps for the trailing five-year period (Figure 14). Endowments greater than $1 billion had the highest average return among the asset size peer groups for all three trailing periods. Similar to the fiscal year 2019 analysis, the median return for these largest endowments was higher than the top quartile returns of the other asset size groups for each trailing period (Figure 15).

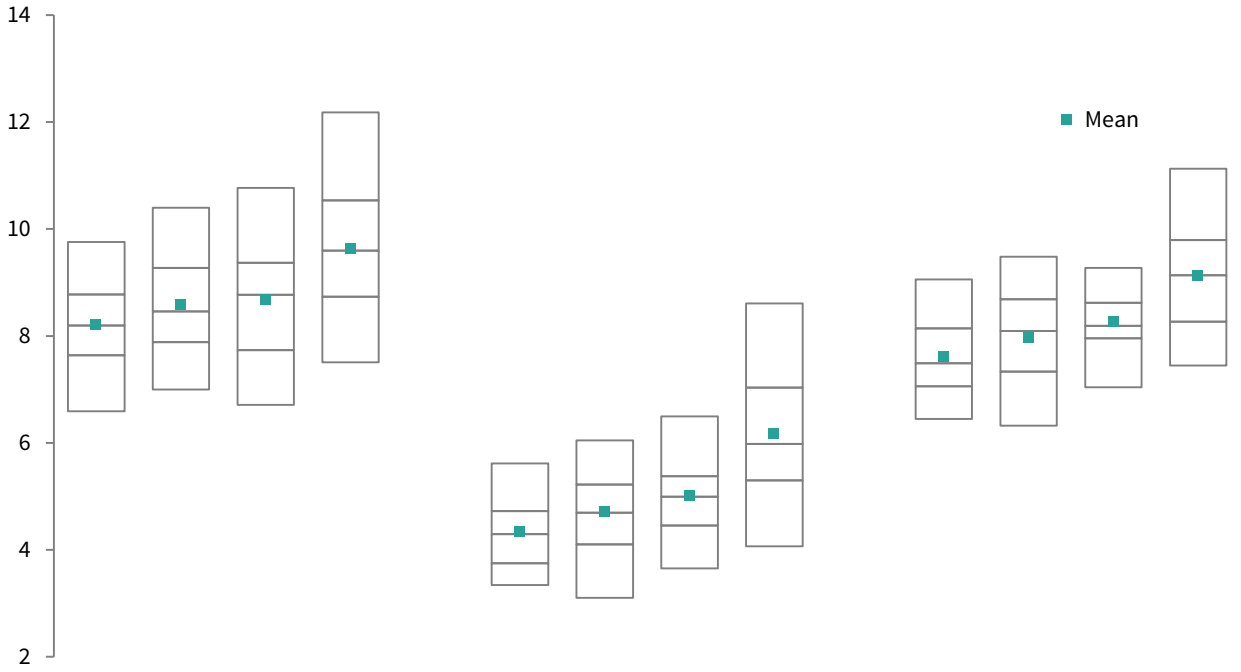
FIGURE 14 TOTAL RETURNS SUMMARY: TRAILING 3-, 5-, AND 10-YR
Years Ended June 30, 2019 • Percent (%)

	Nominal AACRs			Real After Spending AACRs		
	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr
All Endowments						
Mean	8.8	5.1	8.3	2.2	-0.4	2.2
Median	8.6	4.9	8.2	2.2	-0.4	2.0
n	*315*	*312*	*294*	*136*	*118*	*105*
Colleges & Universities						
Mean	9.2	5.5	8.6	2.5	-0.2	2.2
Median	9.1	5.2	8.6	2.4	-0.3	2.1
n	*164*	*163*	*157*	*106*	*96*	*87*
Cultural & Environmental						
Mean	8.8	5.1	8.3	1.6	-0.7	1.9
Median	8.7	4.9	8.3	1.9	-0.5	1.9
n	*51*	*51*	*47*	*14*	*8*	*6*
Independent Schools						
Mean	8.0	4.5	7.8	1.0	-1.2	2.2
Median	8.0	4.4	7.5	1.1	-1.8	1.5
n	*28*	*28*	*26*	*12*	*11*	*9*
Hospitals						
Mean	8.3	4.6	7.8	–	–	–
Median	8.3	4.6	8.0	–	–	–
n	*28*	*28*	*26*	–	–	–
Other Endowments						
Mean	8.1	4.2	7.6	1.5	-1.7	1.6
Median	8.1	4.1	7.5	1.5	-1.0	1.9
n	*44*	*42*	*38*	*4*	*3*	*3*
Benchmarks						
70/30 Global	9.2	5.6	8.7			

Sources: Endowment 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.
Notes: Real returns are adjusted for inflation as measured by the Consumer Price Index. The Global 70/30 benchmark is composed of 70% MSCI ACWI / 30% Bloomberg Aggregate Bond Index. Returns for the MSCI ACWI are net of dividend taxes for global ex US securities.

FIGURE 15 NOMINAL RETURN PERCENTILES BY ASSET SIZE: TRAILING 3-, 5-, AND 10-YR

Years Ended June 30, 2019 • Percent (%)



	3 Yr				5 Yr				10 Yr			
	Less than $200M	$200M – $500M	$500M – $1B	More than $1B	Less than $200M	$200M – $500M	$500M – $1B	More than $1B	Less than $200M	$200M – $500M	$500M – $1B	More than $1B
5th %ile	9.8	10.4	10.8	12.2	5.6	6.0	6.5	8.6	9.1	9.5	9.3	11.1
25th %ile	8.8	9.3	9.4	10.5	4.7	5.2	5.4	7.0	8.1	8.7	8.6	9.8
Median	8.2	8.5	8.8	9.6	4.3	4.7	5.0	6.0	7.5	8.1	8.2	9.1
75th %ile	7.6	7.9	7.7	8.7	3.7	4.1	4.5	5.3	7.1	7.3	8.0	8.3
95th %ile	6.6	7.0	6.7	7.5	3.3	3.1	3.7	4.1	6.4	6.3	7.0	7.4
Mean	8.2	8.6	8.7	9.6	4.3	4.7	5.0	6.2	7.6	8.0	8.3	9.1
n	*104*	*65*	*49*	*97*	*102*	*65*	*49*	*96*	*90*	*65*	*45*	*94*

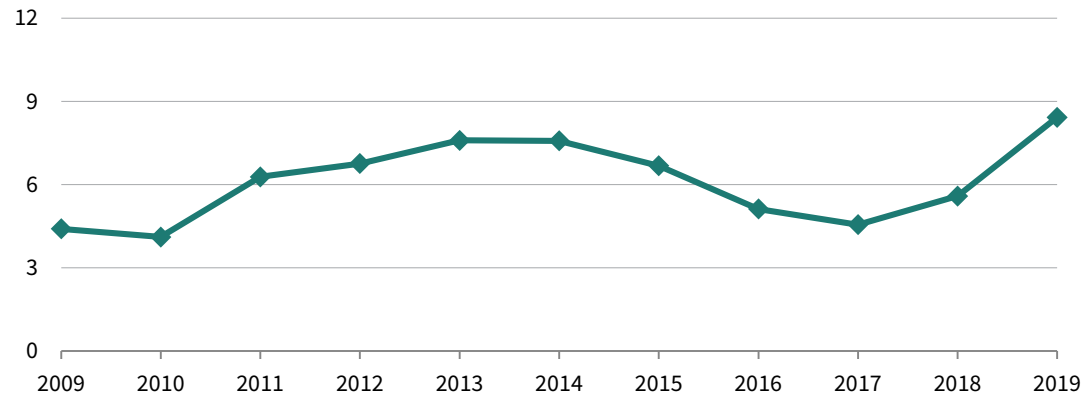
Source: Endowment data as reported to Cambridge Associates LLC.

Note: Three-, five-, and ten-year returns are annualized.

Figure 16 shows the rolling average ten-year return for the overall participant group over the last decade. The average return for the ten-year period ending June 30, 2019, was the highest reported from the last decade. This most recent ten-year period, which began on July 1, 2009, is the only rolling period from the last decade that does not incorporate the steep stock market declines from the 2008–09 global financial crisis (GFC).

FIGURE 16 ROLLING 10-YR AVERAGE ANNUAL COMPOUND RETURNS

Years Ended June 30 • Percent (%)



Source: Endowment data as reported to Cambridge Associates LLC.
Note: Analysis includes data for 222 institutions that provided returns for the last 20 years.

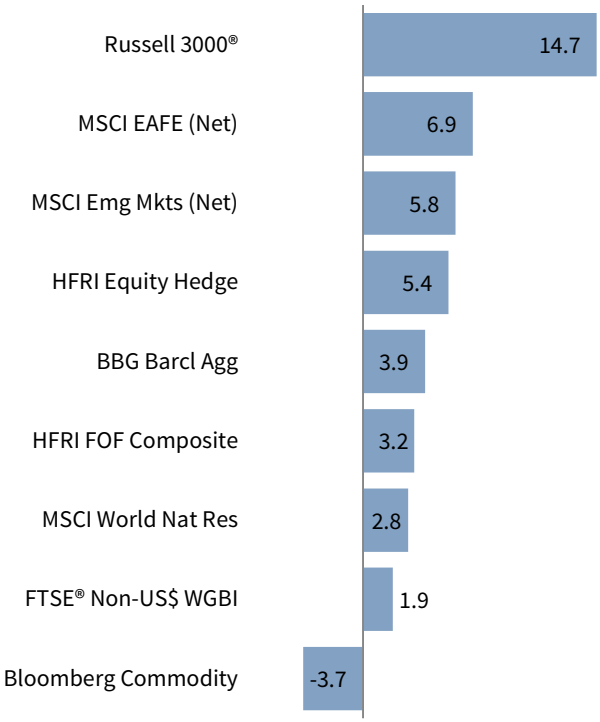
A primary objective when managing an endowment is to preserve, and perhaps even grow, the purchasing power of its assets over the long term. To achieve this goal the endowment must earn a return that offsets or exceeds its spending rate and the inflation rate. Participants in this study have fared well in this objective over the trailing ten-year period, with the real return after spending averaging 2.2% over this period (Figure 14). Of the endowments that provided returns and spending rates for the last ten years, almost all (101 of 105) reported a real return after spending that equaled or exceeded 0.0% over the last decade.

TEN-YEAR ASSET ALLOCATION. Figure 17 looks at the relationship between asset allocation and investment performance for participating endowments over the last ten years. Each of the private investment indexes listed in this analysis, except for real estate, outperformed its mPME benchmark for the trailing ten-year period. The top quartile of performers had the highest average allocations to PE/VC and private real assets over this period, while the bottom quartile of performers had the lowest average allocations. The combined average allocation to these private investment categories over the last decade was 27.4% for the endowments in the top quartile.

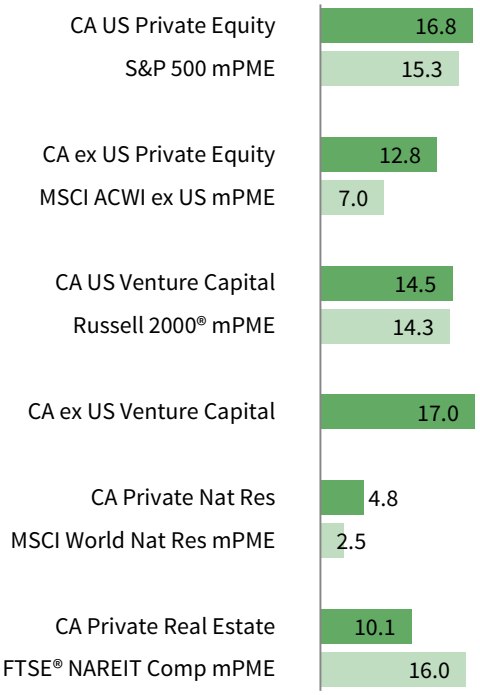
FIGURE 17 10-YR INDEX RETURNS AND ASSET ALLOCATION OF TOP AND BOTTOM PERFORMERS

As of June 30, 2019 • Percent (%)

Public Indexes

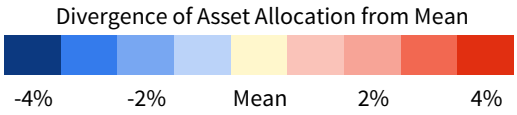


Private Index IRRs and mPME IRRs*



Mean Asset Allocation by Performance Quartile: June 30, 2009 to June 30, 2019

Quartile	US Equity	DM ex US Eqty	EM Equity	Bonds	Hedge Funds	Dist Sec	PE & VC	Priv RA	Pub RA & ILBs	Cash	Other
Top Quartile	17.5	11.4	6.8	7.3	19.3	4.0	17.0	10.4	3.1	3.0	0.2
2nd Quartile	20.0	14.9	7.1	11.2	18.5	3.8	9.8	6.1	4.7	3.5	0.5
3rd Quartile	21.4	14.7	6.5	12.5	20.3	3.4	7.2	4.0	5.7	3.6	0.6
Bottom Quartile	18.6	14.6	6.9	14.2	22.8	3.1	4.9	2.8	6.2	5.3	0.5
Endowment Mean	19.4	13.9	6.8	11.3	20.2	3.6	9.7	5.8	4.9	3.9	0.5



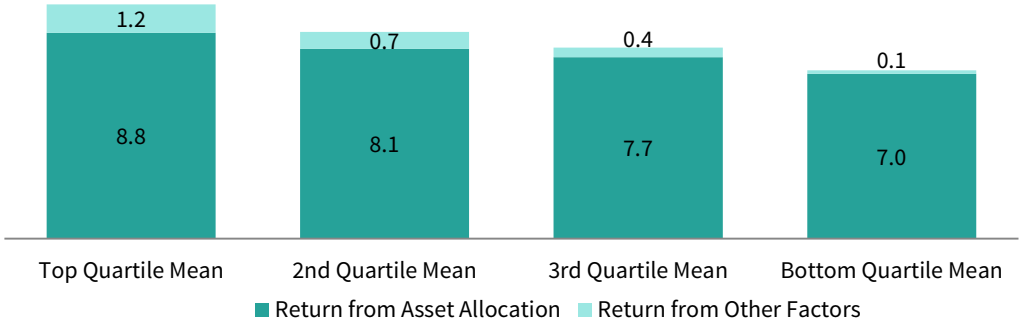
* Private indexes are pooled horizon IRRs, net of fees, expenses, and carried interest. The CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns.

Sources: Endowment 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.
Note: Analysis includes data for 220 institutions.

ATTRIBUTION. The attribution model further illustrates the impact of different asset allocation structures, particularly differences in private investment allocations, on the trailing ten-year return. The average asset allocation return over this period for the top quartile of performers was 8.8% (Figure 18). For the bottom quartile of performers, the average asset allocation return was 180 bps lower at 7.0%.

FIGURE 18 10-YR ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE

As of June 30, 2019 • Percent (%)



Sources: Endowment data as reported to Cambridge Associates LLC.

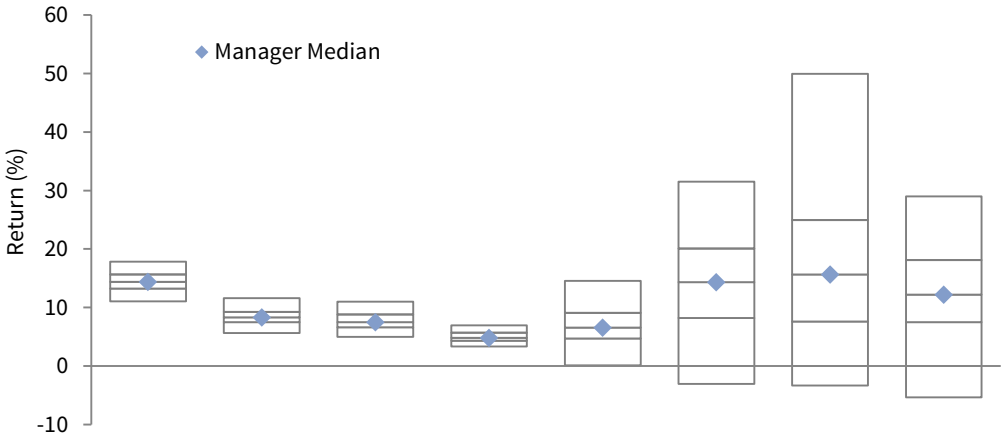
Note: Includes data for 220 institutions that provided beginning year asset allocation for all ten years.

Differences in private investment allocations should also be considered when comparing the implementation returns of top and bottom performers for this period. Figure 19 summarizes data reported by investment managers to Cambridge Associates' manager database. The range of returns among private investment funds was much wider than what was experienced in marketable asset classes over the last decade. Endowments with higher private investment allocations have more potential for earning a larger return from implementation, and the potential for excess return can be very significant in certain periods.

Among endowments reporting ten years of data, our attribution model estimates the top quartile of performers had an average implementation return of 1.2% while the bottom quartile of performers averaged just 0.1% (Figure 18). The ranges of asset class composite returns across the entire participant group for the trailing five- and ten-year periods are listed in Figures 20 and 21.

FIGURE 19 COMPARING MANAGER RETURN DISPERSION ACROSS ASSET CLASSES

USD Terms • Percent (%)



	US Equity	Global ex US Equity	Emerging Markets	Core/Core Plus Bonds	Hedge Funds	Global Private Equity	Global Venture Capital	Global Real Estate
5th %ile	17.8	11.6	11.0	7.0	14.5	31.5	50.0	29.0
25th %ile	15.6	9.3	8.8	5.7	9.1	20.1	24.9	18.1
Median	14.4	8.3	7.5	4.8	6.6	14.3	15.6	12.2
75th %ile	13.3	7.5	6.6	4.3	4.7	8.2	7.6	7.5
95th %ile	11.0	5.6	5.0	3.4	0.1	-3.1	-3.3	-5.4
n	*637*	*182*	*62*	*156*	*445*	*389*	*319*	*265*
5th – 95th Differential	**6.8**	**5.9**	**6.0**	**3.6**	**14.4**	**34.6**	**53.3**	**34.4**

Source: Cambridge Associates LLC.

Notes: Returns for bond, equity, and hedge fund managers are average annual compound returns (AACRs) for the ten years ended June 30, 2019, and only managers with performance available for the entire period are included. Returns for private investment managers are horizon internal rates of return (IRRs) calculated since inception to June 30, 2019. Time-weighted returns (AACRs) and money-weighted returns (IRRs) are not directly comparable. CA's bond, equity, and hedge fund manager universe statistics are derived from CA's proprietary Investment Manager Database. Managers that do not report in US dollars, exclude cash reserves from reported total returns, or have less than $50 million in product assets are excluded. Performance of bond and public equity managers is generally reported gross of investment management fees. Hedge fund managers generally report performance net of investment management fees and performance fees. CA derives its private benchmarks from the financial information contained in its proprietary database of private investment funds. The pooled returns represent the net end-to-end rates of return calculated on the aggregate of all cash flows and market values as reported to CA by the funds' general partners in their quarterly and annual audited financial reports. These returns are net of management fees, expenses, and performance fees that take the form of a carried interest.

FIGURE 20 DISPERSION OF PARTICIPANTS' ASSET CLASS RETURNS: MARKETABLE INVESTMENTS

Trailing 5- and 10-Yr • As of June 30, 2019

	Public Equity[1]	Global Equity[2]	US Equity	DM ex US Equity	EM Equity	Bonds	Hedge Funds	Public Real Assets[3]	Commodities and Natural Resources	Public Real Estate
Trailing 5-Yr										
5th %ile	8.1	13.4	11.7	6.5	6.1	3.9	5.7	1.6	-0.1	10.1
25th %ile	6.6	8.9	10.7	4.1	3.1	2.9	3.6	-2.7	-4.2	7.2
Median	5.5	7.4	9.9	3.4	2.2	2.4	2.7	-4.7	-6.5	5.6
75th %ile	4.3	4.2	8.5	2.7	1.6	1.8	1.7	-6.9	-9.5	3.6
95th %ile	3.3	0.7	5.7	0.9	0.1	0.7	0.4	-11.5	-13.6	-0.1
Mean	5.5	6.9	9.4	3.5	2.4	2.4	2.7	-4.8	-6.9	5.2
n	*246*	*153*	*245*	*234*	*238*	*239*	*242*	*172*	*171*	*51*
Median by Asset Size										
Less than $200M	4.5	6.7	9.9	3.2	2.1	2.2	2.3	-4.9	-5.4	4.3
n	*93*	*61*	*93*	*88*	*92*	*92*	*90*	*77*	*75*	*13*
$200M – $500M	5.5	6.8	9.9	3.4	2.2	2.5	2.4	-4.2	-6.2	4.7
n	*57*	*36*	*58*	*58*	*58*	*56*	*56*	*50*	*48*	*8*
$500M – $1B	5.9	6.3	10.0	3.4	2.2	2.2	2.7	-4.2	-6.6	5.7
n	*41*	*24*	*41*	*40*	*40*	*39*	*42*	*25*	*24*	*15*
More than $1B	6.5	8.5	8.9	3.7	2.4	2.7	3.7	-4.3	-10.3	6.4
n	*55*	*32*	*53*	*48*	*48*	*52*	*54*	*20*	*24*	*15*
Trailing 10-Yr										
5th %ile	12.4	14.7	16.4	9.8	9.2	5.8	8.0	5.5	3.9	15.0
25th %ile	11.0	13.1	15.4	8.7	7.2	4.6	6.7	2.8	1.5	12.1
Median	9.4	8.6	14.3	8.1	5.9	4.0	5.5	1.3	0.2	8.9
75th %ile	7.7	3.7	13.2	7.1	4.6	3.1	4.6	-0.2	-1.9	4.5
95th %ile	5.9	0.7	9.5	3.5	1.5	1.0	2.3	-3.2	-5.2	1.5
Mean	9.3	8.1	13.8	7.7	5.8	3.8	5.4	1.2	-0.1	8.7
n	*236*	*126*	*233*	*223*	*215*	*230*	*228*	*161*	*147*	*49*
Median by Asset Size										
Less than $200M	7.9	5.6	14.2	7.6	5.1	3.9	4.9	0.8	0.2	6.4
n	*91*	*59*	*91*	*88*	*83*	*89*	*87*	*73*	*69*	*15*
$200M – $500M	9.4	8.6	14.4	8.1	6.0	4.1	5.6	1.3	0.7	9.5
n	*55*	*29*	*55*	*53*	*53*	*53*	*54*	*46*	*41*	*11*
$500M – $1B	10.5	8.9	14.7	8.2	6.4	3.9	5.5	1.5	0.2	9.1
n	*39*	*16*	*39*	*38*	*35*	*39*	*37*	*23*	*20*	*12*
More than $1B	10.8	12.8	14.1	8.3	6.9	4.5	6.9	2.3	-1.0	9.4
n	*51*	*22*	*48*	*44*	*44*	*49*	*50*	*19*	*17*	*11*

Source: Endowment data as reported to Cambridge Associates LLC.

