

# COLLEGE AND UNIVERSITY INVESTMENT POOL RETURNS

FISCAL YEAR 2020



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This study is based on a survey that Cambridge Associates (CA) administers annually to our college and university clients. The report that follows summarizes returns, asset allocation, and other investment-related data for 159 institutions for the fiscal year ended June 30, 2020. Included in this year's report are commentary and figures spread across six separate sections.

**INVESTMENT PORTFOLIO RETURNS** highlights performance results for select trailing periods. This section investigates some of the factors that contributed to the variation of peer returns and what made top performers stand out. Also included in this section is an overview on how methodologies for net reporting and incorporating private investments can vary among institutions when calculating performance.

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. This and other related topics are summarized in **INVESTMENT POLICY**.

**PORTFOLIO 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 average allocations to private equities will likely continue to increase in future years.

The number of managers that endowments use for their overall portfolio and within specific asset classes can vary widely. **INVESTMENT 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, **INSTITUTIONAL SUPPORT** contains analyses that highlight how much colleges and universities rely on their endowments to support their annual operating budgets. Also included in this section are exhibits on spending policies, portfolio inflows and outflows, and operating funds.

Finally, **INVESTMENT OFFICE STAFFING AND GOVERNANCE** takes a look at 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.

## Section 1: Investment Portfolio Returns

### RETURNS IN FISCAL YEAR 2020

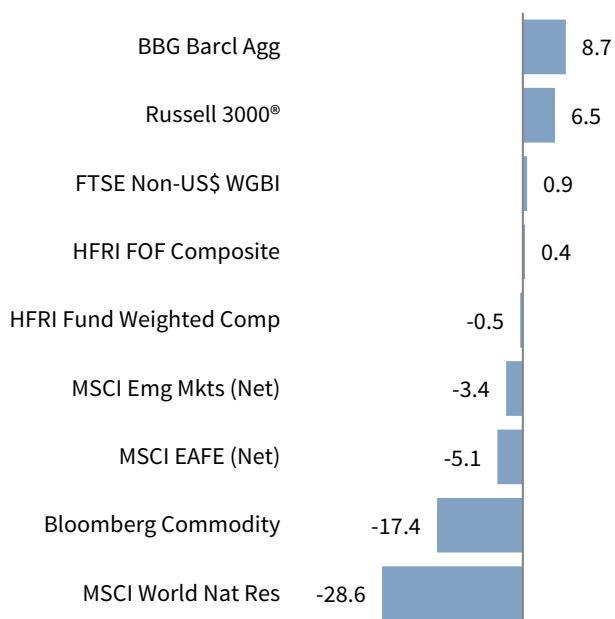
The effects of the COVID-19 pandemic were felt across the entire investment landscape during fiscal year 2020. Public equity markets suffered a steep downturn as the pandemic began to spread globally, but then staged a remarkable rebound in the last quarter of the fiscal year. The overall US stock market was up for the fiscal year, while most global ex US equity markets finished in the red. Factoring in strong performance from US investment-grade fixed income, a simple portfolio consisting of a broad-based public equity index and a US aggregate bond index outperformed many endowments in 2020.

The performance impact endowments realized from diversifying beyond a simple stock/bond portfolio was mixed in fiscal year 2020. Bright spots were private equity and venture capital (PE/VC), where the indexes tracked by Cambridge Associates outperformed their modified public market equivalent (mPME) benchmarks (Figure 1). In contrast, it was a brutal year for natural resources–related investments, with declines of near 20% or more common in both the public and private markets. Hedge fund returns were muted for the fiscal year, with the broad-based HFRI indexes essentially reporting flat performance.

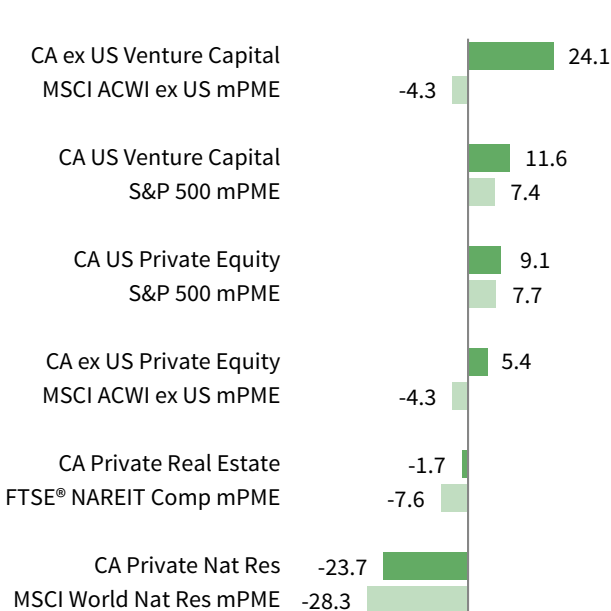
**FIGURE 1 1-YR INDEX RETURNS**

As of June 30, 2020 • Percent (%)