[1] Public equity is a composite of global equity, US equity, developed markets ex US equity, and emerging markets equity.

[2] Global equity includes only investment vehicles that have a mandate to invest in US and international markets.

[3] Total public real assets is a composite of public real estate, commodities, and inflation-linked bonds.

FIGURE 21 DISPERSION OF PARTICIPANTS' ASSET CLASS RETURNS: PRIVATE INVESTMENTS

Trailing 5- and 10-Yr • As of June 30, 2019

	Total Private Equity[1]	Non-Venture Private Equity[2]	Venture Capital	Total Private Real Assets[3]	Private Real Estate	Private Natural Resources
Trailing 5-Yr						
5th %ile	18.8	18.8	23.0	12.2	17.4	7.6
25th %ile	15.4	14.1	18.9	7.5	13.1	2.6
Median	13.1	11.8	14.8	3.3	10.7	-1.3
75th %ile	10.5	9.3	10.8	-0.3	8.3	-4.6
95th %ile	4.9	3.7	1.9	-6.4	2.0	-9.0
Mean	13.0	12.0	14.3	3.3	10.1	-1.1
n	*209*	*204*	*162*	*164*	*148*	*157*
Median by Asset Size						
Less than $200M	11.8	10.3	14.4	3.2	9.8	0.7
n	*60*	*59*	*33*	*39*	*24*	*33*
$200M – $500M	13.2	12.4	14.4	1.4	10.8	-2.5
n	*57*	*57*	*44*	*45*	*33*	*38*
$500M – $1B	12.6	11.0	14.7	1.9	11.3	-2.7
n	*40*	*38*	*34*	*37*	*36*	*36*
More than $1B	14.3	12.9	16.7	4.5	10.4	-0.7
n	*52*	*50*	*51*	*43*	*55*	*50*
Trailing 10-Yr						
5th %ile	19.2	19.0	24.0	12.3	15.0	10.9
25th %ile	16.1	15.7	18.7	8.6	12.1	6.3
Median	14.4	14.1	15.5	6.4	9.1	4.4
75th %ile	12.8	12.3	12.8	3.4	6.0	1.8
95th %ile	9.2	9.2	7.7	-1.1	0.9	-3.5
Mean	14.3	13.9	16.0	6.0	8.6	4.0
n	*190*	*188*	*146*	*141*	*132*	*125*
Median by Asset Size						
Less than $200M	13.3	12.8	14.0	5.9	8.8	4.3
n	*51*	*51*	*24*	*29*	*18*	*22*
$200M – $500M	14.4	14.2	14.9	6.1	9.0	3.8
n	*52*	*52*	*41*	*36*	*28*	*28*
$500M – $1B	14.5	13.5	15.7	6.0	10.0	3.1
n	*38*	*36*	*32*	*36*	*34*	*30*
More than $1B	15.8	14.8	18.0	7.2	8.3	5.2
n	*49*	*49*	*49*	*40*	*52*	*45*

Source: Endowment data as reported to Cambridge Associates LLC.

Note: Private investment return statistics are reported as internal rates of return.

[1] Total private equity is a composite of non-venture private equity and venture capital.

[2] Non-venture private equity also includes distressed securities that are invested through a private investment vehicle.

[3] Total private real assets is a composite of private real estate and private natural resources.

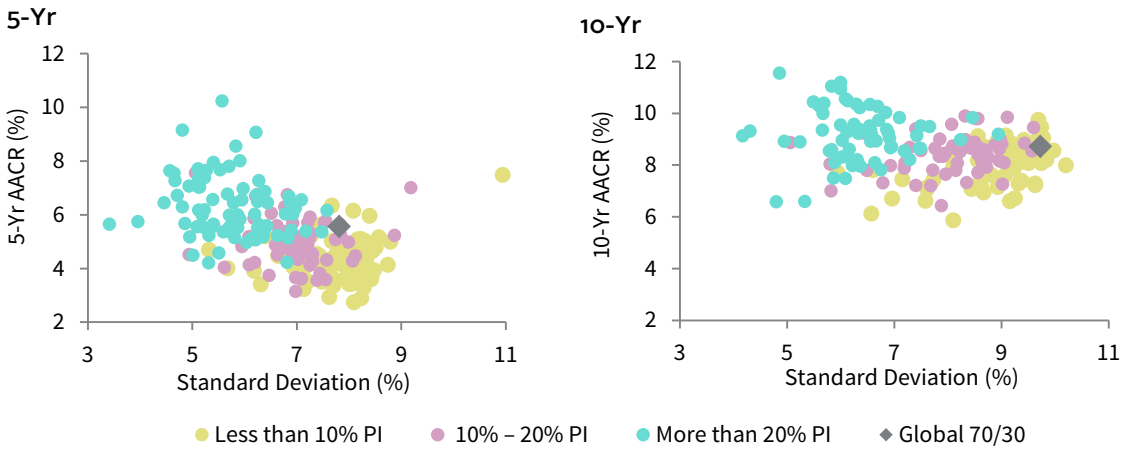
RISK-ADJUSTED RETURNS. Risk-adjusted performance is important to evaluate, as it measures the total return relative to the total amount of risk taken by the portfolio. The most common approach to measuring risk-adjusted performance is by the Sharpe ratio, which shows how much return above the risk-free 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 complicated when portfolios have significant allocations to private investments. The frequency and timing of private investment valuations can artificially dampen the standard deviation for the returns of these assets. Thus, a portfolio with high allocations to private investments can yield a lower volatility statistic that does not fully represent the amount of risk it has actually taken. For this reason, we have split institutions out into subcategories in Figure 22 based on their allocations to private investments.

The average Sharpe ratio for institutions that had an allocation of more than 20% to private investments over the last five and ten years was significantly higher than that of the other subgroups with lower private allocations. Although the magnitude of the differences in average Sharpe ratios is partly a function of this group's higher average returns, it is also attributable to their lower average standard deviations.

FIGURE 22 STANDARD DEVIATION AND SHARPE RATIO

Periods Ended June 30, 2019



	5-Yr				10-Yr			
	AACR	Standard Deviation	Sharpe Ratio	*n*	AACR	Standard Deviation	Sharpe Ratio	*n*
Endowment Mean	5.1	6.8	0.67	*263*	8.5	7.8	1.08	*216*
Mean by PI Allocation								
Less than 10%	4.1	7.8	0.45	*62*	7.7	9.0	0.82	*42*
10% – 20%	4.6	7.3	0.54	*83*	8.1	8.4	0.93	*74*
More than 20%	6.0	6.0	0.89	*118*	9.1	6.8	1.29	*100*
70/30 Benchmark	5.6	7.8	0.62		8.7	9.7	0.87	

Sources: Endowment 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.
Notes: Analysis includes only institutions that provided underlying quarterly returns and asset allocation for the five-year and ten-year periods. The 70/30 Benchmark is composed of 70% MSCI ACWI Index/30% Bloomberg Barclays Aggregate Bond Index.

Investment Policy

An investment policy provides guidelines for trustees, investment committee members, investment staff, advisors, and other relevant parties that are involved in the endowment's investment management and governance processes. The investment policy statement (IPS) is the formal document that outlines the important components of this policy. Some institutions may have additional informal guidelines that are considered in the investment management process but are not documented in the IPS. Our survey touched on several issues related to endowment investment policies; the following section summarizes these responses.

ROLE OF THE ENDOWMENT

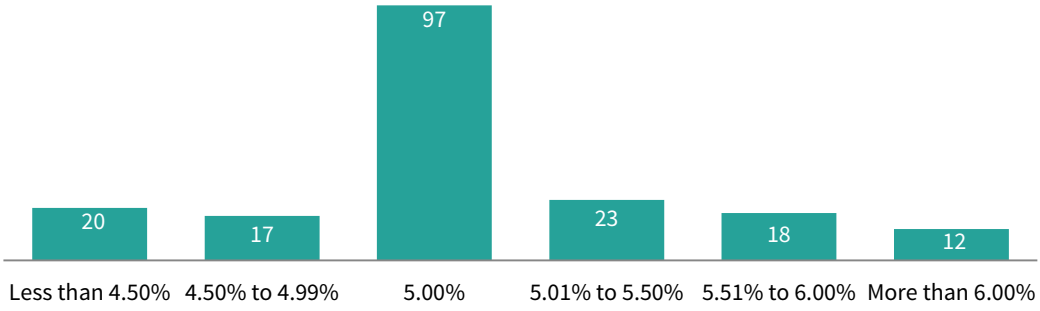
A key issue for any investor to consider is the purpose and role of its investment assets. Most nonprofits don't generate enough revenue to cover the expenses incurred to operate their institutions and rely upon donations and endowed funds to provide additional financial support to their annual budgets. While endowments must provide this support on a regular basis, they also have very long-term time horizons, as many nonprofits intend to carry out their missions in perpetuity.

One term often associated with endowment management is intergenerational equity, the concept that future generations should receive financial support from the endowment that is equitable to what is received by today's beneficiaries and programs. To meet this objective, an endowment must earn a return over the long term that replenishes both the spending withdrawals from the portfolio and the purchasing power lost because of inflation.

Of the survey participants that specified the primary role for their endowment, 80% indicated it was to maintain intergenerational equity. The remaining 20% of respondents indicated that the primary role of the endowment was to expand its permanent capital so the endowment could fulfill a bigger role in the institution's business model in the future. While the overall endowment pool can be expanded by raising new gifts, existing endowment funds would need to earn a long-term return that exceeds the combined rate of spending and inflation if the objective is to grow the purchasing power of those funds.

Our survey asked participants to provide their real return objective for the endowment if one was used. Since endowment returns are volatile from year to year, return objectives should be evaluated from the long-term perspective instead of treated as a goal that must be met each and every year. By far the most common real return objective is 5%, which was cited by 97 of 187 respondents (Figure 23). Of the remaining respondents, 53 cited an objective of more than 5%, while 37 reported an objective of less than 5%.

FIGURE 23 REAL TOTAL PORTFOLIO RETURN OBJECTIVES



Source: Endowment data as reported to Cambridge Associates LLC.
Note: Analysis includes data for 187 institutions that provided a real total portfolio return objective.

ASSET ALLOCATION POLICY

The asset allocation component of the investment policy specifies the asset classes allowed in the portfolio and assigns target allocations and/or ranges for those asset class categories. The categories and targets that are chosen are based on the portfolio's risk tolerance, liquidity needs, and performance objectives. In this year's survey, we asked institutions to provide the asset class categories used in their endowment's asset allocation policy.

There are differences in the policy frameworks reported among respondents, with some endowments using more detailed categories than others. This is most evident in equity categories, where there are contrasting approaches to the inclusion of geographic regions and private investments into the policy framework. The level of granularity used in the asset allocation framework should be determined by the overall investment approach and how much latitude is given to those responsible for implementing the portfolio. A broader framework is appropriate where there is a more opportunistic strategy that allows the management team wider latitude in implementing the portfolio.

A broad approach was reported by nearly half of respondents for public equities, with 48% of respondents reporting a single category that captures their entire public equity allocation (Figure 24). Approximately 39% of institutions assign separate targets based on geographic regions to US, global ex US developed, and emerging markets categories. The remaining 13% of respondents use some other combination of geographic regions to represent public equities in their asset allocation policy. Examples of these other combinations include grouping US and global ex US developed equities together in a global developed category or using a single global ex US category without breaking out emerging markets allocations.

Just under two-thirds of respondents (64%) have a dedicated target to PE/VC in their asset allocation policy. Most of these institutions with a dedicated PE/VC target use a single category for the combined allocations, while a smaller proportion assigns a target for non-venture private equity and a separate target for venture capital. Another

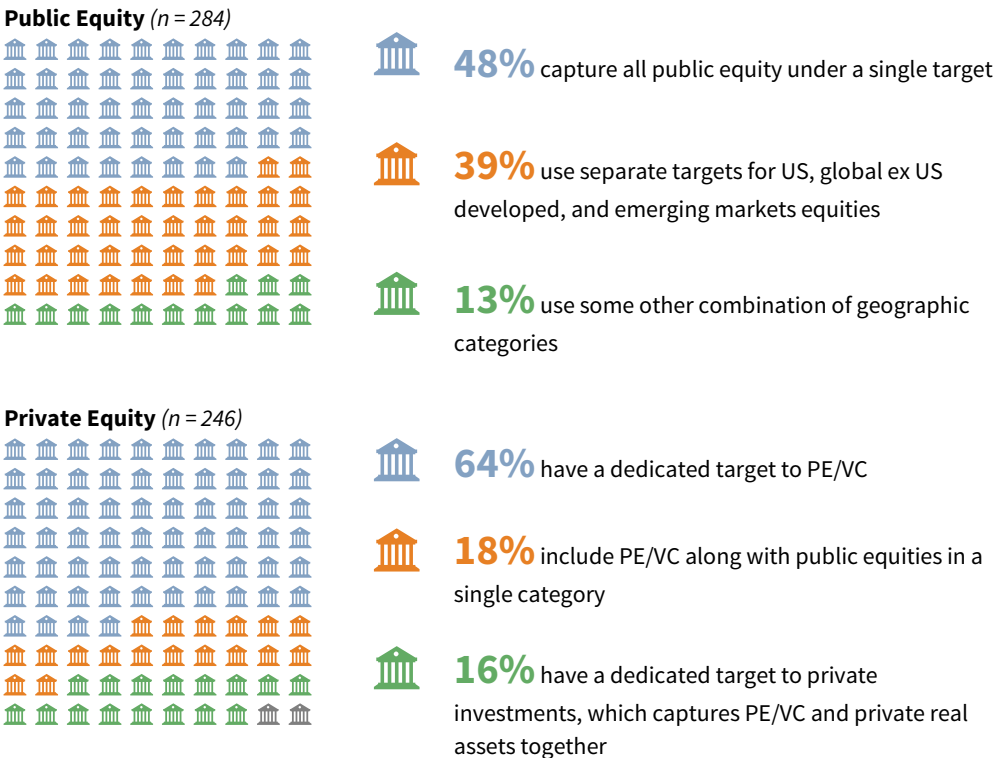
18% of respondents use a single category to capture public equity and PE/VC together in their target asset allocation framework. A similar proportion of respondents (16%) use a total private investments category that combines PE/VC together with private real assets in their policy framework.

POLICY PORTFOLIO BENCHMARKS

When done well, benchmarking is all about answering the question "How are we doing?" in ways that are both accurate and relevant to the objectives of the portfolio being measured. The comparison of an endowment's return to its policy portfolio benchmark is the best measure to evaluate whether the portfolio is being successfully implemented according to its asset allocation policy. The policy benchmark is typically a blend of indexes that represent the desired portfolio risk exposures without any expression of more active alternatives.[5] Measuring performance relative to the policy benchmark captures the impact not only of manager selection decisions but also of the differences between the portfolio's actual asset allocation and the target asset allocation policy.

5 In certain alternative asset classes, there are often no investable proxies, and other types of benchmarks are used.

FIGURE 24 CATEGORIES USED FOR EQUITIES IN ASSET ALLOCATION POLICY
Fiscal Year 2019



Source: Endowment data as reported to Cambridge Associates LLC.
Notes: Institutions can use a target and/or a target range for each category specified in their asset allocation policy framework. For private equity, 2% of respondents use some other approach to capture PE/VC in their asset allocation policy.

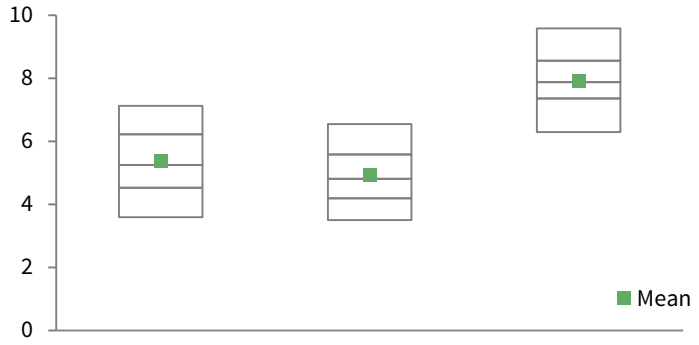
Performance results of peers can be informative, but they are not necessarily the most effective benchmark for evaluating an endowment's investment performance. Each nonprofit institution has its own unique blend of investment objectives, enterprise conditions, and risk tolerances. Therefore, investment policies will vary within a peer group, leading to different asset allocation structures for institutions that may otherwise be considered worthy peers.

The difference in asset allocation structures among endowments can translate to different performance objectives and results as defined by the policy portfolio benchmark return. Figure 25 shows the range of policy benchmark returns among the respondent group for select trailing periods. For fiscal year 2019, the difference in policy benchmark returns from the 5th percentile to the 95th percentile was 350 bps. The range between the same percentiles was 300 bps for trailing five-year period and 330 bps for the trailing ten-year period.

Endowments at the bottom end of the policy benchmark return distribution for the trailing-ten years may have had portfolios that were not as well positioned from an asset allocation perspective to outperform other peers over this period. It is possible for an endowment to underperform the peer group median but still outperform its policy benchmark return. In fact, as illustrated in Figure 26, 26% of respondents experienced this exact scenario for the trailing ten-year period.

FIGURE 25 DISPERSION IN POLICY PORTFOLIO BENCHMARK RETURNS

Periods as of June 30, 2019 • Percent (%)

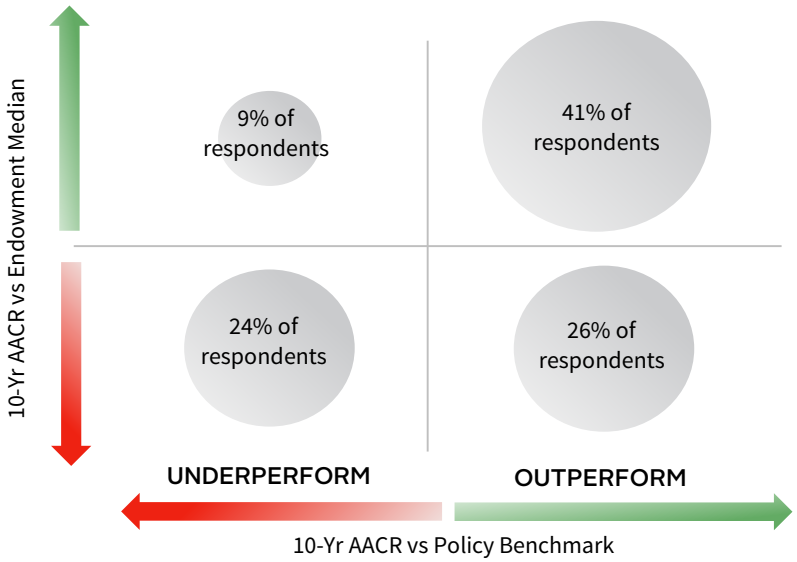


	1 Year	5 Year	10 Year
5th %ile	7.1	6.5	9.6
25th %ile	6.2	5.6	8.6
Median	5.2	4.8	7.9
75th %ile	4.5	4.2	7.4
95th %ile	3.6	3.5	6.3
Mean	5.4	4.9	7.9
n	*289*	*276*	*256*

Source: Endowment data as reported to Cambridge Associates LLC.

FIGURE 26 EVALUATING INVESTMENT PERFORMANCE: 10-YR RETURN VS POLICY BENCHMARK AND ENDOWMENT MEDIAN RETURN

As of June 30, 2019 • n = 246

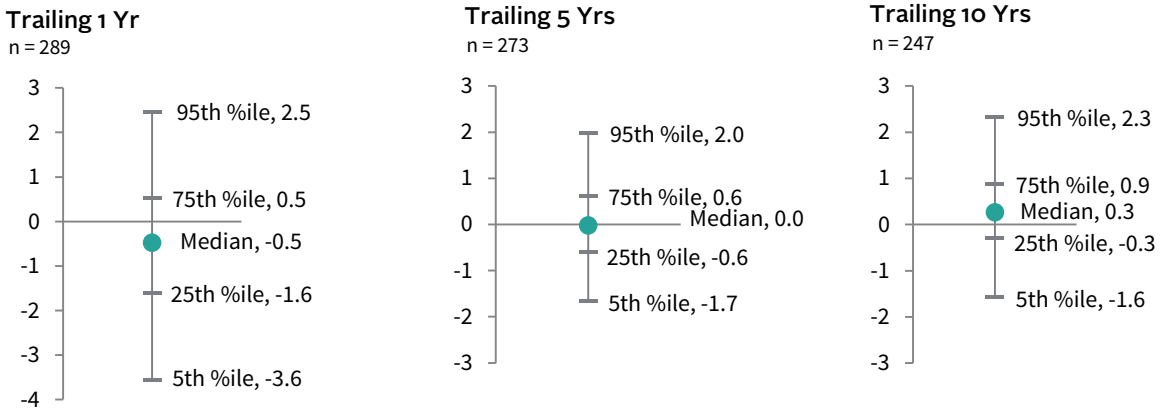


Source: Endowment data as reported to Cambridge Associates LLC.

Two-thirds (67%) of respondents outperformed their policy benchmark return for this trailing ten-year period. The median spread between the actual ten-year return and the policy benchmark return was 0.3 ppts (Figure 27). The median spread was -0.5 ppts for fiscal year 2019, which means a majority of the peer group underperformed their policy benchmark over this most recent annual period. The range of out/underperformance versus the policy benchmark was wider for fiscal year 2019 compared to the trailing five- and ten-year periods.

FIGURE 27 RANGE OF OUT/UNDERPERFORMANCE OF TOTAL RETURN VS POLICY PORTFOLIO BENCHMARK

As of June 30, 2019 • Percentage Points



Source: Endowment data as reported to Cambridge Associates LLC.

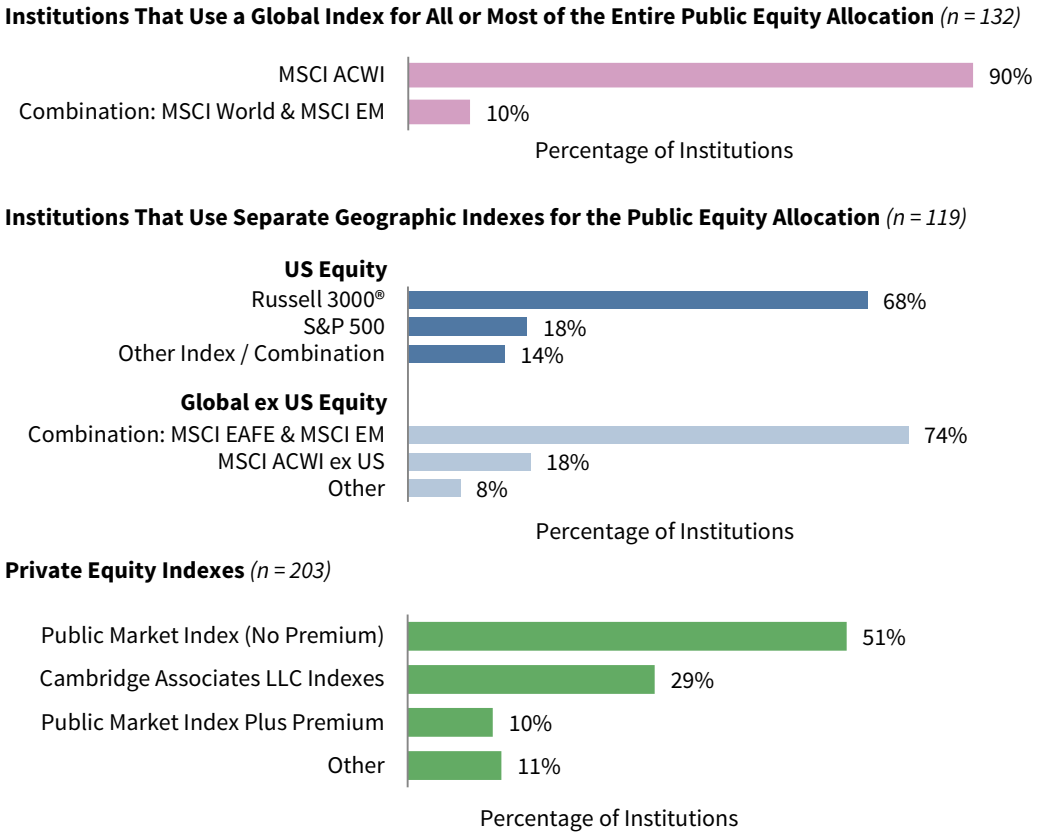
Note: Data points represent the difference between the total portfolio return and the policy portfolio benchmark return.

POLICY PORTFOLIO BENCHMARK COMPONENTS. More than 90% of the respondents that provided a policy portfolio benchmark use a detailed, asset class–specific benchmark to evaluate the performance of the total portfolio. The remaining endowments use a simple benchmark that typically incorporates a broad-based equity market index and a bond index weighted in proportion to the overall risk profile of the portfolio. The analysis that follows includes only the data of the respondents that use a detailed policy portfolio benchmark.

The components of a detailed policy benchmark usually align with the asset classes or categories stated in the portfolio's asset allocation policy. Since policy allocations can be set at varying levels of granularity, approaches to benchmarking vary among institutions. One area where this is noticeable is in the benchmarking of public equities, where a majority of endowments use a global equity index for all or most of their public equity allocation. The use of the MSCI ACWI for the entire public equity allocation was by far the most common approach (Figure 28). A handful of respondents used a combination of the MSCI World Index, which represents global developed markets, and the MSCI Emerging Markets Index.

FIGURE 28 FREQUENTLY USED COMPONENTS OF POLICY PORTFOLIO BENCHMARKS: PUBLIC AND PRIVATE EQUITY

As of June 30, 2019



Source: Endowment data as reported to Cambridge Associates LLC.

Among the endowments that use more granular public equity indexes based on geographic orientation, the Russell 3000® Index was cited by 68% for US equity. For global ex US equities, 74% of respondents used a blend of the MSCI EAFE and MSCI Emerging Markets indexes. This approach is appropriate for institutions that have separate targets to global ex US developed and emerging markets, particularly if the targets are out of proportion to the weightings of the MSCI ACWI ex US Index.

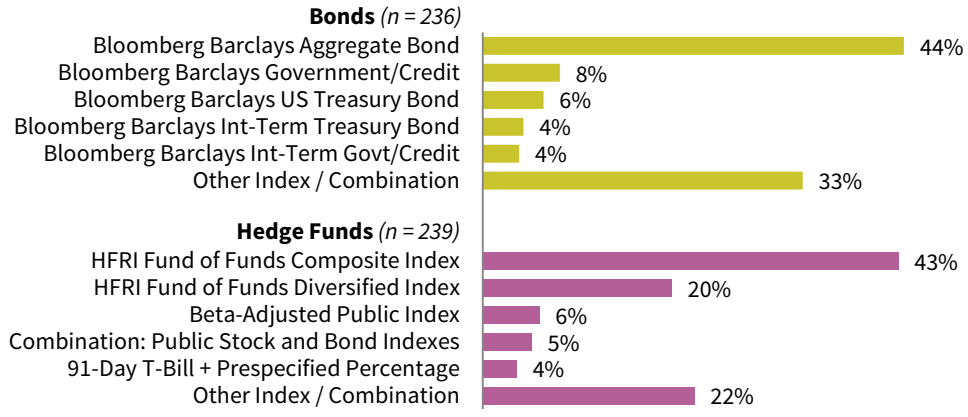
The use of a public index(es) is the most common practice for benchmarking private equity in the policy portfolio benchmark, as 51% of respondents use the actual public index return. While another 10% add a prespecified percentage or premium to the public index return, the proportion of the peer group incorporating a premium has dropped substantially in recent years. The Cambridge Associates private indexes were cited by 29% of respondents, while 11% of institutions used some other benchmark that was not previously mentioned. Included in this other group are institutions that use the actual private equity portfolio return in the policy benchmark, effectively neutralizing the performance of the private allocation in the benchmark calculation. This approach can be appropriate for endowments with immature private investment programs that are deep in the J-curve effect.[6]

The use of the Bloomberg Barclays Aggregate Bond Index only was the most common benchmarking approach for bonds and was reported by 44% of endowments (Figure 29). However, many respondents use unique index combinations to better reflect their underlying bond exposure. Often in practice, benchmarks depend on whether allocations are made domestically or globally as well as on the type of issuer (sovereign versus corporate or both). Some endowments also used indexes that only include bonds of a certain range of maturities. In hedge funds, most respondents use an HFRI index for hedge funds, with the Fund-of-Funds Composite Index being the most common. For real assets, benchmark combinations are unique across most participants due to the wide variety of strategies employed under this category.

6 For a more in-depth discussion on this topic, please see Jill Shaw et al., "Policy Benchmarking: Best Practices for Private Investments," Cambridge Associates Research Report, 2018.

FIGURE 29 FREQUENTLY USED COMPONENTS OF POLICY PORTFOLIO BENCHMARKS: BONDS AND HEDGE FUNDS

As of June 30, 2019 • Percentage of Institutions (%)



Source: Endowment data as reported to Cambridge Associates LLC.

Portfolio Asset Allocation

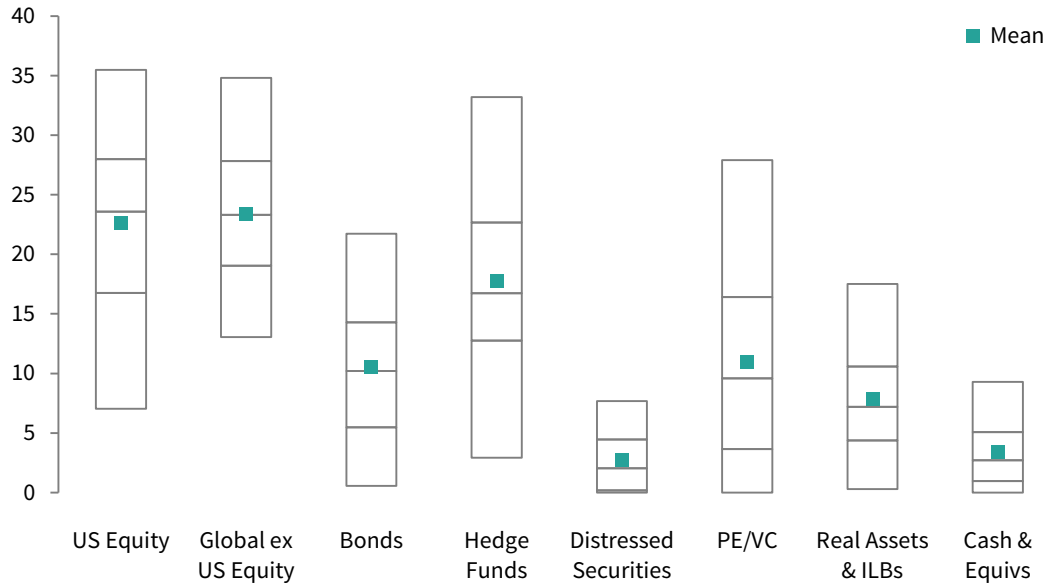
2019 ASSET ALLOCATION

More than 45% of the average long-term investment portfolio (LTIP) consisted of public equities at June 30, 2019. On average, the allocations to global ex US equities (23.4%) were slightly higher than those to US equities (22.6%). Portfolios had significant exposure to alternative assets, with 17.8% allocated to hedge funds and 10.9% allocated to private equity and venture capital, on average. Another 2.8% was allocated, on average, to distressed securities, which are invested through either a hedge fund or private equity–type investment vehicle. Real assets, which consist of a diversified group of public and private assets, made up 7.9% of portfolios, on average. Average allocations to bonds and cash were 10.5% and 3.4%, respectively (Figure 30).

As Figure 31 shows, allocations to some of these broad asset classes vary considerably. A key factor in the variation of asset allocations continues to be the total value of assets under management. Portfolios with asset sizes less than $200 million continue to maintain higher allocations to public equities and bonds, while those with assets more than $1 billion have the highest allocations to private investments. Also displayed in Figure 31 are the average asset allocations for the various institution types in the study.

FIGURE 30 ASSET ALLOCATION DISTRIBUTION BY ASSET CLASS

As of June 30, 2019 • Percent (%) • n = 319



	US Equity	Global ex US Equity	Bonds	Hedge Funds	Distressed Securities	PE/VC	Real Assets & ILBs	Cash & Equivs
5th %ile	35.5	34.8	21.7	33.2	7.7	27.9	17.5	9.3
25th %ile	28.0	27.8	14.3	22.7	4.5	16.4	10.6	5.1
Median	23.6	23.3	10.2	16.7	2.0	9.6	7.2	2.7
75th %ile	16.8	19.1	5.5	12.7	0.2	3.6	4.4	1.0
95th %ile	7.0	13.1	0.6	2.9	0.0	0.0	0.3	0.0
Mean	22.6	23.4	10.5	17.8	2.8	10.9	7.9	3.4

Source: Endowment data as reported to Cambridge Associates LLC.

FIGURE 31 MEAN ASSET ALLOCATION BY ASSET SIZE AND INSTITUTION TYPE

As of June 30, 2019 • Percent (%)

	Asset Size				Institution Type				
	Less than $200M	$200M – $500M	$500M – $1B	More than $1B	Coll & Univ	Cult & Env	Ind Schools	Hospital	Other Endow
	(n = 105)	*(n = 66)*	*(n = 51)*	*(n = 97)*	*(n = 164)*	*(n = 51)*	*(n = 29)*	*(n = 31)*	*(n = 44)*
US Equity	**27.6**	**23.9**	**21.1**	**17.2**	**21.0**	**24.0**	**24.5**	**23.3**	**25.8**
Global ex US Equity	**27.2**	**24.5**	**20.6**	**20.1**	**22.0**	**24.9**	**24.6**	**22.6**	**26.9**
Developed Markets	19.4	16.5	13.8	12.5	14.5	16.7	16.9	15.8	18.8
Emerging Markets	7.8	8.0	6.8	7.6	7.5	8.2	7.7	6.8	8.1
Bonds	**13.4**	**11.7**	**10.0**	**6.9**	**8.9**	**11.1**	**9.3**	**14.2**	**14.3**
US Bonds	12.3	11.1	9.4	5.7	8.0	10.3	8.8	12.9	12.8
Global ex US Bonds (DM)	0.2	0.2	0.1	0.7	0.3	0.1	0.1	0.5	0.5
Global ex US Bonds (EM)	0.6	0.2	0.2	0.1	0.2	0.4	0.3	0.3	0.8
High-Yield Bonds	0.3	0.1	0.3	0.4	0.3	0.3	0.1	0.5	0.2
Hedge Funds	**16.9**	**17.4**	**18.3**	**18.6**	**17.2**	**19.4**	**20.1**	**17.7**	**16.5**
Long/Short Hedge Funds	5.5	7.3	7.4	8.3	7.0	7.1	9.1	6.5	6.0
Absolute Return (ex Distressed)	11.4	10.1	11.0	10.3	10.2	12.3	11.0	11.2	10.5
Distressed Securities	**1.6**	**2.8**	**3.9**	**3.4**	**3.0**	**2.9**	**2.8**	**2.9**	**1.7**
Hedge Fund Structure	0.8	1.4	2.1	1.9	1.4	2.0	1.1	1.9	1.0
Private Equity Structure	0.8	1.4	1.8	1.6	1.6	0.9	1.7	1.0	0.7
PE/VC	**4.6**	**8.8**	**13.2**	**18.0**	**14.8**	**7.5**	**6.9**	**8.1**	**4.8**
Non-Venture Private Equity	1.3	3.8	6.2	9.2	7.0	3.0	3.4	4.0	1.7
Venture Capital	2.0	3.6	5.8	8.0	6.5	3.5	2.3	3.1	2.5
Other Private Investments	1.3	1.4	1.1	0.7	1.3	1.0	1.1	1.0	0.7
Real Assets & Infl-Linked Bonds	**5.4**	**6.5**	**8.9**	**10.9**	**9.2**	**6.1**	**6.7**	**6.5**	**6.6**
Private Real Estate	0.3	1.1	2.7	4.3	2.7	1.3	1.6	1.8	1.0
Public Real Estate	0.4	0.5	0.8	0.4	0.6	0.3	0.1	0.5	0.6
Commodities	0.4	0.3	0.1	0.4	0.3	0.3	0.5	0.3	0.3
Public Energy/Nat Resources	2.3	2.5	1.5	0.8	1.6	1.6	1.7	1.5	2.6
Private O&G/Nat Resources	1.3	1.8	3.3	4.4	3.4	2.1	2.4	1.5	1.5
Timber	0.0	0.0	0.1	0.3	0.2	0.0	0.1	0.1	0.0
Inflation-Linked Bonds	0.7	0.3	0.3	0.4	0.5	0.5	0.3	0.7	0.6
Cash & Equivalents	**3.1**	**3.1**	**3.8**	**3.9**	**3.0**	**4.0**	**4.5**	**4.2**	**3.1**
Other	**0.3**	**1.3**	**0.1**	**1.0**	**1.0**	**0.1**	**0.7**	**0.7**	**0.2**

Source: Endowment data as reported to Cambridge Associates LLC.

HISTORICAL ASSET ALLOCATION

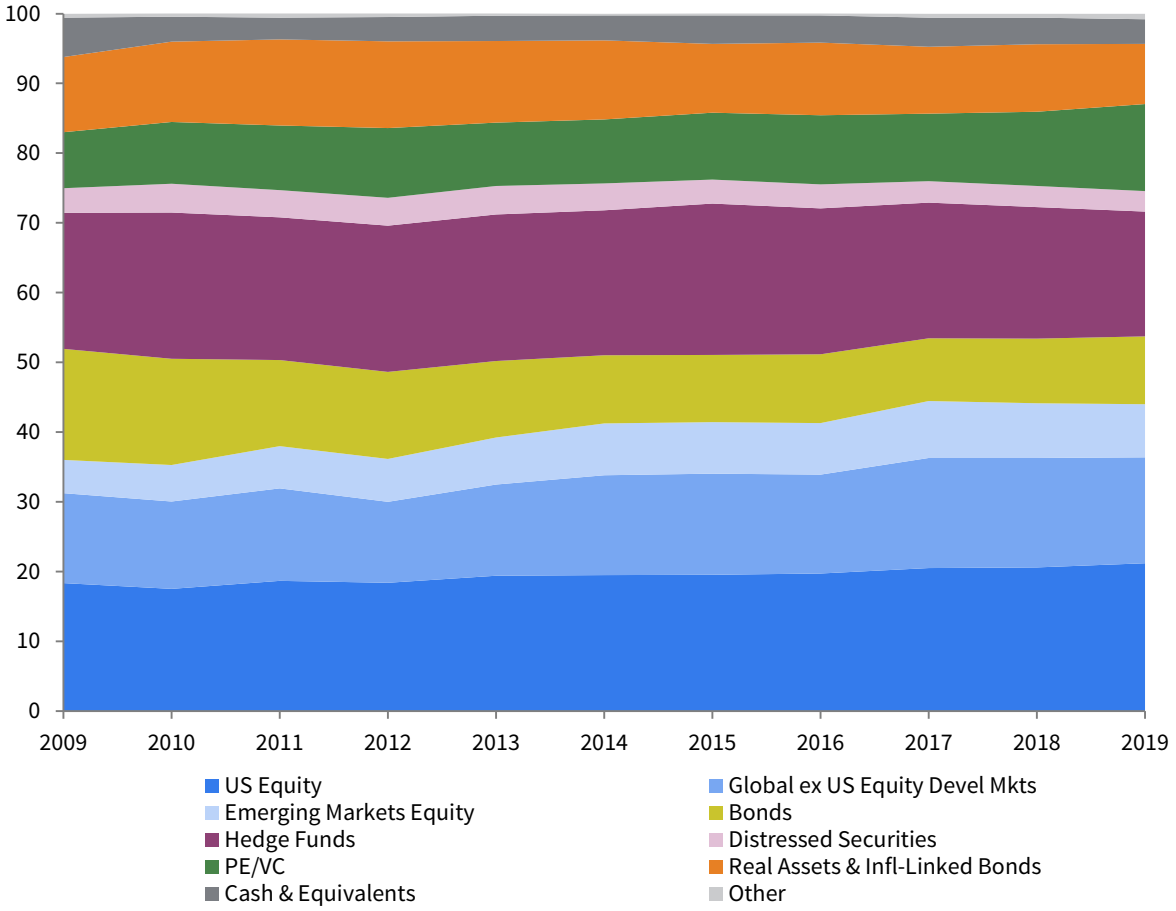
Institutional investors that have adopted the endowment model of investing have seen significant shifts in their asset allocation policies over the last few decades. Exposure to bonds has decreased while the larger equity allocation has become more diversified. The largest endowments pioneered this transition in the 1980s, with the trend spreading among other institutions in the 1990s and then accelerating throughout much of the first decade of the new millennium. By the time of the GFC, most endowments in this study had already built highly diversified portfolios.

Figure 32 shows the trend in average asset allocations for the group of endowments that have participated in the study in each of the last ten years. The beginning of this ten-year period was July 1, 2009, just a few months after the stock market bottoms of the GFC. Average public equity allocations were near their all-time low on this date, and bond allocations had ticked back up after the multi-decade trend downward. In

the ten years since, endowments in general have increased their allocations to both public and private equities while lowering allocations to bonds, hedge funds, and real assets. The largest increase in average allocations over the last decade was to PE/VC (4.4 ppts), while the largest decrease was to bonds (-6.2 ppts).