#### Public Indexes



#### Private Index IRRs and mPME IRRs

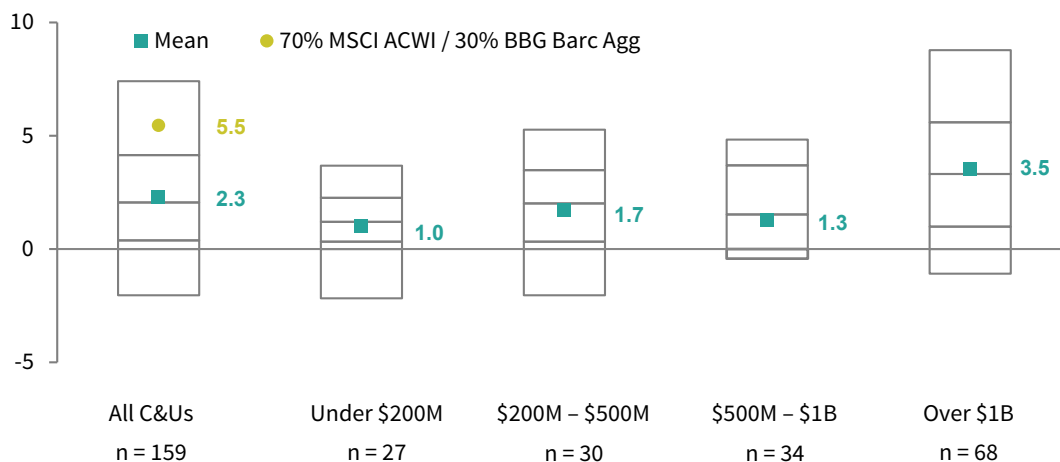


Sources: Index data are provided by Bloomberg Index Services Limited, Cambridge Associates LLC, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., the National Association of Real Estate Investment Trusts, Standard & Poor's, and Thomson Reuters Datastream. MSCI data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

The average return for participating colleges and universities in fiscal year 2020 was 2.3% (Figure 2). A simple benchmark consisting of 70% MSCI All Country World Index (ACWI) and 30% Bloomberg Barclays Aggregate Bond Index returned 5.5% and would have landed in the top quartile of the overall participant group. When the overall universe is split into four separate subgroups based on portfolio size, endowments with assets greater than \$1 billion reported the highest average return (3.5%).

**FIGURE 2 FISCAL YEAR 2020 TOTAL RETURN SUMMARY**

Trailing 1-Yr as of June 30, 2020 • Percent (%)



Sources: College and university 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: For more information, see page 63 in the Appendix.

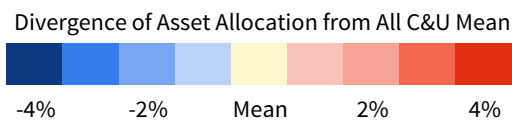
There are several factors that contribute to endowment performance and the differentials in returns reported across institutions in this study. These factors include portfolio asset allocations and how well endowments implement those allocations. In addition, there are various performance measurement methodologies that are important to consider when conducting peer performance comparisons. The commentary and analysis that follow in this section explore these factors and the impact on comparative returns in fiscal year 2020.

**ASSET ALLOCATION.** Our analysis of comparative peer performance begins with examining the relationship between asset allocation and total portfolio returns. In Figure 3, 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.

**FIGURE 3 1-YR MEAN ASSET ALLOCATION BY PERFORMANCE QUARTILE**

Percent (%) • n = 158

Quartile	US Equity	Dev	Emg Mkts Equity	Bonds	Hedge Funds	Dist Sec	PE/VC	Private Real Assets	Public	Cash	Other
		Mkts ex US Equity							Real Assets & ILBs		
Top Quartile	16.1	10.0	6.9	6.0	21.4	2.9	23.4	7.0	1.1	4.4	0.6
2nd Quartile	21.7	13.9	6.9	9.2	17.3	3.0	16.1	6.0	1.8	3.2	0.9
3rd Quartile	23.1	16.3	7.3	9.0	15.8	2.1	14.4	5.6	3.0	3.0	0.4
Bottom Quartile	23.5	14.4	7.1	8.9	13.5	4.0	12.2	6.3	4.3	3.4	2.3
All C&U Mean	21.1	13.6	7.0	8.3	17.0	3.0	16.5	6.2	2.5	3.5	1.1



Sources: College and university data as reported to Cambridge Associates LLC.

Note: Asset allocation is averaged across the two June 30 periods from 2019 to 2020 for each institution in this analysis.

The differences in average asset allocations among the four performance quartiles typically correlate with the backdrop of the market environment. In fiscal year 2020, PE/VC stood above other asset classes in terms of relative performance. As one might expect given this context, endowments in the top quartile reported the highest average allocations to private investments and the lowest allocations to public equities. The average PE/VC allocation for the top quartile of performers was 23.4% for fiscal year 2020, nearly double the average of the bottom quartile (12.2%).

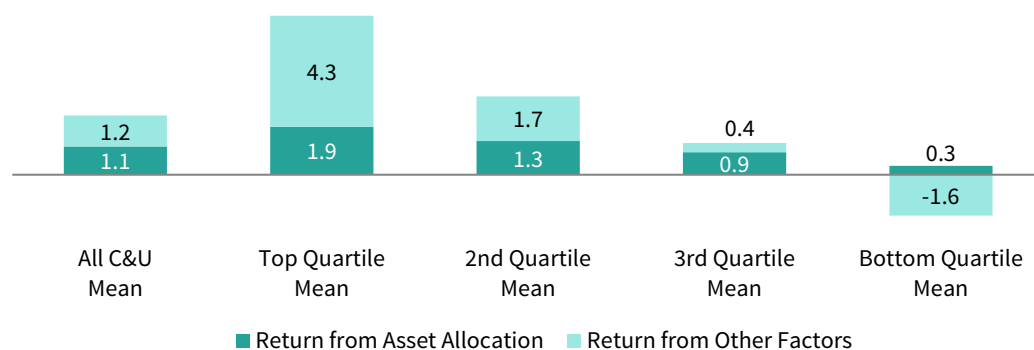
**ATTRIBUTION.** While asset allocation is a key driver of investment performance, it does not fully account for a portfolio’s overall return. The execution or implementation of an asset allocation strategy also contributes to the total return that a portfolio earns. Our attribution model attempts to quantify how much each endowment’s return can be explained by its beginning year asset allocation and how much comes from other factors. The results can be insightful in understanding the variation of total returns that are reported across different endowments.

In the model an index return is assigned to each asset class. An endowment’s return from asset allocation is calculated using a blend of these index returns weighted according to its beginning year asset allocation.<sup>1</sup> This is the return that would have been earned if the endowment was invested passively throughout the year. The model estimates that the average return from asset allocation across all participants was 1.1% for the fiscal year (Figure 4). The top quartile of performers had the highest average asset allocation return (1.9%), while the bottom quartile had the lowest (0.3%).

<sup>1</sup> See the Appendix of this report for a list of asset class indexes used and an example of how the analysis is conducted using the participant group’s mean asset allocation.

#### FIGURE 4 1-YR ATTRIBUTION ANALYSIS

Trailing 1-Yr as of June 30, 2020 • Percent (%) • n = 158



Source: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 63 in the Appendix.

The return from other factors is the difference between the portfolio's actual return and its asset allocation return. This other portion of return is mostly driven by the effects of active management, or alpha. In addition, this portion accounts for any decision to modify the asset allocation structure or rebalance the portfolio allocations through the course of the fiscal year. Given the extreme market volatility during the second half of the fiscal year, rebalancing decisions could have had a meaningful contribution to endowment performance this past year.

The average return from other factors across all participants was 1.2% for fiscal year 2020. The average for the top quartile of performers (4.3%) was nearly 600 basis points (bps) higher than that of the bottom quartile (-1.6%). The conclusion of this analysis is that implementation decisions, not asset allocation, explained most of the differential in the returns between top and bottom performers for the fiscal year.

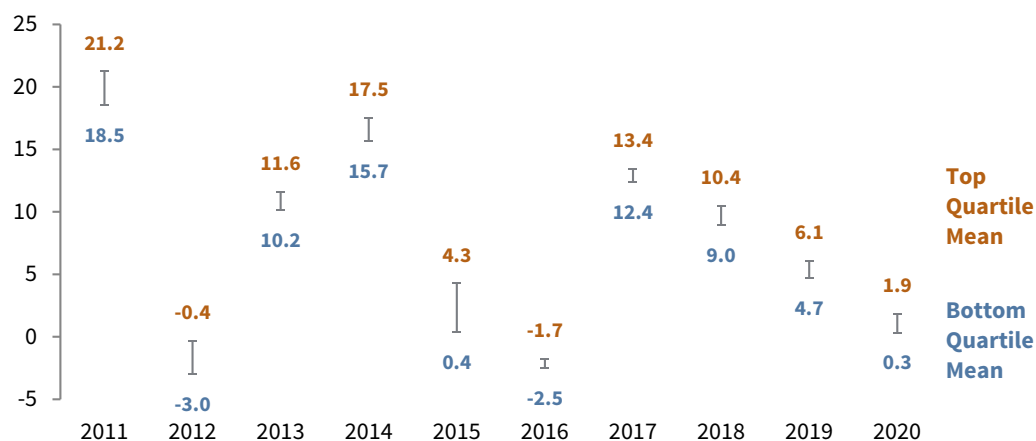
Figure 5 shows the results of this attribution analysis for each of the last ten fiscal years. This historical analysis shows a similar relationship between the returns of the top and bottom quartile of performers. While the effects of both asset allocation and implementation help explain differentials in peer returns, the implementation return usually explains most of the difference. The largest differential in implementation returns over the last decade was calculated in fiscal year 2020.



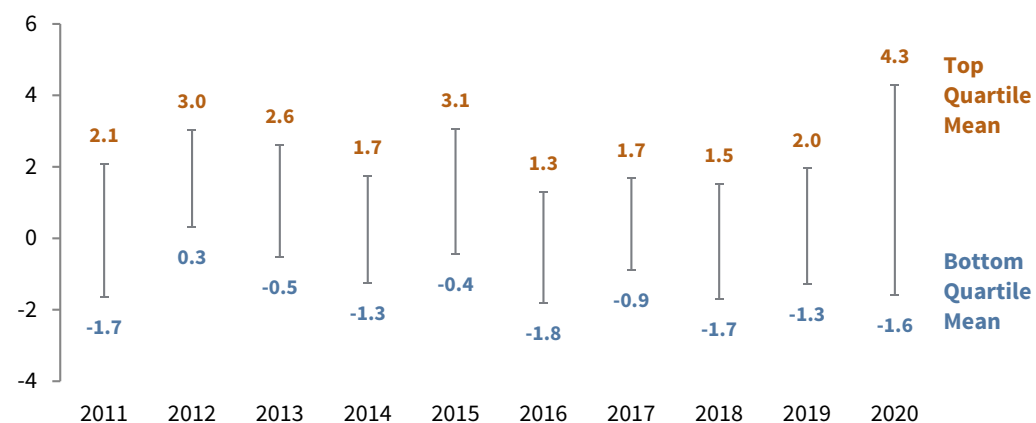
**FIGURE 5 ANNUAL ATTRIBUTION ANALYSIS: 2011–2020**