FIGURE 32 HISTORICAL MEAN ASSET ALLOCATION TRENDS

Years Ended June 30, 2019 • Percent (%)



	Constant Universe										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
US Equity	18.3	17.5	18.7	18.4	19.4	19.5	19.5	19.7	20.5	20.6	21.2
Global ex US Equity Devel Mkts	12.9	12.5	13.2	11.6	13.1	14.3	14.5	14.2	15.8	15.7	15.2
Emerging Markets Equity	4.8	5.2	6.1	6.2	6.8	7.4	7.4	7.4	8.2	7.8	7.6
Bonds	15.9	15.2	12.4	12.4	11.0	9.8	9.6	9.9	9.0	9.2	9.7
Hedge Funds	19.5	21.0	20.5	21.0	21.0	20.8	21.7	20.9	19.5	18.9	17.9
Distressed Securities	3.5	4.2	3.9	4.0	4.1	3.9	3.5	3.5	3.0	3.0	2.9
PE/VC	8.1	8.8	9.3	10.0	9.1	9.2	9.6	9.9	9.7	10.6	12.5
Real Assets & Infl-Linked Bonds	10.8	11.5	12.3	12.5	11.7	11.3	9.9	10.4	9.6	9.7	8.6
Cash & Equivalents	5.6	3.6	3.1	3.5	3.6	3.6	4.1	3.9	4.1	3.8	3.6
Other	0.6	0.5	0.6	0.5	0.3	0.2	0.3	0.3	0.6	0.6	0.8

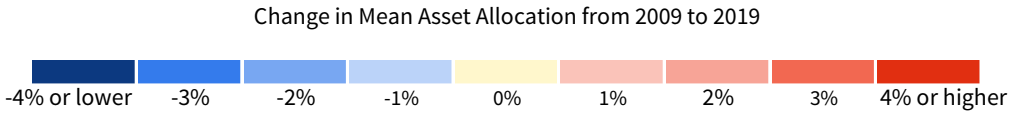
Source: Endowment data as reported to Cambridge Associates LLC.

Note: Analysis is based on a constant universe that includes 220 institutions that provided asset allocation data for each year from 2009 to 2019.

Endowments of various asset sizes followed the same overall trends (Figure 33). Each asset size group saw increases to PE/VC, with the largest endowments reporting the highest average increase (5.9 ppts). Among public equities, it was the smallest endowments that reported the largest increases over the decade. The smallest endowments also reported the biggest change to bonds, with their allocation declining by an average of 8.7 ppts. All asset size groups reported decreases to hedge funds and real assets.

FIGURE 33 TRENDS IN ASSET ALLOCATION BY ASSET SIZE
Means as of June 30 • Percent (%)

	US Equity	Global ex US Dev	Global ex US EM	Bonds	Hedge Funds	Dist Sec	PE/VC	RA & ILBs	Cash & Equiv
Less than $200M (n = 56)									
2009	21.8	15.5	4.1	22.3	18.1	1.7	2.1	7.0	7.3
2019	26.3	19.0	7.9	13.5	17.4	1.4	4.5	6.2	3.4
Change (ppt)									
2009–2019	4.4	3.5	3.9	-8.7	-0.7	-0.3	2.4	-0.7	-3.8
$200M–$500M (n = 44)									
2009	20.5	13.9	4.7	17.3	18.0	3.4	5.5	10.0	6.1
2019	23.3	16.4	7.7	11.4	16.8	3.3	9.6	6.7	3.2
Change (ppt)									
2009–19	2.7	2.5	3.0	-6.0	-1.1	-0.1	4.0	-3.3	-2.9
$500M–$1B (n = 39)									
2009	17.9	12.3	5.0	16.0	19.6	4.7	8.9	10.4	4.4
2019	21.0	14.4	6.7	9.5	17.7	3.8	13.6	8.9	4.1
Change (ppt)									
2009–19	3.1	2.1	1.7	-6.5	-1.9	-0.8	4.6	-1.5	-0.3
More than $1B (n = 81)									
2009	15.0	10.8	5.2	10.8	21.2	4.3	13.2	14.0	4.8
2019	16.6	12.3	7.7	6.3	18.9	3.4	19.1	11.1	3.6
Change (ppt)									
2009–19	1.6	1.5	2.6	-4.4	-2.3	-0.9	5.9	-2.9	-1.2



Source: Endowment data as reported to Cambridge Associates LLC.
Note: Asset sizes are based on June 30, 2019, data.

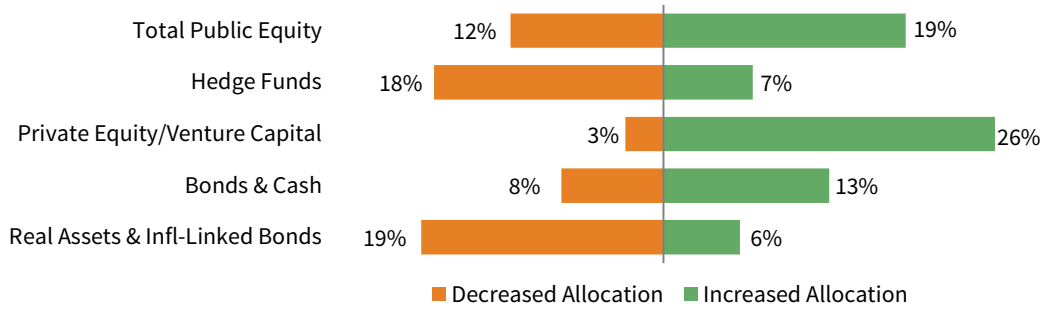
TARGET ASSET ALLOCATION

Though long-term asset allocation trends clearly show how investment policies have evolved over time, one-year changes in actual allocations can be influenced by factors such as asset returns and rebalancing flows. Using shorter-term data can sometimes be misleading for determining whether endowments are altering their long-term asset allocation policies. An analysis of target asset allocations is more suitable for such an evaluation.

As shown in Figure 34, 26% of respondents raised their target allocation to private equity and venture capital in fiscal year 2019, while just 3% lowered their target. The trend was the opposite for hedge funds, where there were more endowments that lowered their target (18%) compared to those that reported an increase (7%). In real assets, the proportion of endowments lowering their target (19%) was more than triple the proportion that reported increases (6%). For both total public equities and bonds & cash, the proportion of endowments reporting an increase was higher than the proportion reporting a decrease.

FIGURE 34 CHANGES IN TARGET ASSET ALLOCATION

June 30, 2018 – June 30, 2019 • Percentage of Institutions Increasing or Decreasing Targets



Source: Endowment data as reported to Cambridge Associates LLC.
Notes: Total public equity excludes institutions that combine public equity together with PE/VC in a single equity category. Private equity/venture capital includes institutions that include PE/VC together with private real assets in a single private investments category.

PRIVATE INVESTMENTS AND UNCALLED CAPITAL COMMITMENTS

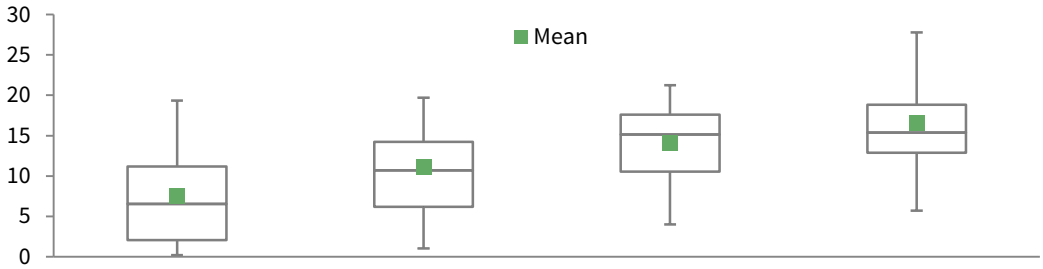
One of the core principles of the endowment model is the use of private investments that, in part due to their illiquid nature, offer the potential for higher long-term returns than those of public equities. Investors should be mindful of the liquidity implications of investing in and funding a private investments program. Uncalled capital represents a commitment of capital to be funded in the future. Although annual spending distributions usually represent the biggest liquidity need of a portfolio, endowments with private investment programs must also consider the potential impact of uncalled capital commitments.

Participating institutions, particularly those with larger asset sizes, have been allocating an increasingly significant portion of their portfolios to private investments. The average asset allocation to private investments for all participants was 17.0% as of June 30, 2019. For endowments greater than $1 billion, the average allocation was even higher at 28.6%.

As Figure 35 shows, uncalled capital commitments as a percentage of the total LTIP increases along with portfolio size. Endowments of less than $200 million reported an average ratio of 7.6% for fiscal year 2019, while those greater than $1 billion reported an average ratio that was more than twice as high (16.6%). The difference is even more stark when considering the ratio of uncalled capital commitments to the LTIP's total liquid assets, which exclude hedge funds and private investments. For endowments greater than $1 billion, uncalled capital commitments represented an average of 36.3% of their total liquid assets. In contrast, the ratio was 11.2% for endowments less than $200 million.

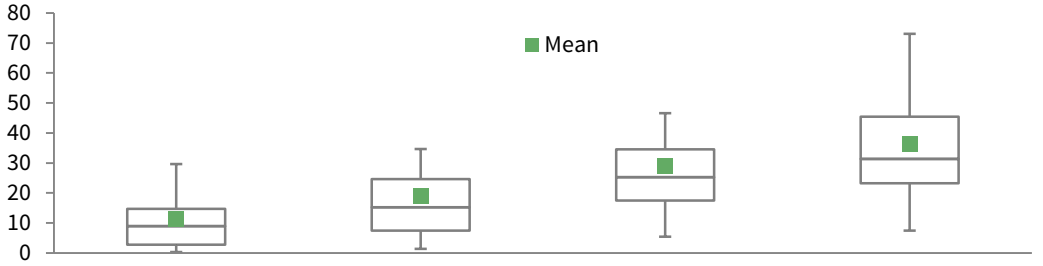
FIGURE 35 UNCALLED CAPITAL COMMITTED TO PRIVATE INVESTMENT FUNDS
As of June 30, 2019 • Percent (%)

Uncalled Capital Commitments as a Percentage of the Total LTIP



	Less than $200M	$200M – $500M	$500M – $1B	More than $1B
5th Percentile	19.3	19.7	21.3	27.8
25th Percentile	11.2	14.2	17.6	18.8
Median	6.6	10.7	15.1	15.4
75th Percentile	2.1	6.2	10.5	12.9
95th Percentile	0.2	1.0	4.0	5.7
Mean	7.6	11.2	14.1	16.6
n	*69*	*61*	*47*	*74*

Uncalled Capital Commitments as a Percentage of the LTIP's Liquid Assets

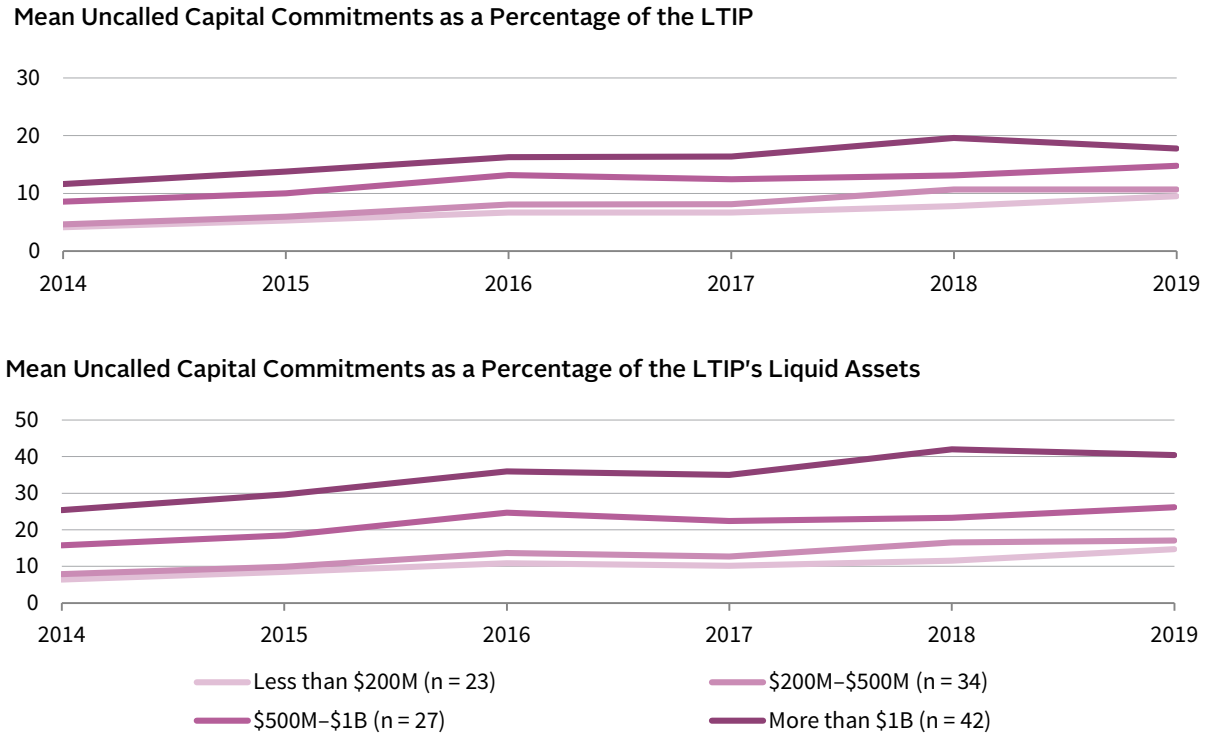


	Less than $200M	$200M – $500M	$500M – $1B	More than $1B
5th Percentile	29.6	34.7	46.6	73.0
25th Percentile	14.6	24.6	34.5	45.4
Median	9.0	15.2	25.3	31.3
75th Percentile	2.7	7.4	17.4	23.2
95th Percentile	0.3	1.3	5.4	7.4
Mean	11.2	19.1	29.0	36.3
n	*69*	*61*	*47*	*74*

Source: Endowment data as reported to Cambridge Associates LLC.
Notes: Uncalled capital is the amount committed, but not yet paid in, to private investment funds. Liquid assets consist of all LTIP assets excluding hedge funds and private investments. Private investments include non-venture private equity, venture capital, distressed securities (private equity structure), private oil & gas/natural resources, private real estate, and timber.

Figure 36 shows the trend over the last five years for these two ratios. The average ratios were considerably higher in 2019 compared to five years prior for each of the asset size groups. This is a result of uncalled capital commitments growing at a much higher rate than the value of the LTIP and its liquid assets. Among all endowments in this analysis, the average amount of uncalled capital commitments increased by 103% over the last five years. Over this same period, the average change in the market value of the LTIP and the portfolio's liquid assets was just 14% and 17%, respectively. These trends imply that private investment allocations as a percentage of the overall portfolio will continue to rise among endowments into the future.

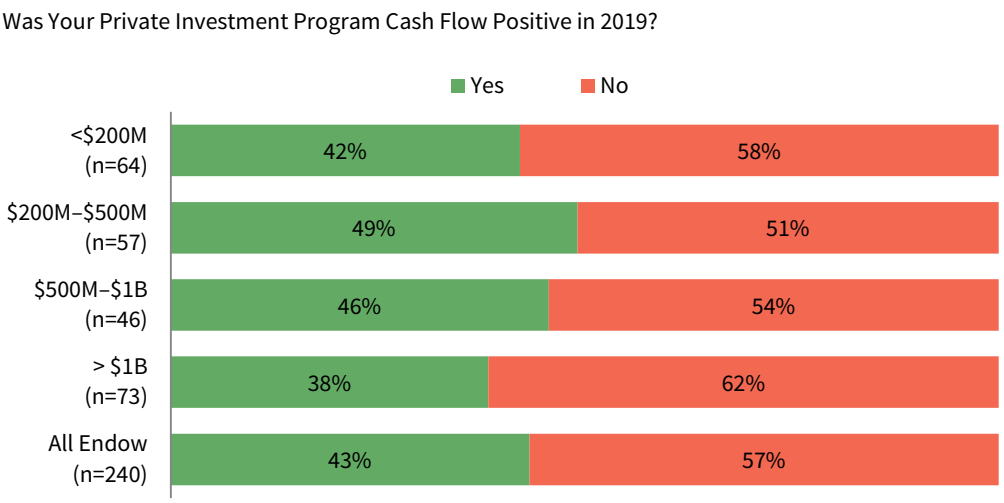
FIGURE 36 TREND IN UNCALLED CAPITAL COMMITMENTS TO PRIVATE INVESTMENT FUNDS
Years Ended June 30 • Percent (%)



Source: Endowment data as reported to Cambridge Associates LLC.
Notes: Uncalled capital is the amount committed, but not yet paid in, to private investment funds. Liquid assets consist of all LTIP assets excluding hedge funds and private investments. Private investments include non-venture private equity, venture capital, distressed securities (private equity structure), private oil & gas/natural resources, private real estate, and timber.

Despite the strong performance of private investments in 2019, most endowments (57%) reported that their private investment programs were cash flow negative for the fiscal year (Figure 37). This is likely because many endowments have been ramping up their private investment allocations, resulting in a phase where paid-in capital was higher than fund distributions. For endowments whose private investment fund distributions are not enough to offset new capital calls, the remaining funding of capital calls has to come from cash reserves or other liquidity sources, which could include proceeds from sales of other investment assets in the LTIP.

FIGURE 37 PRIVATE INVESTMENT PROGRAM CASH FLOW
As of June 30, 2019 • n = 240



Source: Endowment data as reported to Cambridge Associates LLC.
Note: Private investment fund programs were considered cash flow positive if fund distributions were higher than paid in capital calls in 2019.

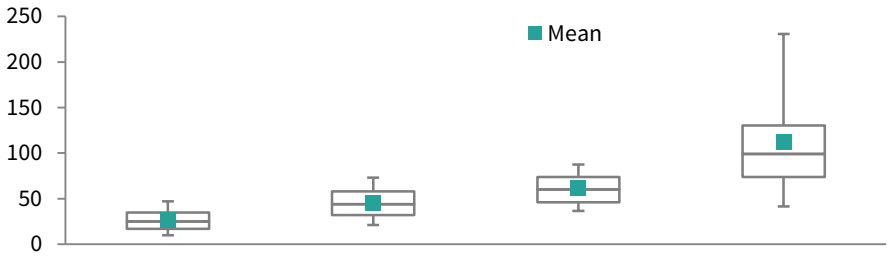
Investment Manager Structures

NUMBER OF EXTERNAL MANAGERS

Many factors contribute to the number of managers employed within an investment portfolio. The scale of total assets under management is a primary factor, as portfolios with more assets generally spread their assets across a greater number of managers. On average, endowments greater than $1 billion employed 113 external investment managers in 2019 (Figure 38). At the opposite end of the asset size spectrum, endowments with assets less than $200 million averaged just 27 managers. While the average number of managers was higher in fiscal year 2019 compared to five years prior for all asset size groups, the trend has leveled off over the last couple of years (Figure 39).

FIGURE 38 NUMBER OF EXTERNAL MANAGERS

As of June 30, 2019

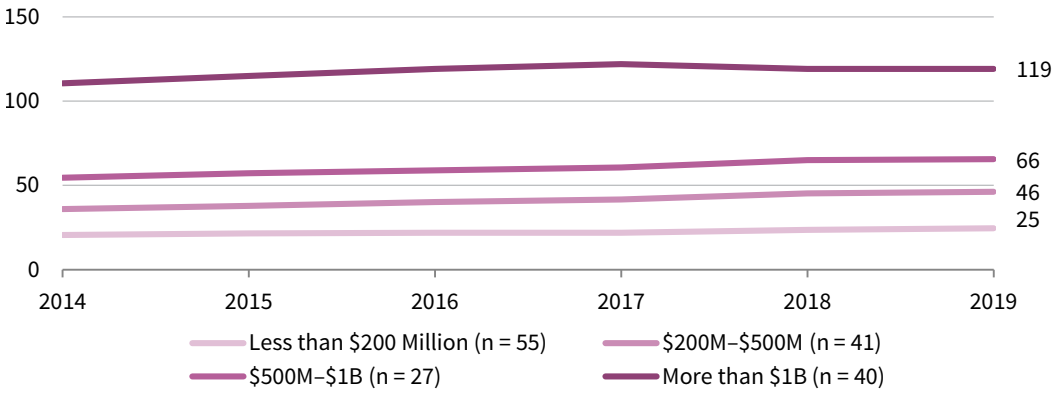


	Less than $200M	$200M – $500M	$500M – $1B	More than $1B
5th %ile	47	73	88	231
25th %ile	35	58	74	131
Median	25	44	60	99
75th %ile	17	32	46	74
95th %ile	10	21	37	42
Mean	27	45	62	113
n	*100*	*65*	*48*	*68*

Source: Endowment data as reported to Cambridge Associates LLC.
Note: Funds-of-funds are counted as one separate investment manager.

FIGURE 39 TREND IN NUMBER OF AVERAGE EXTERNAL MANAGERS

2014–19

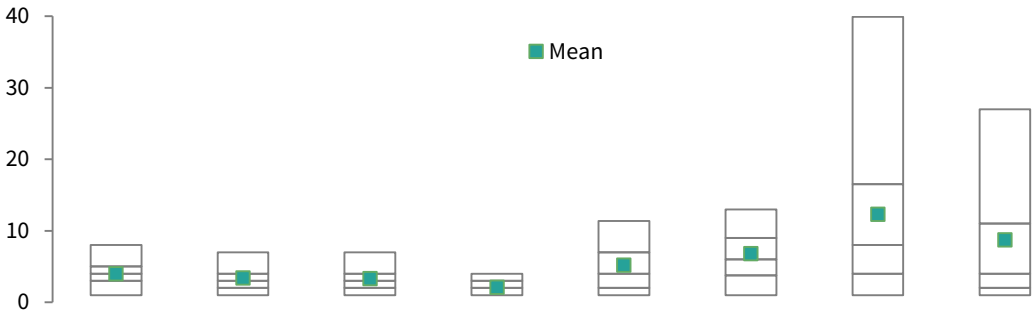


Source: Endowment data as reported to Cambridge Associates LLC.