Periods as of June 30

**Mean Asset Allocation Return: Top Quartile versus Bottom Quartile\***



**Mean Implementation Return: Top Quartile versus Bottom Quartile\***



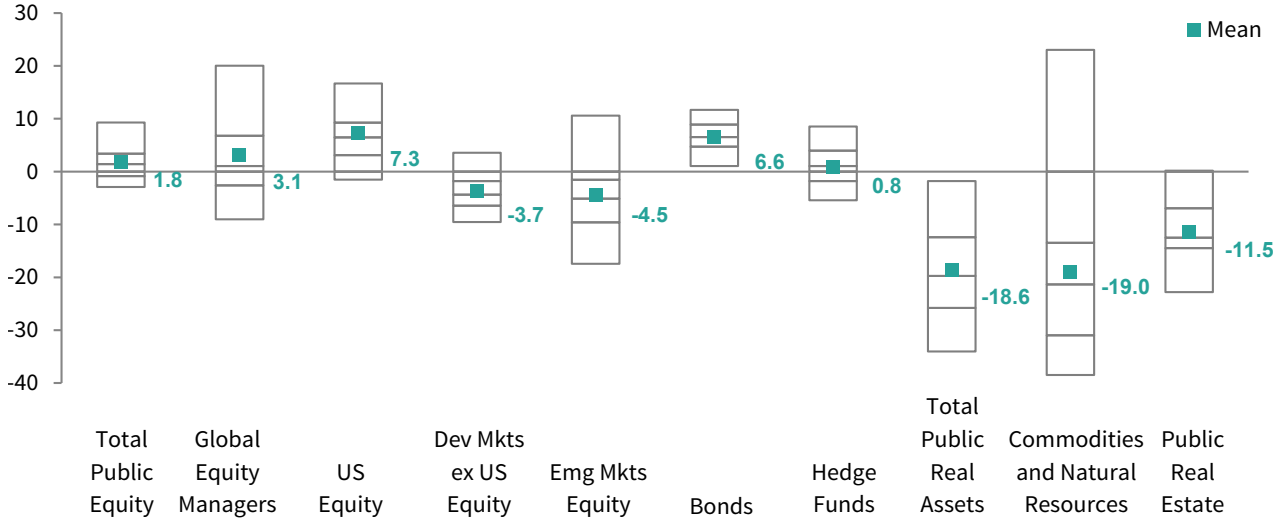
\* Performance quartiles are calculated separately for each fiscal year.  
Source: College and university data as reported to Cambridge Associates LLC.

**ASSET CLASS RETURNS.** The attribution analysis establishes that there can be wide differentials among endowments in the performance impact from implementation. A key driver of these differentials is the relative returns that participants earn for the asset class strategies in their portfolios. Over 85% of respondents (136 of 159) provided asset class returns for at least a portion of their portfolio for fiscal year 2020. The marketable asset class returns are reported as time-weighted returns, and the private investment data are horizon internal rates of return (IRRs).

Growth stocks significantly outperformed value stocks across global markets in fiscal year 2020. Although our survey does not capture allocations by style, the distribution of participants' equity returns infers that some endowments had more of a value tilt in their allocations while others leaned more towards growth. The 5th percentile return for US equity (16.7%) was over 1,800 bps higher than that of the 95th percentile (-1.5%). The range of returns for this and other marketable asset classes was significantly wider compared to more recent years (Figure 6).

**FIGURE 6 DISPERSION OF PARTICIPANTS' 1-YR ASSET CLASS RETURNS: MARKETABLE INVESTMENTS**

Trailing 1-Yr as of June 30, 2020 • Percent (%)



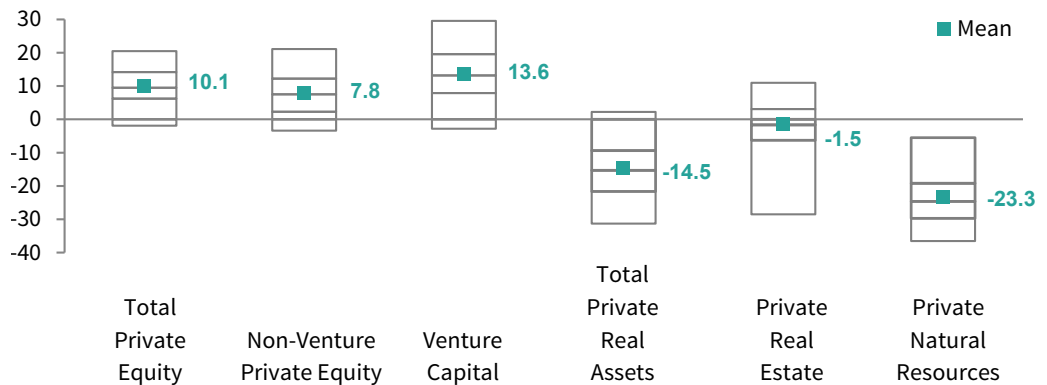
Source: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 64 in the Appendix.

There was also a large spread between the 5th and 95th percentile returns for participants' private investment composite IRRs. Yet, unlike with the marketable asset classes for fiscal year 2020, this wide range of returns among these strategies is comparable with what we observed in past years. Private investment funds historically have 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. For fiscal year 2020, the widest range in endowments' private investment returns was in real estate, where the 5th percentile return (11.0%) was nearly 4,000 bps higher than the 95th percentile return (-28.5%). The spread was also quite wide for venture capital with returns ranging from 29.5% at the 5th percentile to -2.8% at the 95th percentile (Figure 7).

**FIGURE 7 DISPERSION OF PARTICIPANTS' 1-YR ASSET CLASS RETURNS: PRIVATE INVESTMENTS**

Trailing 1-Yr as of June 30, 2020 • Percent (%)



Source: College and university data as reported to Cambridge Associates LLC.

Notes: Private investment return statistics are reported as horizon internal rates of return. For more information, see page 64 in the Appendix.

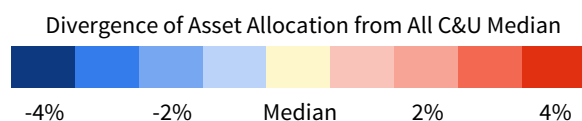
Figure 8 breaks the participant group out into four quartiles based on the total portfolio return and shows the median asset class returns for the endowments that fall within each respective quartile. Outperformance for endowments with the best total returns in fiscal year 2020 was not limited to a specific asset class. With the exception of global ex US equities developed markets and public real estate, the top quartile of performers had the highest median return in each of the marketable asset classes. For the total public equity composite, the median return for the top quartile of performers (5.6%) was more than 400 bps higher than that of the overall participant group (1.4%). This magnitude of outperformance is notable considering that the top quartile endowments allocated approximately one-third of their portfolio on average to total public equities.

As Figure 9 shows, top-performing endowments at the total return level also tended to outperform the rest of the participant group in private investment strategies. The top quartile's median return was higher than the overall universe median return for each private asset class. The largest differential in private investment composite returns was within venture capital, where the median return for top performers (19.4%) was more than 600 bps higher than the median return (13.2%) for all participants.

**FIGURE 8 1-YR MEDIAN ASSET CLASS RETURNS BY TOTAL PERFORMANCE QUARTILE: MARKETABLE INVESTMENTS**

Trailing 1-Yr as of June 30, 2020 • Percent (%)

Median Return	Total Public Equity	Global Equity Managers	US Equity	Devel Markets ex US Equity	Emerging Markets Equity	Bonds	Hedge Funds	Total Public Real Assets	Comm and Nat Res	Public Real Estate
Top Quartile	5.6	7.8	8.7	-4.3	-0.1	6.8	2.7	-14.5	-8.5	--
<i>n</i>	25	16	27	22	26	26	28	7	9	--
2nd Quartile	2.3	4.0	7.7	-3.2	-4.7	6.5	1.0	-14.0	-14.8	-8.4
<i>n</i>	33	18	28	28	27	33	32	12	15	8
3rd Quartile	1.1	-2.2	6.5	-4.8	-6.2	6.4	1.2	-15.7	-20.5	-14.4
<i>n</i>	36	25	36	35	36	36	35	21	20	9
Bottom Quartile	-1.0	-1.6	4.3	-4.8	-8.7	6.4	-1.7	-21.0	-28.4	-12.3
<i>n</i>	30	15	31	31	31	32	30	27	26	16
All C&U Median	1.4	1.1	6.5	-4.4	-5.1	6.5	1.0	-19.8	-21.3	-12.5
<i>n</i>	124	74	122	116	120	127	125	67	70	35

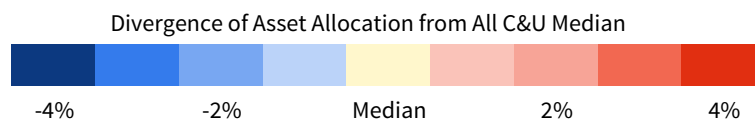


Sources: College and university data as reported to Cambridge Associates LLC.

Note: Institutions are assigned to performance quartiles based on their fiscal year 2020 total portfolio return.

**FIGURE 9 1-YR MEDIAN ASSET CLASS RETURNS BY TOTAL PERFORMANCE QUARTILE: PRIVATE INVESTMENTS**  
Trailing 1-Yr as of June 30, 2020 • Percent (%)

Median Return	Total Private Equity	Non-Venture Private Equity	Venture Capital	Total Private Real Assets	Private Real Estate	Private Natural Resources
Top Quartile	11.6	9.8	19.4	-13.3	2.5	-23.0
<i>n</i>	23	22	22	21	23	21
2nd Quartile	12.3	8.7	14.8	-16.1	-2.2	-25.2
<i>n</i>	33	29	30	26	29	29
3rd Quartile	8.8	6.7	11.3	-18.2	-6.6	-25.2
<i>n</i>	32	32	29	32	27	32
Bottom Quartile	8.3	5.6	10.4	-15.4	0.1	-25.2
<i>n</i>	27	25	24	23	26	24
All C&U Median	9.5	7.5	13.2	-15.3	-1.7	-24.6
<i>n</i>	124	74	122	116	120	127



Sources: College and university data as reported to Cambridge Associates LLC.

Notes: Institutions are assigned to performance quartiles based on their fiscal year 2020 total portfolio return. Private investment return statistics are reported as horizon internal rates of return.

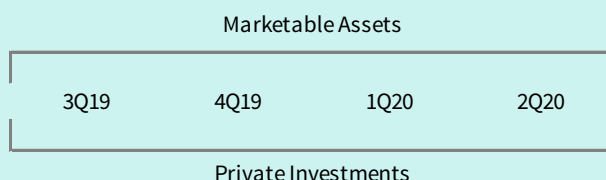
**RETURN CALCULATION METHODOLOGIES.** The methodology endowments use to account for private investments in their total portfolio return calculation is important to consider when conducting peer performance comparisons. The most frequently used approach among all participants was to report private investment returns on a current basis. The second most frequently used methodology was the lagged basis. For fiscal year 2020, there could be a considerable performance impact to using one of the methodologies over the other.

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 2020 total return represents performance for the period of April 1, 2019, to March 31, 2020. When assessing the impact of these two methodologies, it is important to consider private investment returns for both second quarter 2019 and second quarter 2020. 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

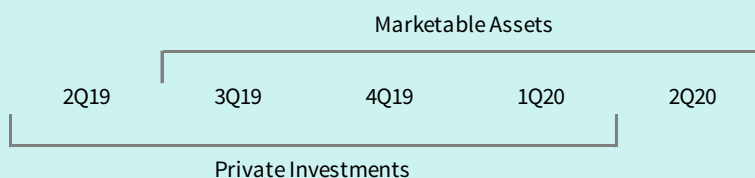
### Current Basis

Total investment pool return for 2020 includes marketable asset performance for July 1, 2019, to June 30, 2020.



### Lagged Basis

Total investment pool return for 2020 includes marketable asset performance for July 1, 2019, to June 30, 2020, and private investment performance for April 1, 2019, to March 31, 2020.