Even within the broad asset size groups, the range of managers employed can be wide. Among the smallest endowments, the number of managers employed at the 25th percentile (35) is more than double the number used at the 75th percentile (17). For portfolios more than $1 billion, 231 managers are employed at the 5th percentile compared to just 42 at the 95th percentile. Much of the variation can be attributed to the management of alternative asset classes. As Figure 40 shows, the dispersion in the number of alternative asset managers employed, particularly within private investments, is much wider than that of the more traditional equity and bond asset classes. Further detail on these and other asset classes are provided for the four broad asset size groups in Figure 41.

FIGURE 40 DISPERSION IN NUMBER OF MANAGERS FOR SELECTED ASSET CLASSES

As of June 30, 2019



	US Equity	DM ex US Equity	Emerging Markets Equity	US Bonds	Long/Short Hedge Funds	Ab Return Hedge Funds	Private Equity	Venture Capital
5th %ile	8	7	7	4	11	13	40	27
25th %ile	5	4	4	3	7	9	17	11
Median	4	3	3	2	4	6	8	4
75th %ile	3	2	2	1	2	4	4	2
95th %ile	1	1	1	1	1	1	1	1
Mean	4	3	3	2	5	7	12	9
n	*278*	*274*	*279*	*256*	*234*	*268*	*235*	*224*

Source: Endowment data as reported to Cambridge Associates LLC.

Notes: Only those institutions with an allocation to the specific asset class have been included. Funds-of-funds are counted as one manager.

FIGURE 41 EXTERNAL MANAGERS BY STRATEGY

As of June 30, 2019

	Less than $200M		$200M – $500M		$500M – $1B		More than $1B	
Strategy	Average Number of Managers	*n*	Average Number of Managers	*n*	Average Number of Managers	*n*	Average Number of Managers	*n*
Traditional Equity								
Global Equity	2	*75*	3	*51*	4	*25*	4	*45*
US Equity	3	*101*	4	*65*	4	*46*	5	*67*
Developed ex US Equity	3	*99*	3	*64*	3	*46*	5	*66*
Emerging Markets Equity	2	*101*	3	*65*	3	*46*	5	*68*
Traditional Bonds								
Global Bonds	1	*27*	1	*11*	2	*8*	1	*10*
US Bonds	2	*98*	2	*62*	2	*42*	2	*55*
Developed ex US Bonds	1	*3*	1	*2*	1	*3*	2	*9*
Emerging Markets Bonds	1	*4*	1	*3*	1	*3*	1	*7*
High-Yield Bonds	1	*10*	1	*3*	1	*8*	3	*14*
Hedge Funds								
Long/Short Hedge Funds	3	*75*	5	*58*	5	*42*	8	*60*
Absolute Return (ex Dist Securities)	4	*95*	7	*61*	8	*46*	10	*67*
Distressed Securities								
Distressed (Hedge Fund Structure)	1	*30*	2	*39*	2	*38*	3	*40*
Distressed (Private Equity Structure)	2	*50*	3	*55*	5	*44*	6	*57*
Private Investments								
Non-Venture Private Equity	3	*59*	7	*61*	12	*48*	25	*68*
Venture Capital	3	*56*	4	*56*	7	*46*	19	*66*
Other Private Investments	2	*59*	2	*48*	3	*30*	4	*32*
Real Assets & ILBs								
Private Real Estate	2	*39*	3	*48*	6	*45*	13	*67*
Public Real Estate	1	*19*	1	*13*	1	*18*	1	*20*
Commodities	1	*12*	1	*13*	1	*4*	1	*20*
Inflation-Linked Bonds (TIPS)	1	*21*	1	*9*	1	*5*	1	*10*
Private Oil & Gas / Natural Resources	2	*47*	4	*50*	5	*44*	10	*65*
Timber	1	*1*	1	*3*	2	*8*	2	*31*
Public Energy/Natural Resources	1	*60*	2	*45*	2	*27*	3	*30*
Diversified (Multi-Strategy) RA	1	*21*	1	*7*	1	*3*	2	*3*
Cash (Dedicated Cash Managers Only)	1	*88*	2	*59*	2	*40*	2	*45*
Tactical Asset Allocation	1	*7*	1	*5*	–	–	1	*2*
Other	1	*6*	1	*10*	1	*3*	3	*12*

Source: Endowment data as reported to Cambridge Associates LLC.

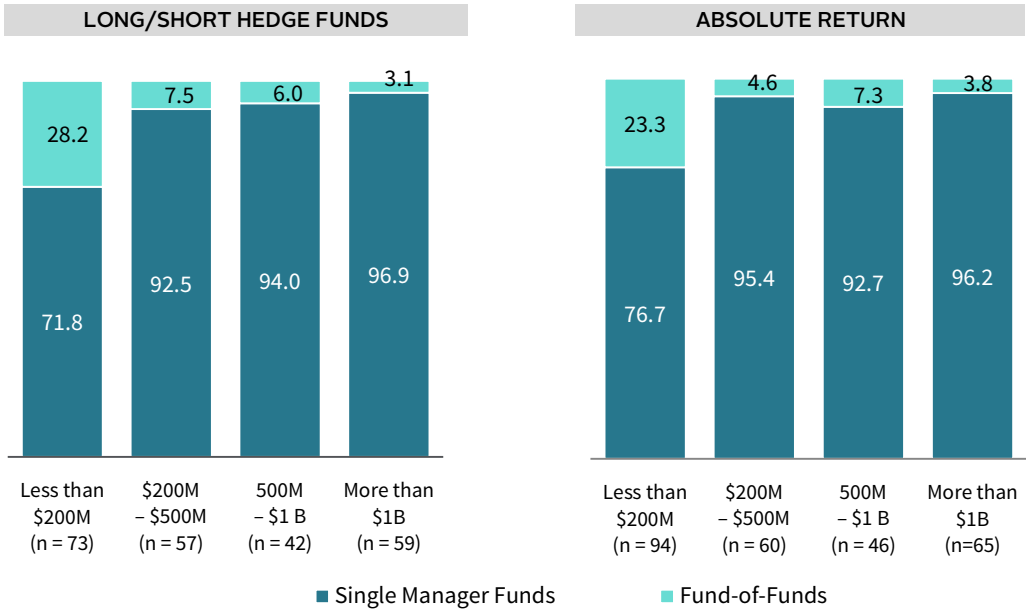
Notes: *n* indicates the number of institutions that are included in the average number of managers. Only those institutions with an allocation to the specific asset class are included in each category. As a result, the sum of the individual asset classes will not equal the true total average of managers.

ASSET CLASS IMPLEMENTATION

HEDGE FUNDS. There are two primary types of investment vehicles that endowments use when implementing their hedge funds allocations. A single manager fund is a type of investment vehicle where the investment manager makes the decisions for the securities and assets held within the fund. In contrast, a fund-of-funds is a type of strategy where the investment manager invests in a collection of other investment funds. Figure 42 shows the average breakdown of hedge funds allocations across the two implementation categories. While single manager funds make up the majority of hedge fund allocations for all asset size groups, endowments less than $200 million have the highest exposure to fund-of-funds managers. On average, these smallest endowments use fund-of-funds for 28% and 23% of their long/short hedge funds and absolute return allocations, respectively.

FIGURE 42 PORTFOLIO IMPLEMENTATION: HEDGE FUNDS

As of June 30, 2019 • Equal-Weighted Means (%)



Source: Endowment data as reported to Cambridge Associates LLC.

Note: Analysis shows the average allocation of assets across the implementation categories for each peer group.

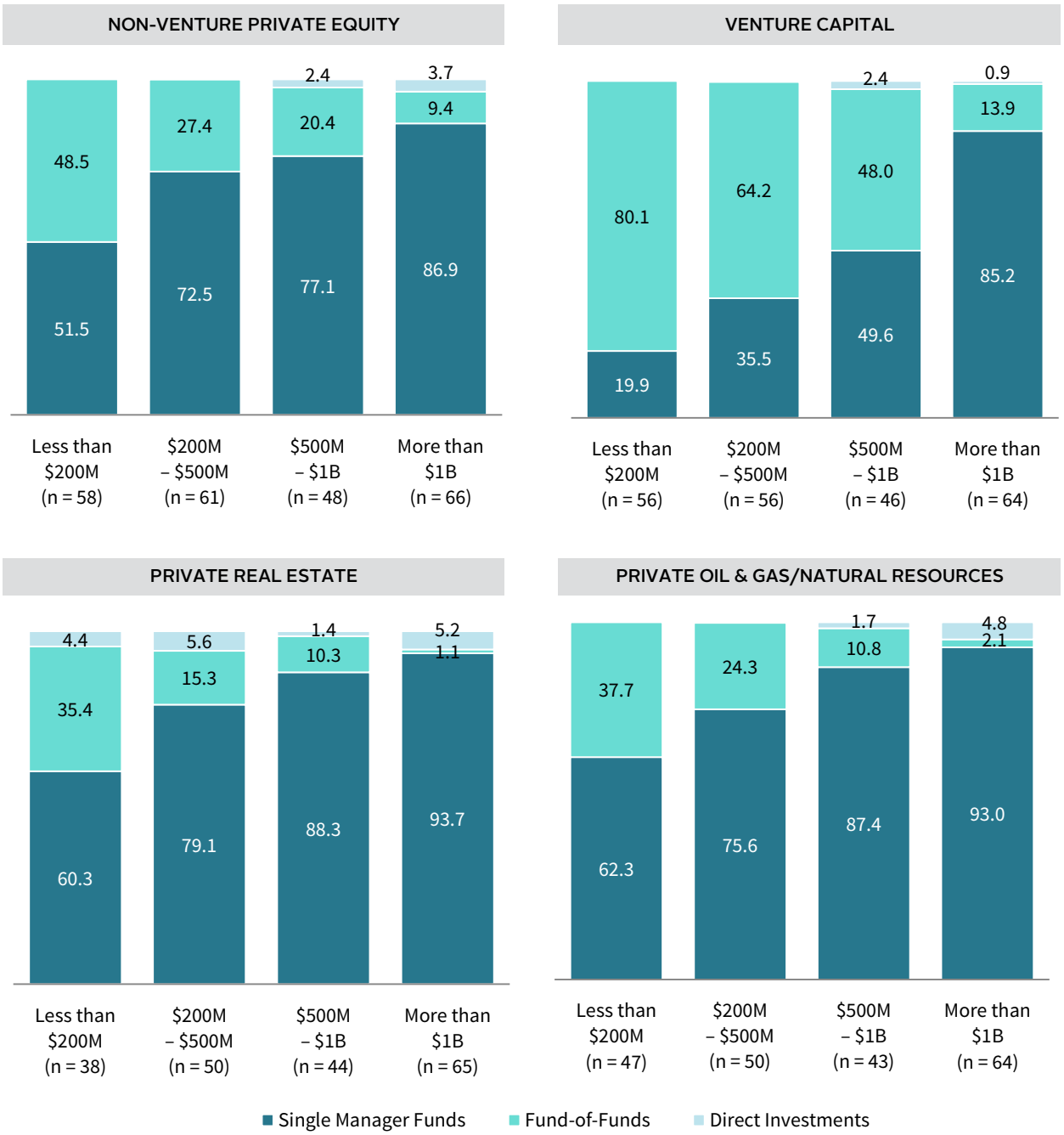
PRIVATE INVESTMENTS. Single manager funds and fund-of-funds are also common investment vehicles used to implement private investment allocations. In addition, some endowments use direct investments to implement some of their private investment allocations. Direct investments can take the form of co-investments that are made alongside a general partner or solo investments that are originated by the endowment itself.

Compared to hedge funds, implementation practices are more varied across private investment asset classes. The average breakdown of allocations by implementation category shows how experiences differ by asset size. For endowments less than $200 million, an average of 49% of non-venture private equity and 80% of venture capital

was invested via fund-of-funds (Figure 43). The experience is the opposite for endowments greater than $1 billion, where more than 85% of both non-venture private equity and venture capital was implemented through single manager funds, on average.

Most of the private real estate and private oil & gas allocations are invested in single manager funds across all asset size groups. Similar to the private equity categories, the average percentage of allocations implemented through single manager funds is higher as endowment size increases.

FIGURE 43 PORTFOLIO IMPLEMENTATION: PRIVATE INVESTMENTS
As of June 30, 2019 • Equal-Weighted Means (%)



Source: Endowment data as reported to Cambridge Associates LLC.
Note: Analysis shows the average allocation of assets across the implementation categories for each peer group.

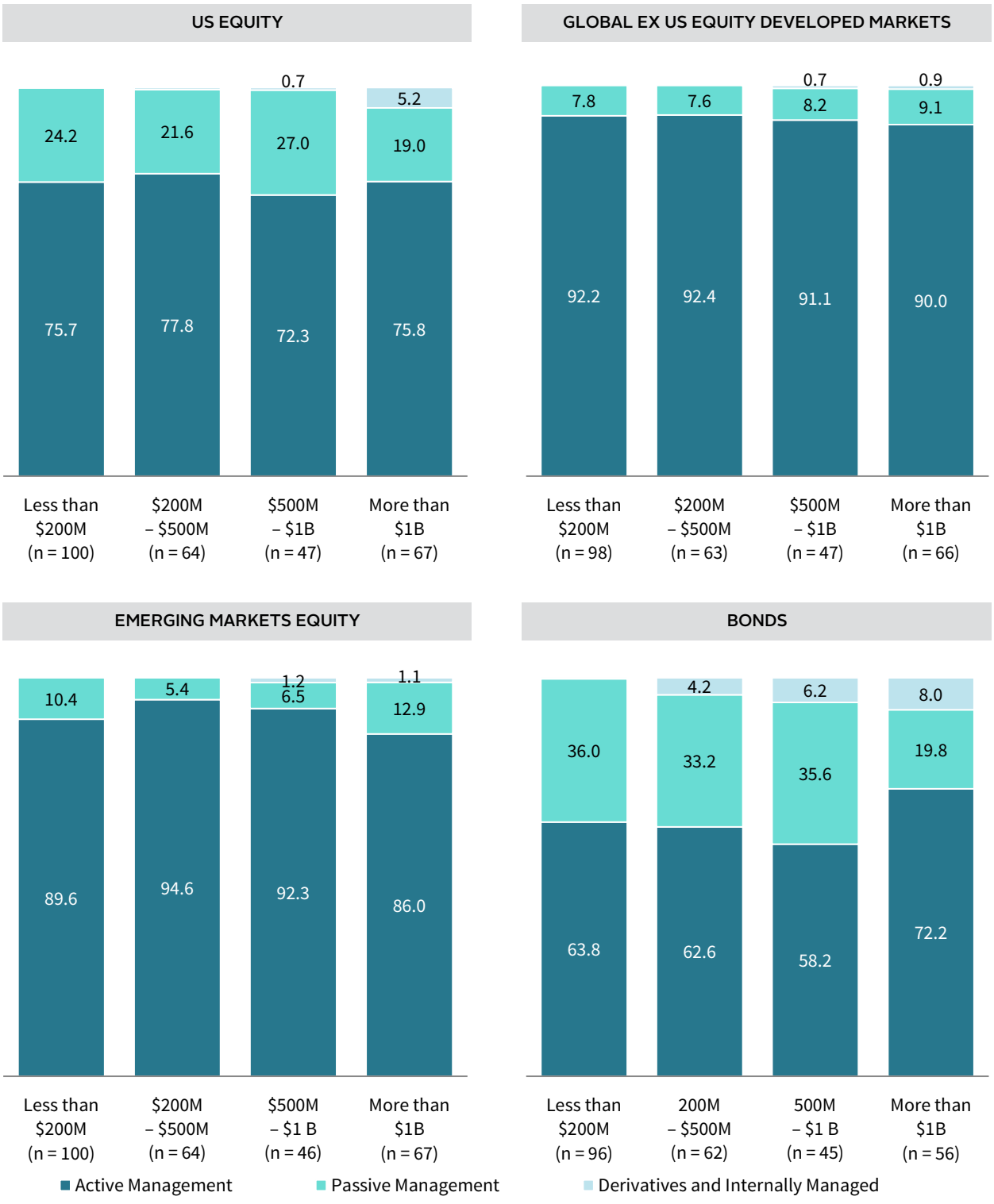
PUBLIC EQUITIES AND BONDS. For traditional bonds and equities, endowments primarily use external managers to implement their allocations. These assets are invested either through active or passively managed investment vehicles. Some endowments also manage assets internally or use derivatives to achieve desired exposures. The use of these implementation methods is most common among the largest endowments.

When considering the average breakdown of US equity allocations, the majority of assets are invested via active managers (Figure 44). The proportion of assets invested through active managers is similar across all asset size groups. For global ex US equities, the average proportion of allocations invested through active managers is even higher. Similar to US equity, the proportion of assets invested through active managers varies little when looking across asset size groups.

Passive management tends to be more common among bonds than it is in the public equity categories. For endowments less than $1 billion, a little over one-third of the average allocation is implemented passively. The proportion is lower for larger endowments, where an average of 20% of the bond allocation is invested through passive funds.

FIGURE 44 PORTFOLIO IMPLEMENTATION: TRADITIONAL EQUITIES AND BONDS

As of June 30, 2019 • Equal-Weighted Means (%)



Source: Endowment data as reported to Cambridge Associates LLC.

Note: Analysis shows the average allocation of assets across the implementation categories for each peer group.

Additions to and Withdrawals from the LTIP

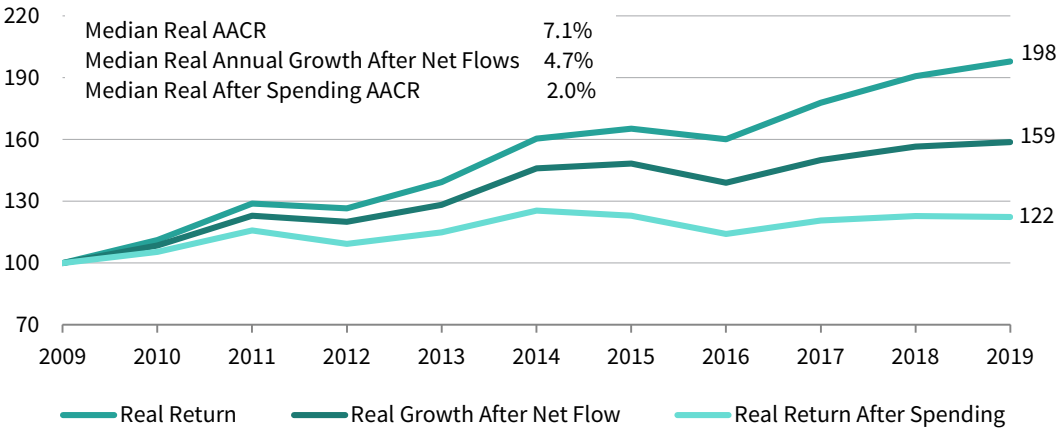
NET FLOW RATE

Traditionally, endowment health has been evaluated in terms of investment performance and endowment spending or payout rate. A key objective has been to achieve real investment returns that exceed the average annual payout rate over the long term. Figure 45 is based on median data for the group of participants that provided returns, LTIP market values, and spending rates over the last decade. Using median investment performance and starting with an initial investment of $100 in 2009, the portfolio would have almost doubled on an inflation-adjusted basis by the end of fiscal year 2019, growing to $198 in real dollars. After deducting the annual spending distributions from real investment performance, the investment would have grown to $122 and experienced a much smaller growth rate in purchasing power. This approach omits an important part of the picture: the LTIP is also driven by inflows that come in as gifts and other funds designated for long-term investment.

The combination of the total inflows and outflows for the LTIP constitutes the net flow rate. In the same figure, the actual value of the investment, which incorporates both real investment performance and net flows, is tracked by the middle line and grew by 59% over the ten-year period. Because of the steady inflow from gifts and other additions that most institutions experienced, the actual growth in the portfolio was substantially higher than growth based on returns after spending only. Since maintaining the purchasing power of existing endowment gifts is a key objective in endowment management, the traditional return-after-spending statistic should not be dismissed. However, this statistic can understate the actual extent of asset growth. By incorporating real investment performance with the overall net flow rate, an institution can better evaluate the trajectory of the LTIP's role in the institution's business model.

FIGURE 45 CUMULATIVE DOLLAR GROWTH AFTER INFLATION, NET FLOWS, AND SPENDING

Years Ended June 30 • 2009 = $100 • n = 98



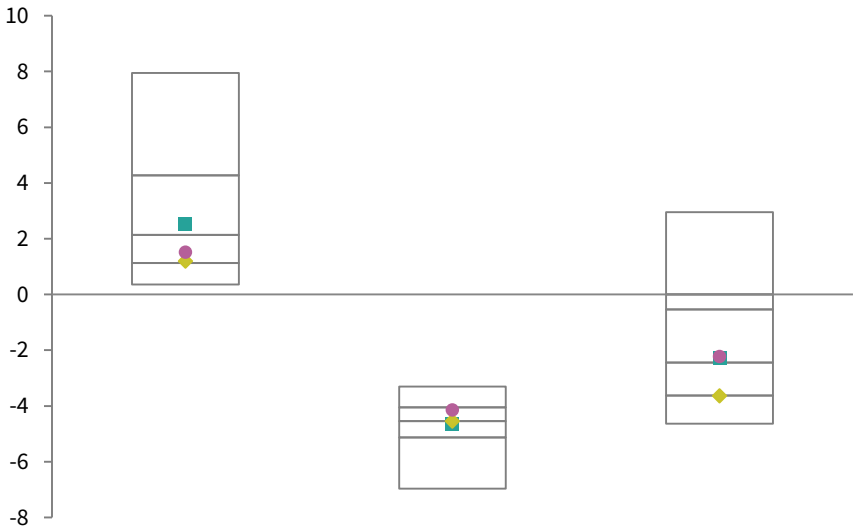
Source: Endowment data as reported to Cambridge Associates LLC.

Notes: To limit the impact of outliers, median data are used for each statistic in this chart. The median real annual growth after net flows represents the actual growth in the long-term investment portfolio's market value adjusted for inflation.

The net flow rate is calculated as a percentage of the LTIP market value at the beginning of the fiscal year. As is typically the case, the median (-2.4%) net flow rate for participants in fiscal year 2019 was negative, meaning the amount of withdrawals from the portfolio surpassed the amount of additions for most respondents (Figure 46). The median outflow rate was -4.5%, while the median inflow rate was 2.1%. The median net flow rate was lowest for cultural and environmental institutions (-3.6%). Colleges and universities and independent schools reported median net flow rates of -2.3% and -2.2%, respectively.

FIGURE 46 INFLOW, OUTFLOW, AND NET FLOW RATES

Fiscal Year 2019



	Inflow Rate	Outflow Rate	Net Flow Rate
5th %ile	7.9	-3.3	3.0
25th %ile	4.3	-4.1	-0.5
Median	2.1	-4.5	-2.4
75th %ile	1.1	-5.1	-3.6
95th %ile	0.4	-7.0	-4.6
n	*116*	*116*	*116*
Colleges & Universities	2.5	-4.6	-2.3
Cultural & Environmental	1.2	-4.5	-3.6
Independent Schools	1.5	-4.1	-2.2

Source: Endowment data as reported to Cambridge Associates LLC.

Notes: All rates are expressed as a percentage of the beginning year LTIP market value. Included in this analysis are 91 colleges and universities, 13 cultural and environmental institutions, and 12 independent schools.

INFLOW RATE. Endowment gifts typically represent the bulk of the inflows that an LTIP receives. On average, endowment gifts represented 71% of total inflows in fiscal year 2019 among participants. Other types of inflows can include reinvested operating surpluses, capital campaign funds, proceeds from non-portfolio asset sales, and other various types of additions. The inflow rate among all endowments in fiscal year 2019 ranged from 7.9% at the 5th percentile to 0.4% at the 95th percentile. Colleges and universities reported the highest median inflow rate at 2.5% (Figure 46).

OUTFLOW RATE. The vast majority of outflows consist of distributions determined by the endowment spending policy. On average, spending policy distributions represented 87% of total outflows in fiscal year 2019 among participants. Other types of outflows consist of special one-time appropriations as well as recurring annual distributions to cover administrative costs and expenses. Compared to inflow rates, the range of outflow rates among participants fell within a narrower band, from -3.3% at the 5th percentile to -7.0% at the 95th percentile.

SPENDING POLICIES

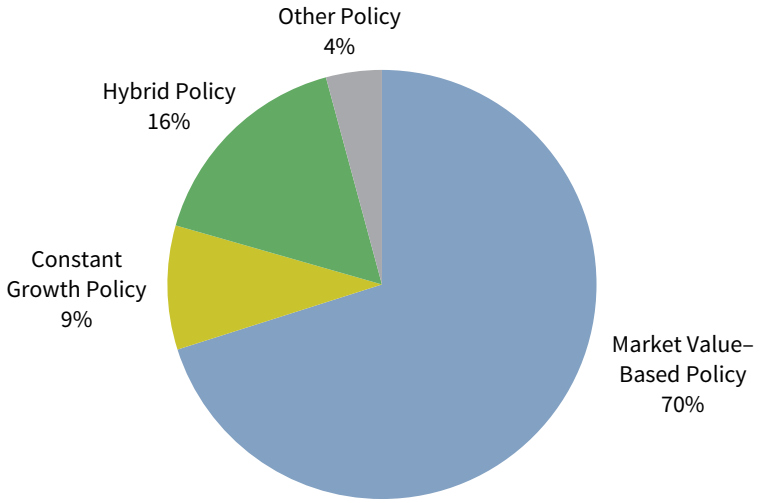
An institution's spending policy serves as a bridge that links the LTIP and the enterprise. The spending policy should be designed to balance the needs of current and future generations of stakeholders with the goals of providing appropriate levels of support to operations and preserving, or even growing, endowment purchasing power.[7]

The majority (70%) of responding institutions continue to use a market value–based rule, which dictates spending a percentage of a moving average of endowment market values (Figure 47). By using a target spending rate, this rule type links the spending distribution amount directly to the endowment's market value. The annual distribution will grow in periods where portfolio values trend upward and decrease after periods where portfolio values experience significant declines. By curtailing spending after the market value declines, this rule type places an emphasis on preserving the endowment's purchasing power.

Approximately 9% of respondents use a constant growth rule. This rule type increases the prior year's spending amount by a measure of inflation and/or a prespecified percentage. Institutions tend to use this rule type when the endowment is a significant source of operating revenue and volatility in annual spending distributions is less tolerable. Though the strict application of a constant growth rule produces predictable spending, most institutions using this rule type impose a spending cap and floor based on a percentage of the endowment's market value, or a moving average of market values. Spending collars essentially transform the constant growth rule to a market value–based rule in times of significant endowment growth or contraction to avoid a complete disconnect between spending and the endowment market value.

7 For a more in-depth discussion on this topic please see William Prout et al., "Spending Policy Practices," Cambridge Associates Research Report, 2019.

FIGURE 47 SPENDING POLICY TYPES
Fiscal Year 2019 • n = 214

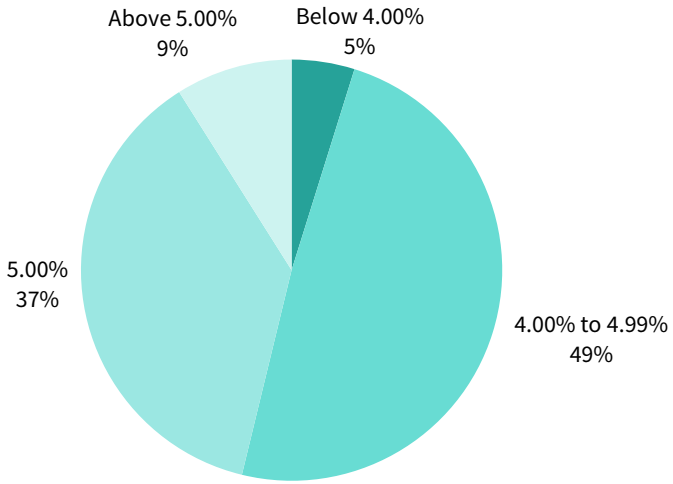


Source: Endowment data as reported to Cambridge Associates LLC.

Another 16% of respondents use a hybrid spending rule, which blends the more predictable spending element of a constant growth policy with the asset preservation principle of a market value–based policy and allows an institution to set the appropriate mix that best meets its needs. The rule is expressed as a weighted average of a constant growth rule and a percentage-of-market-value (or average market value over a period of time) rule.

TARGET SPENDING RATES. The most common target spending rate for market value–based rules continues to be 5%, which was cited by more than one-third (37%) of respondents in fiscal year 2019 (Figure 48). A little less than half (49%) of endowments reported a target spending rate that ranged between 4% and 4.99%.

FIGURE 48 TARGET SPENDING RATES FOR MARKET VALUE–BASED RULES
Fiscal Year 2019 • n = 145



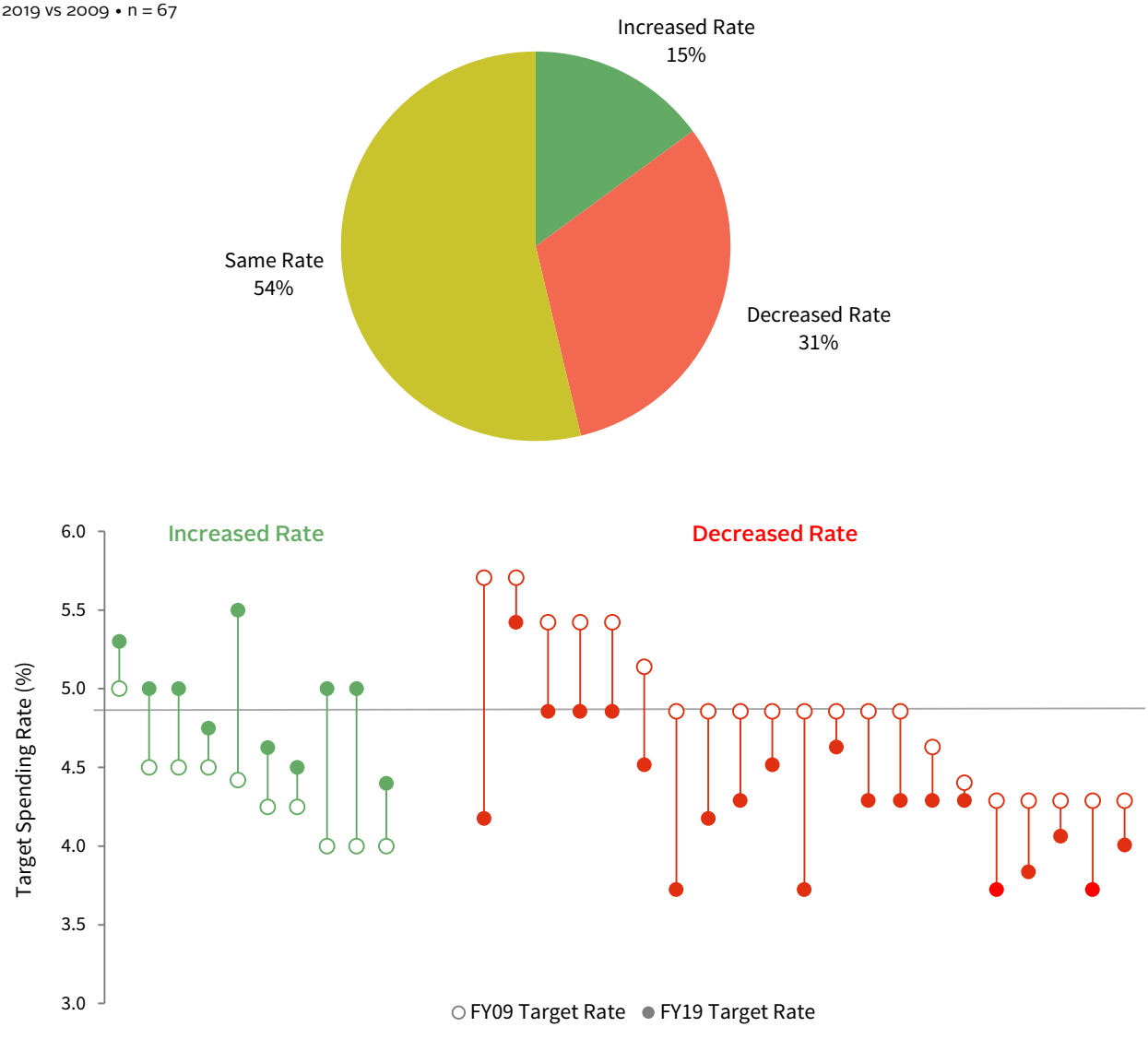
Source: Endowment data as reported to Cambridge Associates LLC.

Figure 49 considers endowments that use a market value–based rule and reported spending rule data for fiscal years 2019 and 2009. A litte more than half (54%) of respondents used the same target spending rate in 2019 compared to ten years prior. The remaining respondents switched to a different target rate over the course of the last decade. The percentage of endowments that decreased their rate was more than double the proportion that reported an increase (31% versus 15%).

The level of spending from ten years ago was a distinguishing characteristic when separating those that decreased their rate from those that increased their rate. Among the group of endowments that decreased their target spending rate, most (14 of 21) were using a rate that was equal to or more than 5% in 2009. In contrast, nine of the ten endowments that increased their spending rates were using a rate that was below 5% in 2009.

FIGURE 49 CHANGES IN TARGET SPENDING RATES FOR MARKET VALUE–BASED SPENDING POLICIES

2019 vs 2009 • n = 67



Source: Endowment data as reported to Cambridge Associates LLC.

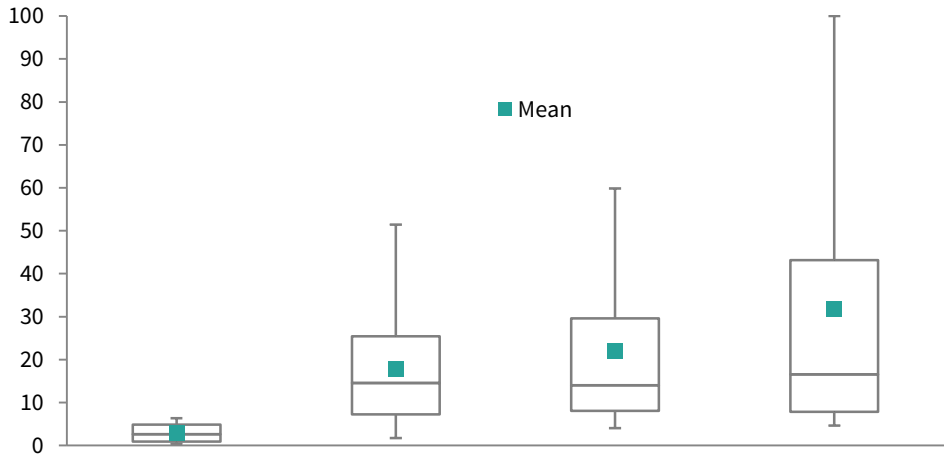
Notes: This analysis reflects data for the institutions using a market value–based spending policy that also provided the target rate used in their spending calculation for fiscal year 2009. If a range was provided, the target spending rate was calculated using the midpoint of the range.

LTIP SUPPORT OF OPERATIONS

Since few nonprofit institutions generate enough revenues from their core operations to break even on their annual operating budgets, many rely on their LTIP to provide additional financial support. The level of LTIP support varies considerably among the institutions in this study. Spending distributions supported 1% or less of the operating budget for some institutions, while for others it is the single largest source of revenue.

Public universities, which receive financial support from state appropriations, generally rely less on the LTIP to fund the operating budget compared to private colleges and universities and other nonprofits. For the 19 public universities that provided data, median support from the LTIP as a percentage of operating expenses was 2.6% in 2019. Median support for private colleges and universities was considerably higher at 14.5% (Figure 50). Reliance upon the endowment was similar among independent schools and cultural and environmental institutions, as median support of the operating budget was 16.5% and 14.0%, respectively.

FIGURE 50 LTIP SUPPORT OF OPERATIONS
Fiscal Year 2019



	Public Coll & Univ	Private Coll & Univ	Cultural & Environmental	Independent Schools
5th %ile	6.3	51.4	59.9	100.0
25th %ile	4.8	25.4	29.6	43.1
Median	2.6	14.5	14.0	16.5
75th %ile	0.9	7.2	8.1	7.8
95th %ile	0.4	1.7	4.0	4.7
Mean	3.0	17.8	22.0	31.7
n	*19*	*75*	*15*	*15*

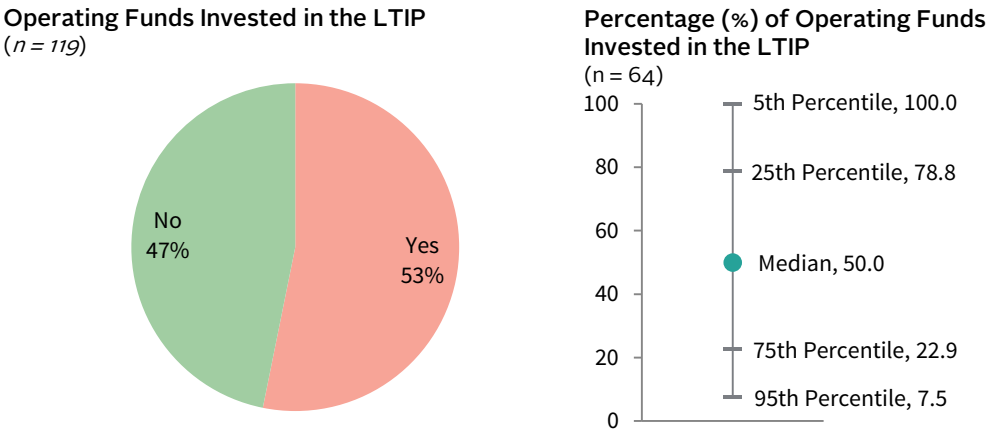
Source: Endowment data as reported to Cambridge Associates LLC.
Note: LTIP support of operations is the proportion of the operating budget that is funded from LTIP payout.

ENDOWMENT PAYOUT COVERAGE RATIOS

As discussed earlier in this section, the endowment spending policy distribution accounts for the vast majority of the annual outflows from the LTIP. Since most spending rules incorporate some measure of the endowment's market value, institutions can be susceptible to decreases in endowment spending following periods of market decline. Similarly, institutions may prefer to avoid liquidating certain assets at depressed prices during market bottoms. In such instances, institutions may seek to replace a portion of endowment spending or supplement it by drawing funds from other liquidity sources. Following is a discussion of two coverage metrics that compare the market value of operating funds and the amount available under lines of credit to endowment spending. While credit lines and operating funds can be used for many different purposes by an institution, the coverage ratios we show here provide hypothetical markers for institutions to evaluate their endowment payout in relation to these sources of liquidity.

OPERATING FUNDS. More than half of the institutions (53%) that provided data on their operating funds invest a portion of those funds in the LTIP. The median percentage of operating funds invested in the LTIP was 50%, but this percentage varies considerably across respondents (Figure 51).

FIGURE 51 OPERATING FUNDS
Fiscal Year 2019



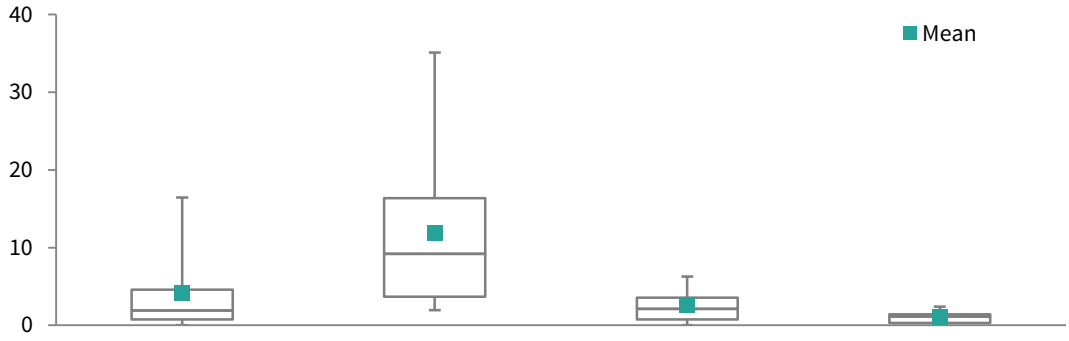
Source: Endowment data as reported to Cambridge Associates LLC.

There were 99 respondents that reported data on their operating funds and endowment spending policy distribution. The coverage ratio displayed in Figure 52 considers the amount of operating funds outside of the LTIP in relation to the endowment spending policy distribution. The median ratio among all respondents was 1.9. At this level, there would be enough operating funds outside the LTIP to cover almost two full years of endowment spending.

FIGURE 52 ENDOWMENT PAYOUT COVERAGE RATIOS

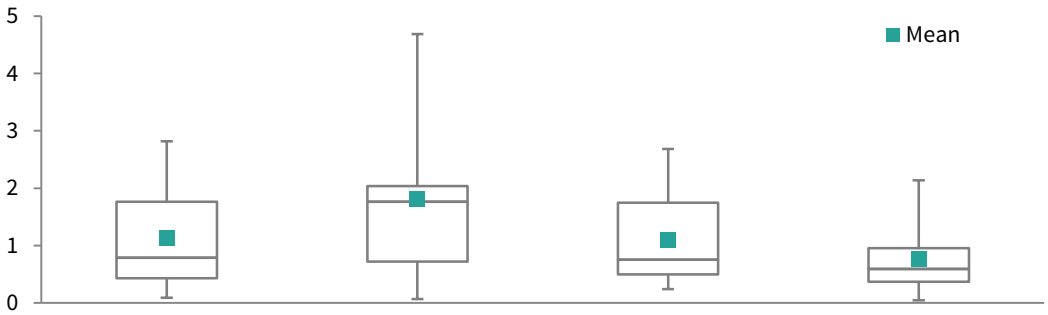
As of June 30, 2019

Ratio of Operating Funds Outside LTIP to Endowment Spending Policy Distribution



	All Institutions	Low LTIP Support	Moderate LTIP Support	High LTIP Support
5th %ile	16.4	35.1	6.3	2.4
25th %ile	4.6	16.4	3.5	1.4
Median	1.9	9.2	2.1	1.1
75th %ile	0.8	3.7	0.7	0.3
95th %ile	0.0	2.0	0.0	0.0
Mean	4.1	11.9	2.6	1.1
n	*99*	*21*	*43*	*30*

Ratio of Available Line of Credit to Endowment Spending Policy Distribution



	All Institutions	Low LTIP Support	Moderate LTIP Support	High LTIP Support
5th %ile	2.8	4.7	2.7	2.1
25th %ile	1.8	2.0	1.7	1.0
Median	0.8	1.8	0.7	0.6
75th %ile	0.4	0.7	0.5	0.4
95th %ile	0.1	0.1	0.2	0.0
Mean	1.1	1.8	1.1	0.8
n	*73*	*16*	*30*	*26*

Source: Endowment data as reported to Cambridge Associates LLC.