### Methodologies Used by Participants

Asset Size	Current Basis	Lagged Basis	Other	No PI Allocation
Less than \$200M	81%	0%	0%	19%
<i>n</i>	22	0	0	5
\$200M – \$500M	100%	0%	0%	0%
<i>n</i>	30	0	0	0
\$500M – \$1B	76%	24%	0%	0%
<i>n</i>	26	8	0	0
More than \$1B	84%	15%	1%	0%
<i>n</i>	57	10	1	0
All Institutions	85%	11%	1%	3%
<i>n</i>	135	18	1	5

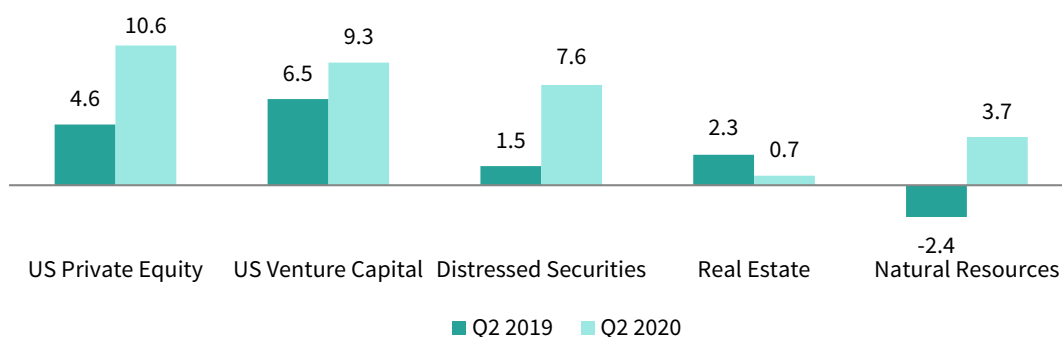
Source: College and university data as reported to Cambridge Associates LLC.

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 substantial for most of the private investment asset classes (Figure 10). With the exception of real estate, each of the private investment index returns posted higher performance in second quarter 2020 compared to second quarter 2019. For institutions with large allocations to private investments, the current methodology would very likely calculate a higher total portfolio return compared to the lagged basis for fiscal year 2020. Of the 18 participants that use the lagged methodology, just three reported a total portfolio return that was in the top quartile for fiscal year 2020.

**FIGURE 10 CAMBRIDGE ASSOCIATES' PRIVATE INVESTMENT INDEX RETURNS**

Percent (%)



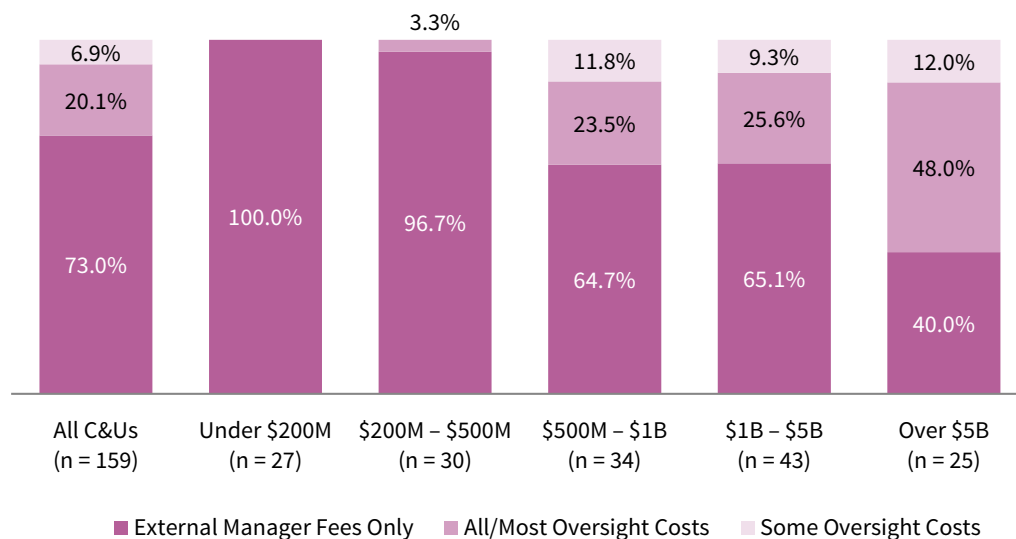
Source: Cambridge Associates LLC.

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. Just under three-quarters of respondents (73%) reported returns net of external manager fees only for fiscal year 2020 (Figure 11). Another 20% 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 7% of respondents deduct external manager fees plus some additional costs but are gross of the major oversight cost expenses.

**FIGURE 11 TYPES OF FEES DEDUCTED IN FY 2020 NET RETURN CALCULATION**

As of June 30, 2020 • Percent (%)



Source: College and university 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 drivers (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.

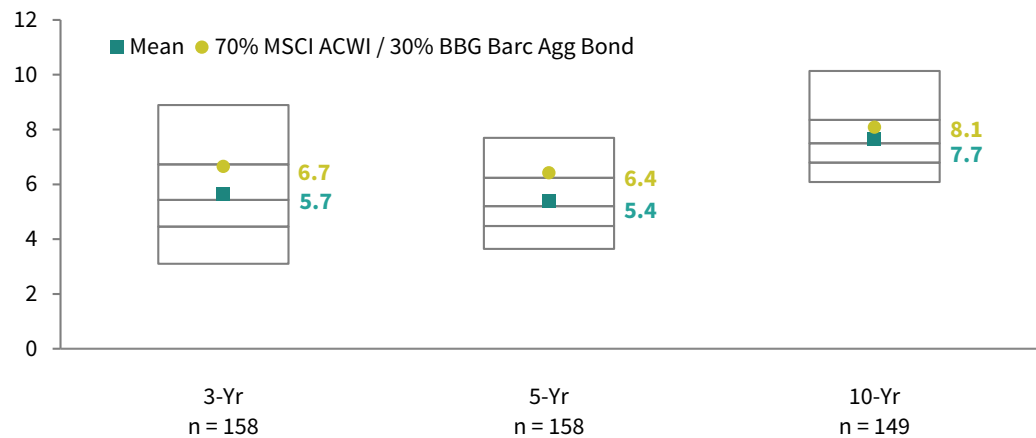
Smaller endowments are much less likely to deduct oversight costs compared to larger endowments. Just one endowment less than \$500 million deducts all investment oversight costs in their net return calculation. In contrast, nearly half (48%) of endowments with asset sizes greater than \$5 billion reported 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 for the trailing ten-year period was 7.7%. A simple benchmark consisting of 70% MSCI ACWI and 30% Bloomberg Barclays Aggregate Bond outperformed the mean return by 40 bps over this period and would have landed just outside the top quartile of the overall participant group. The simple benchmark outperformed the average endowment return by 100 bps for both the trailing three-year and five-year periods (Figure 12).