Notes: Subgroups in this analysis are based on the proportion of the operating budget that is funded from LTIP payout. The subgroups are broken out as follows: low LTIP support, less than 5%; moderate LTIP support, 5% to 20%; and high LTIP support, greater than 20%. Available line of credit is calculated as the total amount of all credit lines net of any amounts drawn against those lines as of June 30, 2019.

For institutions that rely little on the LTIP to support the operating budget, spending distributions are often lower relative to other aspects of the business model. Indeed, the ratio of operating funds outside the LTIP to the endowment spending policy distribution is generally higher among institutions in this study that have lower LTIP support. Institutions that have low LTIP support (5% or less) reported a median ratio of 9.2. Respondents with a moderate reliance on LTIP support reported a median ratio of 2.1, while those with a high reliance on LTIP support reported a median of 1.1.

LINES OF CREDIT. There were 73 respondents that reported data on their line(s) of credit and endowment spending policy distribution. Among these institutions, the median ratio of available line of credit to endowment spending policy distribution was 0.8 for fiscal year 2019. A ratio less than 1.0 means that there are not enough funds available to be drawn from the credit lines to replace the entire annual endowment spending policy distribution.

Similar to the coverage ratio that focused on operating funds, this ratio also tends to be higher for institutions that have lower levels of LTIP support. Institutions that rely the least on the LTIP to support the operating budget reported a median ratio of 1.8. Respondents with a moderate reliance on LTIP support reported a median ratio of 0.7, while those with a high reliance reported a similar median ratio (0.6).

Investment Office Staffing and Governance

In this section, we provide a snapshot of endowment management in 2019 and highlight relevant trends over the past year. A little more than half of this year's participants (175 of 319) responded to this section of our survey, including 37 endowments with assets greater than $3 billion, 41 that fall between $1 billion and $3 billion, 31 that fall between $500 million and $1 billion, and 66 less than $500 million. Some institutions chose not to respond to every question within this section, or the question was not applicable to them. The universe size for each analysis is noted in the subsequent figures.

INVESTMENT OFFICE STAFFING AND OUTSIDE RESOURCES

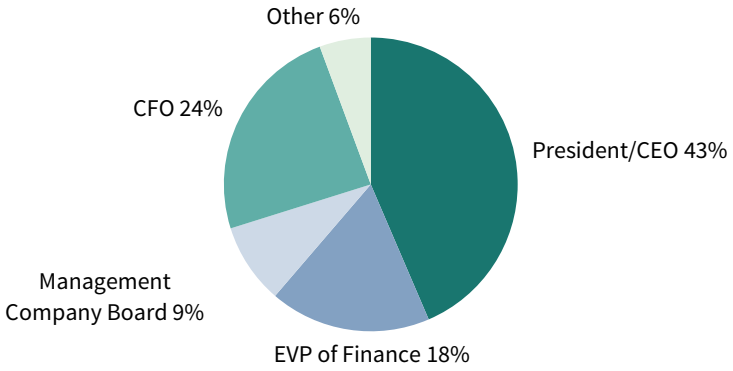
The primary mission of an investment office is to assume day-to-day responsibility for the endowment and other investment assets. This mission will be defined by the set of functions that internal investment office staff will carry out or oversee. Since both the investment philosophy and the demands on the office will vary among institutions, each office will have its own unique profile. Therefore, when evaluating the current structure or anticipated growth of an investment office, it is important to consider not only the size of the asset base but also the portfolio complexity (whether handled by internal or external resources), the secondary demands on the staff (i.e., treasury functions), the use of outside consultants or advisors, and the level of involvement by boards and committees. Both the number of internal professional investment staff and the depth of specialization required to successfully manage the asset base will fluctuate based on these characteristics.

CHIEF INVESTMENT OFFICER. The presence of a dedicated Chief Investment Officer (CIO) correlates with asset size and is most common at larger endowments. Nearly all (96%) of the respondents with endowments greater than $1 billion have a full-time CIO, while 63% of respondents with assets between $500 million and $1 billon indicated they had a CIO in place. The percentage is drastically lower for endowments less than $500 million, where only 6% of respondents have a CIO.

Organizations with smaller asset sizes rely more heavily on outside advisors or a chief financial officer to oversee investment assets. In these cases, the chief financial officer might work closely with external investment advisors to develop an investment strategy and monitor investment managers. It is also becoming more commonplace for endowments of this size to outsource some or the entire portfolio to an OCIO. Where there is a CIO, it is most common for the position to report directly to the CEO or President of the institution (Figure 53).

FIGURE 53 CHIEF INVESTMENT OFFICER REPORTING LINES

Fiscal Year 2019 • n = 124



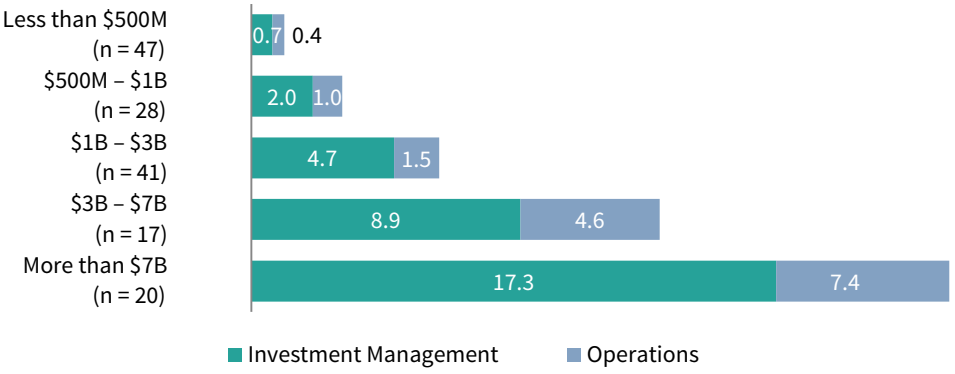
Source: Endowment data as reported to Cambridge Associates LLC.

STAFFING LEVELS. Investment office personnel are typically divided into investment management and investment operations. Investment management staff is responsible for implementing the investment policy of the committee and can include: a chief investment officer, risk officer(s), investment director(s), investment officer(s), portfolio manager(s), and analyst(s). Investment operations staff is responsible for the management of custodian and broker relationships, transaction processing, capital call management, endowment accounting, performance measurement, and in some cases conducting operational due diligence on investment managers.

Our survey shows that investment office staffing typically correlates with asset size. This is perhaps not surprising, as larger portfolios tend to invest with more fund managers and favor a more active investment approach, which can require more resources. On average, endowments that oversee more than $7 billion in assets employ a total of 24.7 full-time equivalent (FTE) split between investment management and operations, while endowments with assets between $3 billion and $7 billion are just more than half of that size at 13.5 FTE (Figure 54). Endowments less than $1 billion have much smaller in-house investment resources (if any) and use outside professionals to mange or assist in managing the investment portfolio.

FIGURE 54 AVERAGE STAFFING LEVELS

Fiscal Year 2019 • Number of Full-Time Equivalents (FTEs)



Source: Endowment data as reported to Cambridge Associates LLC.

Personnel consisted of a mixture of senior-, mid-, and junior-level positions. Senior investment professionals typically carry the title of Investment Director or Managing Director and have more than ten years of professional experience. Mid-level professionals can hold the titles of Investment Officer or Associate and bring five to ten years of experience. Junior-level positions are usually recent graduates or those with a few years of experience. Junior positions usually carry the title of Investment Analyst or Associate. Figure 55 provides the average FTEs by asset size and position levels for investment management and operations positions.

FIGURE 55 AVERAGE INVESTMENT STAFF BY FUNCTION

Fiscal Year 2019 • Number of Full-Time Equivalents (FTEs)

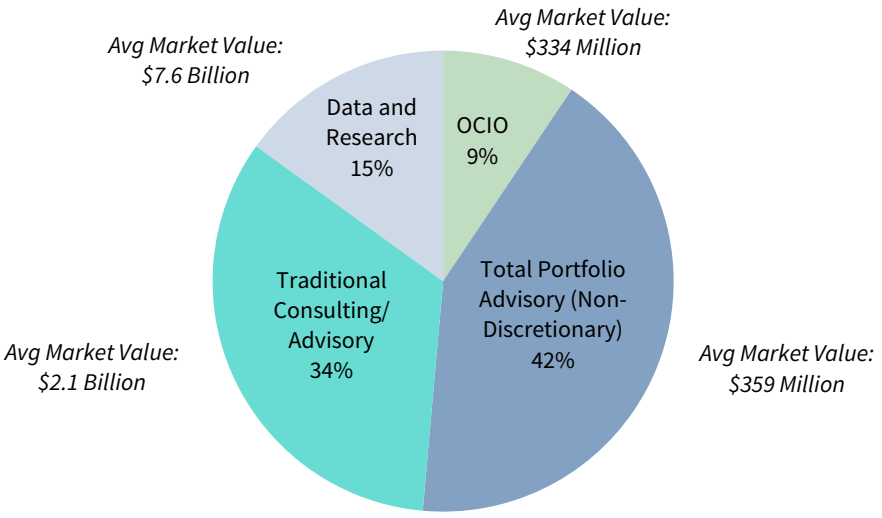
	Investment Management			Investment Operations		
	Senior	Mid	Junior	Senior	Mid	Junior
More than $7B	6.9	4.5	5.7	1.2	2.4	4.2
n	19	18	19	17	18	20
$3B – $7B	2.9	2.9	3.5	1.0	1.8	2.8
n	17	10	15	13	15	14
$1B – $3B	1.9	1.9	1.7	0.9	1.0	1.4
n	33	15	33	13	21	20
$500M – $1B	1.2	1.0	1.2	0.5	0.9	0.9
n	14	8	10	6	16	11
Less than $500M	0.7	0.5	0.9	0.4	0.5	0.5
n	9	2	9	6	15	18

Source: Endowment data as reported to Cambridge Associates LLC.

Notes: Office leadership positions (CFO/CIO), IT, and Legal support are not included in the analysis. Only institutions with personnel at the specific staffing level are included in each category. Therefore, the sum of the personnel across each category will not equal the total investment office FTEs.

RELIANCE ON OUTSIDE ADVISORS AND CONSULTANTS. Endowments engage external advisors and consultants in varying degrees and across a wide variety of functions. Based on survey responses and our understanding of how each survey participant engages with Cambridge Associates, Figure 56 broadly illustrates how the 319 participants in this study work with outside advisors or consultants. Endowments, with assets less than $1 billion rely more heavily on external advisors to manage or help manage their investment portfolios, while larger endowments will seek outside support in the form of research, data, or asset class specialization.

FIGURE 56 USE OF EXTERNAL ADVISORS AND CONSULTANTS
Fiscal Year 2019 • n = 319



Source: Endowment data as reported to Cambridge Associates LLC and CA's service contract records.

Of study participants, 9% use Cambridge Associates for discretionary portfolio management services. Also known as OCIO, this management model allows institutions to fully delegate portfolio management decision making to an outside firm. These firms are accountable for portfolio strategy, implementation, day-to-day management, and operations. Managing the portfolio within agreed upon policy guidelines, the outsourced investment team makes manager selection, manager termination, tactical asset allocation, and portfolio rebalancing decisions.

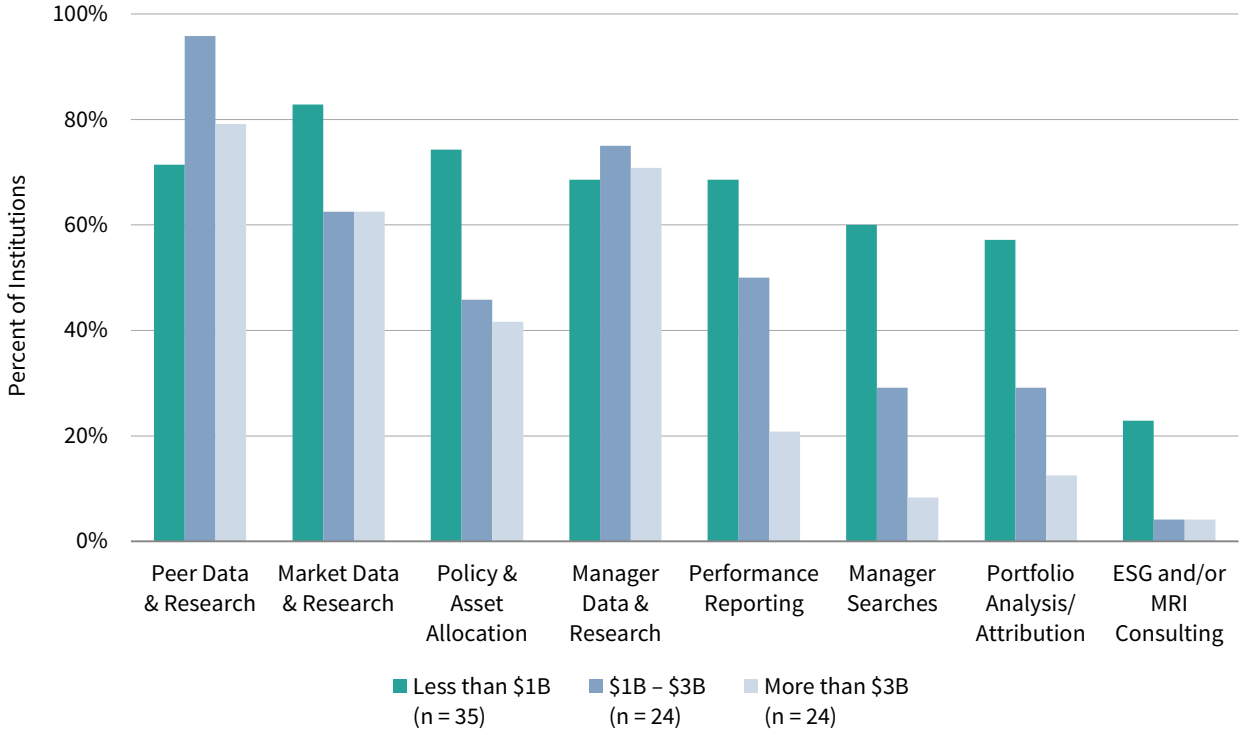
In our study, 42% of institutions use advisors for non-discretionary portfolio management services for the total endowment. These institutions work with an outside team of investment professionals who provide day-to-day oversight of their portfolios, while retaining final decision making on portfolio investments. This model provides resources and expertise to contribute to portfolio management alongside an institution's staff.

Of participants, 15% use outside support for research, manager, peer, and benchmarking data. These endowments tend to be larger and have built their own internal investment teams to manage their portfolios. The average market value of endowments using consultants in this fashion is $7.6 billion.

The remaining 34% of survey participants use external resources for a range of traditional consulting services, including asset allocation reviews, manger searches, alternative assets management, ESG/MRI consulting, and performance reporting.

Figure 57 examines the range of services other than portfolio management that are most commonly used by institutions of different sizes. Based on survey responses, smaller endowments rely more heavily on external advisors for policy and asset allocation, performance reporting, and manager searches than the largest endowments. Reliance on research and data was consistent across all asset sizes.

FIGURE 57 USE OF EXTERNAL ADVISORS AND CONSULTANTS: TYPES OF SERVICES USED
Fiscal Year 2019 • n = 83 • Percent of Institutions (%)



Source: Endowment data as reported to Cambridge Associates LLC.
Note: Analysis excludes institutions that use advisors for OCIO and non-discretionary portfolio management, as the above services are included in those tpyes of arrangements.

GOVERNANCE

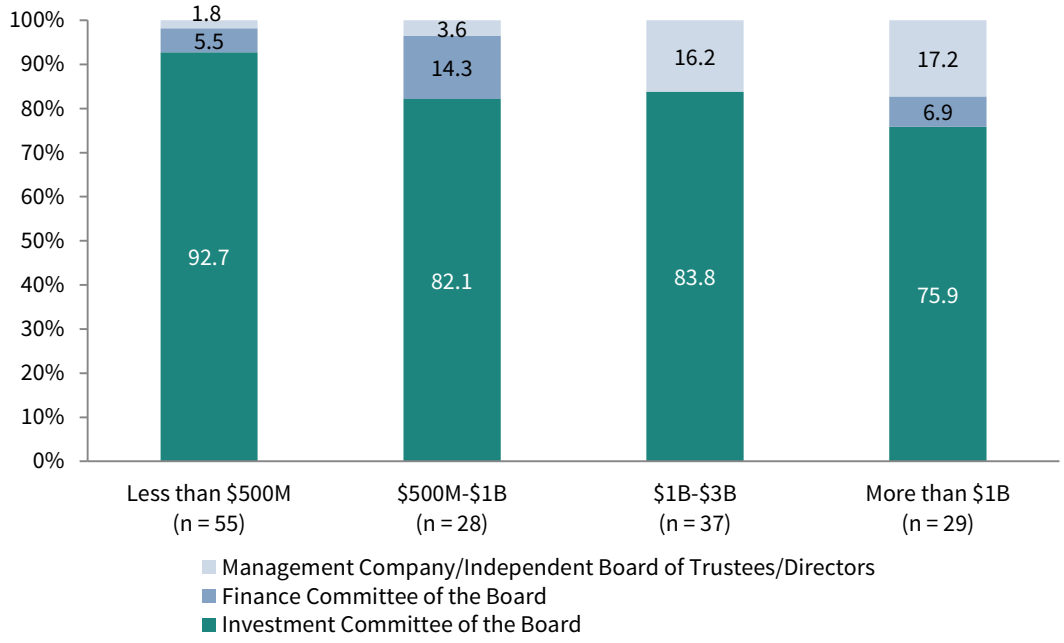
Good governance is one key factor to a successful investment program. To create the conditions for good governance, endowments should assess whether they have in place the appropriate model for portfolio oversight and management, are upholding their fiduciary responsibilities, and are learning about peer best practices in committee structure, process, and policies.

GOVERNING BODY/OVERSIGHT COMMITTEE. Regardless of endowment size, an investment committee of the board most often has oversight over the investment office and/or outside advisors who manage the portfolio. In much smaller numbers, other governing bodies cited by respondents were a finance committee of the board, and management company/independent board of trustees/directors (Figure 58).

Some of the largest endowments have established legally separate investment management companies, which have their own board of directors. In these cases, the management company's board typically has some overlap with that of the institution. Among the greater than $3 billion cohort, 17% have a management company board in place.

FIGURE 58 GOVERNING BODY OF OVERSIGHT COMMITTEE BY ORGANIZATION TYPE

Fiscal Year 2019 • Percent of Institutions (%)

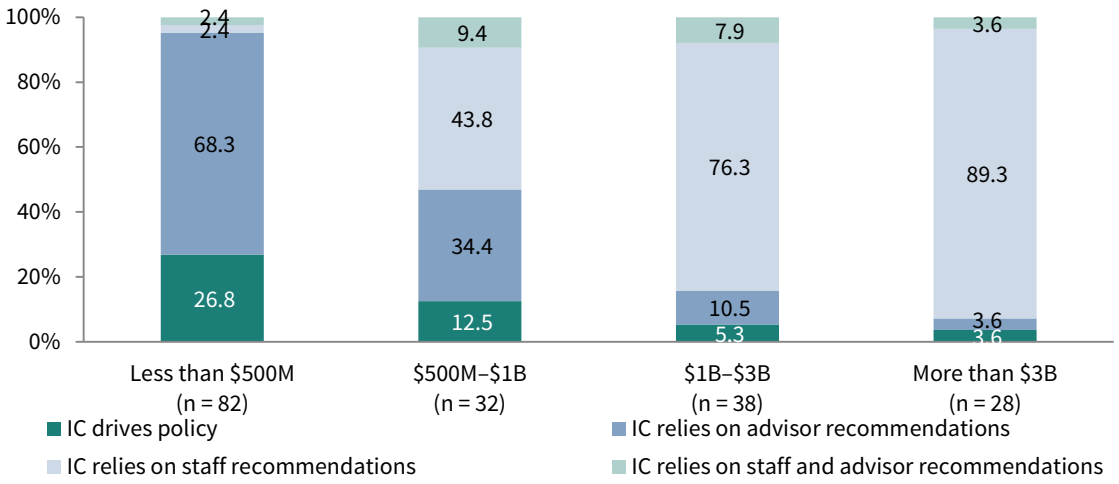


Source: Endowment data as reported to Cambridge Associates LLC.

DECISION-MAKING RESPONSIBILITY. To help quantify the dynamic between the governing body (hereafter referred to as simply investment committee) and those managing the endowment (internal investment office or outside advisor), we asked who possessed decision-making responsibility for four integral investment functions: asset allocation policy development, portfolio rebalancing, manager selection, and manager termination. The resulting data show certain trends in the balance of authority between investment committees, staff, and advisors.

FIGURE 59 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: ASSET ALLOCATION POLICY DEVELOPMENT

Fiscal Year 2019 • Percent of Institutions (%)

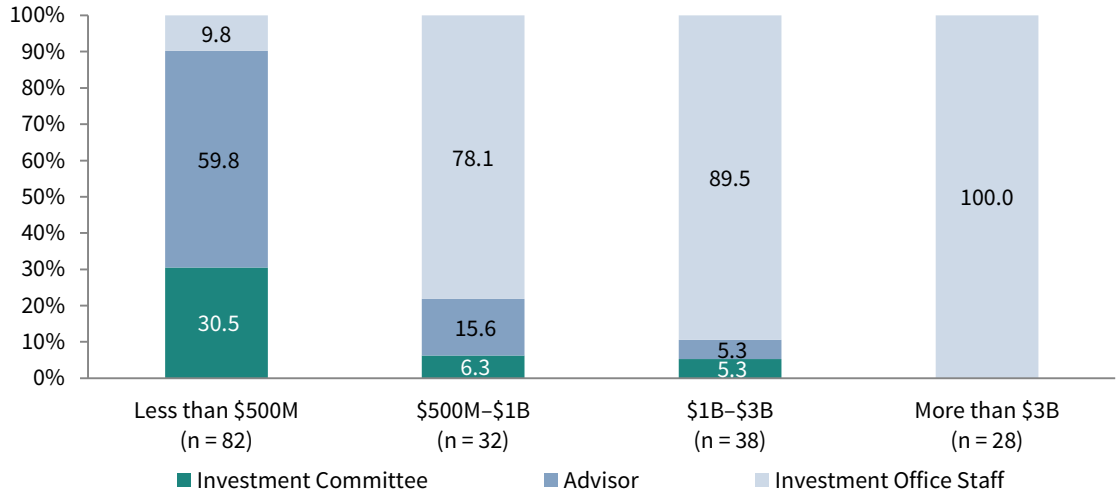


Source: Endowment data as reported to Cambridge Associates LLC.
Note: Investment Committee (IC) is shorthand for governing body.

For endowments greater than $1 billion, the majority of asset allocation policy is developed by committees acting on staff recommendations (Figure 59). Endowments less than $500 million depend far more on the recommendations of outside advisors or investment committees driving policy autonomously. The investment committee's role in portfolio rebalancing is steadily diminished as endowment size rises, with total staff discretion on rebalancing decisions most common for endowments greater than $500 million (Figure 60).

FIGURE 60 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: PORTFOLIO REBALANCING

Fiscal Year 2019 • Percent of Institutions (%)



Source: Endowment data as reported to Cambridge Associates LLC.

The process of manager selection and termination also involves committees, advisors, and staff, but with different degrees of discretion (Figure 61). Advisors play a significant role in both selection and termination of investment managers at endowments less than $500 million, with 32% delegating full discretion to an OCIO to make hiring and firing decisions. Among the investment committees involved in manager selection, the predominant role is to approve managers, but not interview them. Staff recommendations are increasingly relied upon from $500 million to $3 billion and staff discretion (with and without guidelines) accounts for most of the decision making at endowments greater than $3 billion.

FIGURE 61 DECISION–MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: MANAGER SELECTION AND TERMINATION

Fiscal Year 2019 • Percent of Institutions (%)

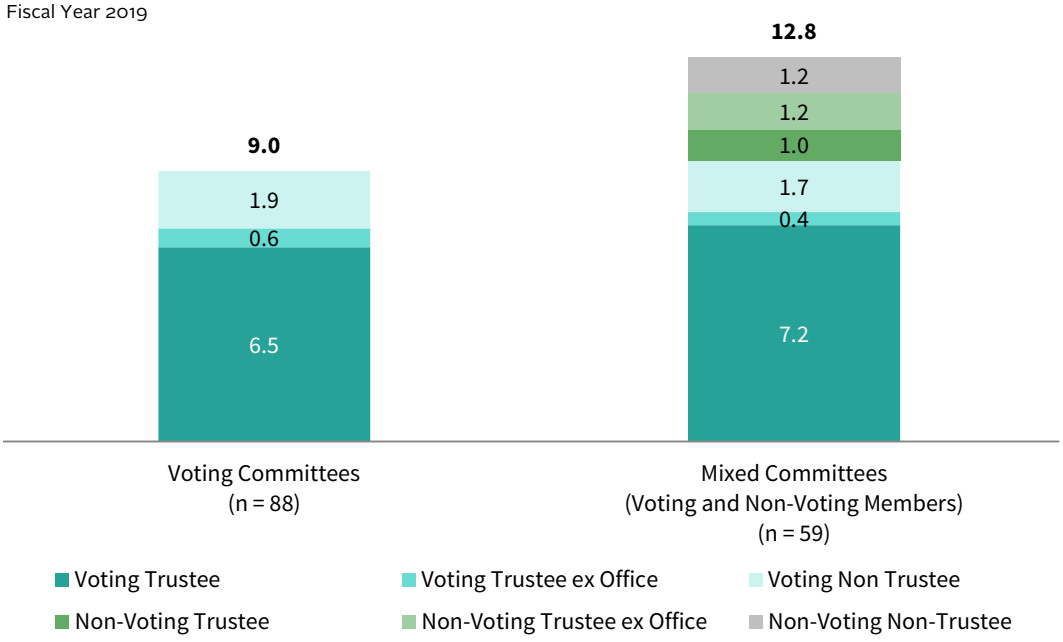
Source: Endowment data as reported to Cambridge Associates LLC.

Notes: Investment Committee (IC) is shorthand for governing body. "Other" includes IC approval based on staff and advisor recommendations.

INVESTMENT COMMITTEE COMPOSITION. Two types of committees emerged from our survey data. We found that more than half of investment committees (88 of 147) are fully composed of voting members, while the remaining investment committees also include nonvoting members. Although mandatory voting encourages accountability, there can be good reasons to include nonvoting members. Organizations should weigh the benefit of these advisory members against the prospects of an oversized committee.

The average size of voting committees is 9.0 members, which on average consist of 6.5 trustees, 1.9 non-trustees, and 0.6 ex officio members. Examples of ex officio committee members include the president of the institution or chairman of the board or of another committee, whose investment committee membership is included in the official duties of the position. Committees including non-voting members averaged 12.8 people (Figure 62).

FIGURE 62 PROFILE OF INVESTMENT COMMITTEE MEMBERS
Fiscal Year 2019



Source: Endowment data as reported to Cambridge Associates LLC.
Note: Investment Committee is shorthand for governing body.

Investment committee members can bring a diverse set of experiences to assist in overseeing institutional investment assets. At least some committee members should have professional, institutional investment experience—not just experience managing their own money—and if the organization lacks sufficient trustees with such qualifications, many times the committee includes non-trustee members with investment expertise to fulfill this role.

On average, respondents indicated that 67% of their committee members have investment experience. This composition does vary when viewed by asset size. Organizations with assets less than $500 million reported an average of 59% of committee membership having professional investment experience. Each of the asset size groups greater than $500 million had an average of 70% or higher (Figure 63).

FIGURE 63 PERCENT OF INVESTMENT COMMITTEE WHO ARE INVESTMENT PROFESSIONALS

Fiscal Year 2019 • Percent of Institutions (%)

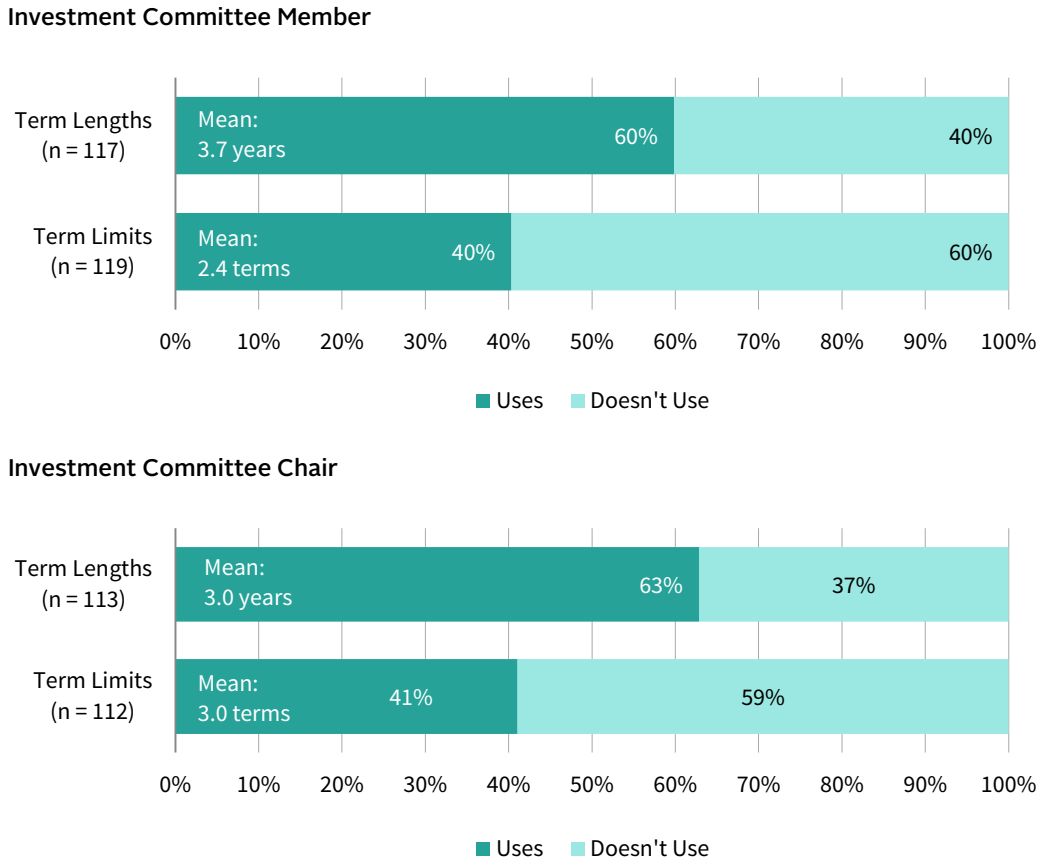
Source: Endowment data as reported to Cambridge Associates LLC.

COMMITTEE TERM LENGTH AND LIMITS. Setting guidelines for terms can help manage member turnover and mitigate committee stagnation. Responses regarding term length and limit policy indicate that term length guidelines are generally more common than term limits: for committee members, term lengths (an average of 3.7 years) were specified by 60% of endowments, while term limits (an average of 2.4 terms) were mandated by a smaller percentage of 40% of institutions (Figure 64). Term length and limit policies applied similarly to committee chairmanship. The lack of policies around term limits and lengths at some endowments could suggest that these institutions value the stability of a long-standing committee and view turnover as disruptive to long-term investment policy.

INVESTMENT COMMITTEE MEETINGS. Our survey responses show that the majority of endowments (67%) hold quarterly meetings. Few institutions hold meetings on a more or less frequent schedule, but ad hoc conference calls are a frequently cited occurrence. Regular attendance of investment committee members is critical to proper oversight. Participants indicated that average attendance was strong, at 84%.

FIGURE 64 INVESTMENT COMMITTEE TERM LENGTHS AND LIMITS

As of June 30, 2019



Source: Endowment data as reported to Cambridge Associates LLC.

REIMBURSEMENT AND CONFLICT OF INTEREST POLICY. Only 24% of respondents provide committee members with expense reimbursement, which generally includes travel-related and other out-of-pocket expenses. Just 4% of respondents offer their committee members some sort of compensation other than expense reimbursement. This compensation most often comes in the form of charitable gifts and honorariums.

More than 95% of respondents have a conflict of interest policy for investment committee members. These policies require disclosure (43%), recusal (25%), or both disclosure and recusal (32%). Policies may differ by asset class, with institutions requiring disclosure for long-only equity conflicts and recusal for private equity conflicts, for example. The vast majority of institutions (82%) also have a conflict of interest policy in place for investment staff. Fifty-seven percent of policies center on disclosure only, while 29% require disclosure and recusal. ■

Notes on the Data

PROFILE OF RESPONDENTS

This report includes data for 319 endowed institutions. When the overall group is broken out by industry type, 164 are colleges and universities, 51 are cultural and environmental institutions, 31 are hospitals, 29 are independent schools, and 44 are other endowed institutions. All participants provided investment pool data as of June 30, 2019. The notation of *n* denotes the number of institutions included in each analysis.

The 319 participants in this study reported long-term investment portfolio (LTIP) assets as of June 30, 2019, totaling $647 billion. The mean LTIP size was $2.0 billion and the median was $397.8 million.

Forty-seven participants have an LTIP size below $100 million while 97 have an asset size more than $1 billion. The remaining 175 participants have an LTIP size between $100 million and $1 billion. The participants with LTIP sizes greater than $1 billion controlled 89% of the aggregate LTIP assets.

CALCULATION OF THE SHARPE RATIO

The Sharpe ratio shows how much return above the risk-free rate (T-bills) the investor has earned per unit of risk (defined as standard deviation of returns). The higher the Sharpe ratio, the more the investor has been compensated for each unit of risk taken. The ratio is a measure of reward relative to total volatility. The formula is:

$$\frac{R_p - R_f}{S_p} = \text{Sharpe Ratio}$$

Where:

R_p is the arithmetic average of composite quarterly returns,

R_f is the arithmetic average of T-bill (risk-free) quarterly returns, and

S_p is the quarterly standard deviation of composite quarterly returns.

BLENDED PORTFOLIO BENCHMARKS

Throughout the report, 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. ■

PARTICIPANTS

COLLEGES & UNIVERSITIES

University of Alaska Foundation
Allegheny College
American Coll of Greece & American Univ of Greece
American University
Amherst College
University of Arkansas Foundation Inc.
College of The Atlantic
Baylor University
Bentley University
Berkeley Endowment Management Company
Bethune-Cookman University
Boston College
Boston University
Bowdoin College
Brown University
Bryn Mawr College
University of California
California Institute of Technology
Carleton College
Carnegie Mellon University
Case Western Reserve University
Centenary College of Louisiana
Chapman University
The University of Chicago
University of Cincinnati
Claremont McKenna College
Clarkson University
Clemson University Foundation
Colby College
Colgate University
Columbia University
Connecticut College
Cooper Union for the Advancement of Science & Art
Cornell University
College For Creative Studies
Dartmouth College
Davidson College
University of Delaware
Denison University
Duke University
Duquesne University
Emerson College
Emory & Henry College
Emory University
Florida International University Foundation, Inc.
Florida State University Foundation Inc.
University of Florida Investment Corporation
Georgia Tech Foundation Inc.
Gettysburg College
Goucher College
Grand Valley State University
Grinnell College
Hampton University
Harvard Management Company, Inc.
Haverford College
University of Hawaii Foundation
Hollins University
College of the Holy Cross
Hope College
Houston Baptist University
University of Houston System
Howard University
University of Idaho Foundation, Inc.
University of Illinois Foundation
Indiana University Foundation
Iowa State University Foundation
Johns Hopkins University
Kalamazoo College
KU Endowment
Kentucky; University of
Lafayette College
Lebanese American University
Lehigh University
Lewis and Clark College
Louisiana State University Foundation
University of Louisville
Lycoming College
Macalester College
University of Maine Foundation
Maryland Institute College of Art
MIT Investment Management Company
Memphis Foundation; University of
Mercy College
University of Miami
University of Michigan
Michigan State University
Mount Holyoke College
Mount St. Mary's University
National University
University of Nebraska Foundation
Nevada System of Higher Education
New England Conservatory
New York University
Northeastern University
Northwestern University
Norwich University
University of Notre Dame
Oberlin College
Occidental College
Ohio State University
Ohio Wesleyan University
The University of Oklahoma Foundation, Inc.
Pace University
University of the Pacific
University of Pennsylvania
Pennsylvania State University
Pepperdine University
University of Pittsburgh
Pomona College
Princeton University
Providence College
Purdue Research Foundation
Randolph-Macon College
Reed College
Rensselaer Polytechnic Institute
University of Rhode Island Foundation
Rice University
University of Rochester
The Rockefeller University
University of San Diego
San Francisco State University Foundation
Santa Clara University
Scripps College
Seattle University
Simmons College
Soka University of America
University of Southern California
Southern Methodist University
Southern New Hampshire University

PARTICIPANTS (CONTINUED)

COLLEGES & UNIVERSITIES (CONT)

Spelman College
Stanford University
St. Lawrence University
University of St. Thomas
Swarthmore College
University of Tennessee
Texas Lutheran University
Texas State Univ. Dev. Fdn.
The University of Texas Investment Management Co.
University of Toronto c/o UTAM (returns in CAD)
Trinity University
Tulane University
The UCLA Foundation
UNC Management Company, Inc.
UNCG Endowment Partners, LP
Union Theological Seminary
Vanderbilt University
University of Vermont & State Agricultural College
Villanova University
University of Virginia Investment Management Co.
Virginia Tech Foundation
Washburn University Foundation
University of Washington
Washington College
Washington and Jefferson College
Washington University in St. Louis
Webb Institute
Wellesley College
Wesleyan University
Western New England University
Wichita State University Foundation
William & Mary Foundation
Williams College
Yale University
Yeshiva University

CULTURAL & ENVIRONMENTAL

Atlanta Historical Society
The Vivian Beaumont Theater, Inc.
Boston Symphony Orchestra Inc.
The Brookings Institution
California Academy of Sciences
Carnegie Institution for Science
Science History Institute
The Children's Museum of Indianapolis
Conner Prairie Foundation
Council on Foreign Relations
Cypress Lawn Endowment Care Trust
The Edison Institute
The Evergreens Cemetery
Fallon Paiute-Shoshone Tribe
The Frick Collection
Isabella Stewart Gardner Museum
The J. Paul Getty Trust
Jeremy and Hannelore Grantham Environmental Trust
Hagley Museum and Library
Honolulu Museum of Art
Huntington Library and Art Gallery
Institute for Advanced Study
Institute of International Education
Linda Hall Library Trusts
Longwood Gardens, Inc.
Mashantucket Pequot Tribal Nation Endowment Trust
Metropolitan Museum of Art
Minnesota Orchestral Association
Museum of Contemporary Art, Los Angeles
Museum of Fine Arts, Boston
Museum of Fine Arts, Houston
Museum of Science, Boston
National Gallery of Art
National Geographic Society
NPR Foundation
National Wildlife Federation
New York Philharmonic
The New York Public Library
New York Public Radio
Peabody Essex Museum
Philadelphia Museum of Art
Ravinia Festival Association
Scenic Hudson Land Trust Inc.
Seattle Art Museum
Smithsonian Institution
Indianapolis Symphony Orchestra Foundation, Inc.
The Trustees of Reservations
United Negro College Fund
WGBH Educational Foundation
Wildlife Conservation Society
The Henry Francis duPont Winterthur Museum, Inc.

HOSPITALS

Blythedale Children's Hospital
CareGroup Investment Partnership, LLP
Children's Hospital & Health System, Inc.
Children's HealthCare of Atlanta, Inc.
The Children's Hospital of Philadelphia
The Children's Institute
Children's Medical Center
Cleveland Clinic Fdn; The
Dana-Farber Cancer Institute Inc.
Exeter Health Resources Inc.
Franciscan Missionaries of Our Lady Health System
Hawaii Pacific Health
Holy Redeemer Health System Inc.
Lifespan Corporation
Maine Medical Center
Main Line Health Foundations
Mayo Clinic
Medical Society of South Carolina
Memorial Hermann Health System
Mount Sinai School of Medicine
New York Presbyterian Hospital
Northwestern Memorial HealthCare
Novant Health Inc.
Ochsner Clinic Foundation
Partners HealthCare System, Inc.
Phoebe Putney Health System
Saint Francis Foundation
Shore Regional Health
Tufts Medical Center
University Hospitals Health System
Woman's Hospital Foundation

INDEPENDENT SCHOOLS

Auditory Learning Foundation
The Blake School
Boston College High School
The Brearley School
Buckingham Browne & Nichols School
Castilleja School

PARTICIPANTS (CONTINUED)

INDEPENDENT SCHOOLS (CONTD)

The Colburn School
The Episcopal School of Dallas
The Fessenden School
Greenwich Country Day School
Groton School
Milton Hershey School Trust
Hockaday School
The Hotchkiss School
Kamehameha Schools
Lakeside School
The Lawrenceville School
The Loomis Institute
The Madeira School
Park Tudor Trust
Phillips Exeter Academy
The Pingry School
Punahou School
The Roxbury Latin School
Salisbury School
St. Paul's School
Western Reserve Academy
The Winsor School
Xaverian Brothers High School

OTHER ENDOWMENTS

American Association for Cancer Research
American College of Surgeons
American Jewish Committee
American Jewish Joint Distribution Committee
The American Society of Hematology
Animal Rescue League of Boston
Armenian Church Endowment Fund
Armenian General Benevolent Union
The Boston Home Inc.
CASAColumbia
Catholic Church Extension Society
Catholic Investment Trust of Washington
Archdiocese of Chicago
The Church Pension Fund
Claremont University Consortium
Episcopal Divinity School
Federation of Protestant Welfare Agencies
Greater New York Hospital Association
HighGround Advisors
Howard Hughes Medical Institute
The Ignatius Fund
Isidore and Van Gerwen Charitable Trusts
Jewish Child Care Association
Mission Diocese Fund
Mission Health System, Inc.
Mass. Society for Prevention of Cruelty to Animals
University of Nebraska Foundation Fund N
Lucile Packard Foundation for Children's Health
The PGA of America, LP
Diocese of Providence
The Rose Hills Foundation
Saint Thomas Church
The Sealy & Smith Foundation
SGI-USA Endowment
Soka University of America EEF
Southern Poverty Law Center
Spastic Children's Endowment Foundation
Sunflower Foundation Health Care for Kansans
Texas Biomedical Research Institute
Trinity Church Wall Street
United Methodist Health Ministry Fund
United States Tennis Association
Catholic Diocese of Wilmington
Xaverian Brothers USA

William Prout, Senior Investment Director