**FIGURE 12 TOTAL RETURNS SUMMARY: TRAILING 3-, 5-, AND 10-YR**

Years Ended June 30, 2020 • Percent (%)



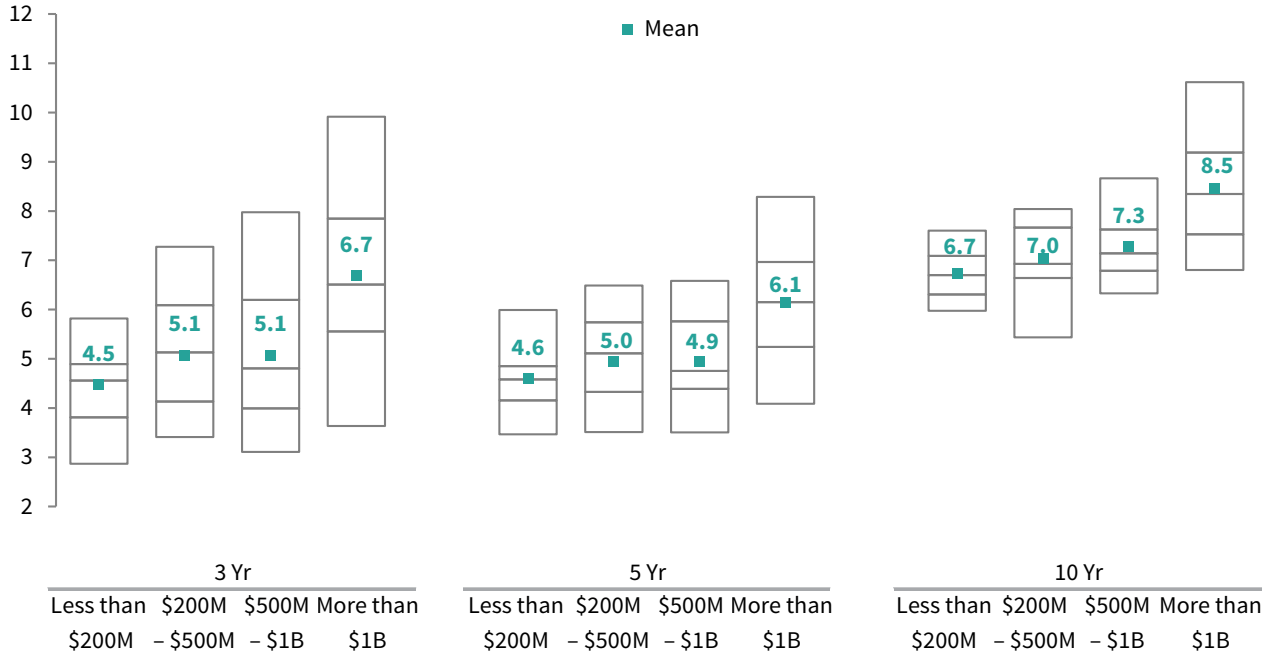
Sources: College and university data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

Note: For more information, please see page 65 in the Appendix.

Endowments greater than \$1 billion reported the highest average return out of all the asset size groups for the trailing three-, five-, and ten-year periods. In fact, the average returns for endowments greater than \$1 billion outperformed the top quartile returns of the other asset size groups across each of these periods. Compared to the 70/30 simple benchmark, the average return of the largest endowments was 40 bps higher over the trailing ten-years and equaled the benchmark return over the trailing three-years. For the trailing five-years the simple benchmark exceeded the average return of the largest endowments by 30 bps.

**FIGURE 13 NOMINAL RETURN PERCENTILES BY ASSET SIZE: TRAILING 3-, 5-, AND 10-YR**

Years Ended June 30, 2020 • Percent (%)



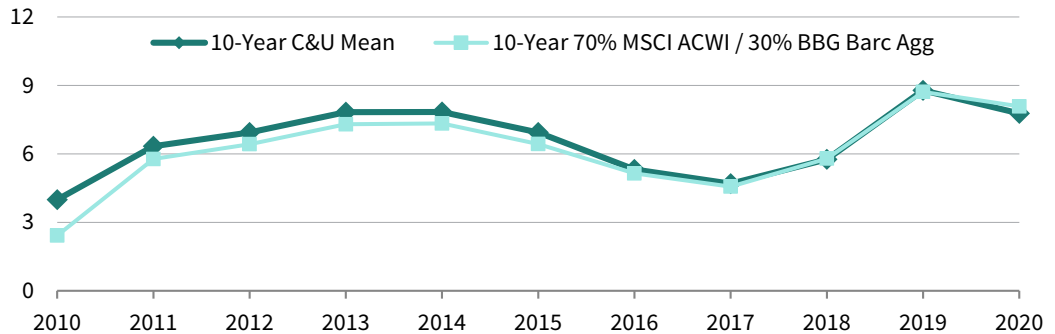
Source: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 65 in the Appendix.

Figure 14 shows the rolling average ten-year return for the overall participant group over the last decade along with the simple 70/30 returns. The returns for the ten-year period ending June 30, 2020 were the second highest reported from the last decade for both series. From a comparative standpoint, 2020 was the first time in recent history that the ten-year average participant return underperformed the simple 70/30 benchmark.

**FIGURE 14 ROLLING 10-YR AVERAGE ANNUAL COMPOUND RETURNS**

Years Ended June 30 • Percent (%) • n = 132



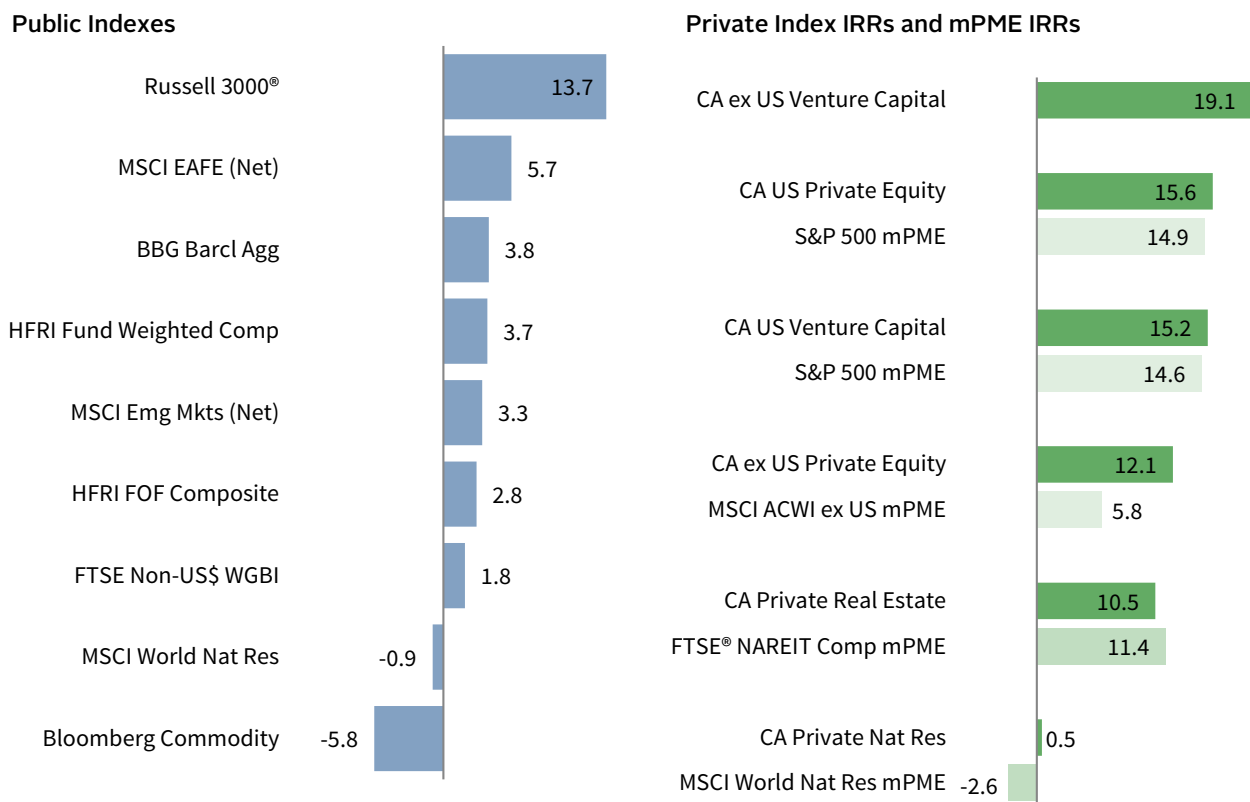
Source: College and university data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.



**TEN-YEAR ASSET ALLOCATION.** Each endowment in this study has diversified beyond a simple 70/30 portfolio to some degree and into what are considered alternative asset classes. Assessing the returns of alternative asset strategies is important when evaluating the overall performance of endowments relative to the simple benchmark. The US public stock market has accounted for more than half of the equity component (MSCI ACWI Index) in the 70/30 index in recent years and has been the primary driver of this the simple portfolio's return over the last decade. Yet the Cambridge Associates US Private Equity and US Venture Capital indexes performed even better for the trailing ten years, posting a higher return than the mPME version of the S&P 500 Index over this period. The outperformance of the private strategies was more pronounced in the global ex US private markets (Figure 15).

**FIGURE 15 10-YR INDEX RETURNS**

As of June 30, 2020 • Percent (%)



Sources: 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.

This market backdrop helps to shed light on the differences in asset allocations among participants over the last decade and the impact on comparative returns. The group of endowments that outperformed the 70/30 portfolio over the last decade generally had the highest allocations to PE/VC. The top quartile of performers, all of which outperformed the 70/30 benchmark, had an average allocation of 21.5% to PE/VC over this period. In contrast, endowments in the bottom performance quartile had an average allocation of 9.1% to these strategies.

**FIGURE 16 10-YR MEAN ASSET ALLOCATION BY PERFORMANCE QUARTILE**

Percent (%) • n = 125

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	13.4	10.2	7.2	5.6	21.2	3.7	21.5	11.1	2.5	3.3	0.3
2nd Quartile	17.5	13.0	7.3	9.2	19.2	3.9	14.3	8.4	3.5	3.3	0.4
3rd Quartile	21.7	14.8	6.7	10.3	18.1	3.7	9.5	5.4	5.9	3.2	0.6
Bottom Quartile	21.0	14.7	7.1	12.3	17.3	3.7	9.1	4.7	5.2	3.7	1.2
All C&U Mean	18.4	13.2	7.1	9.3	19.0	3.7	13.6	7.4	4.3	3.4	0.6

Divergence of Asset Allocation from All C&U Mean



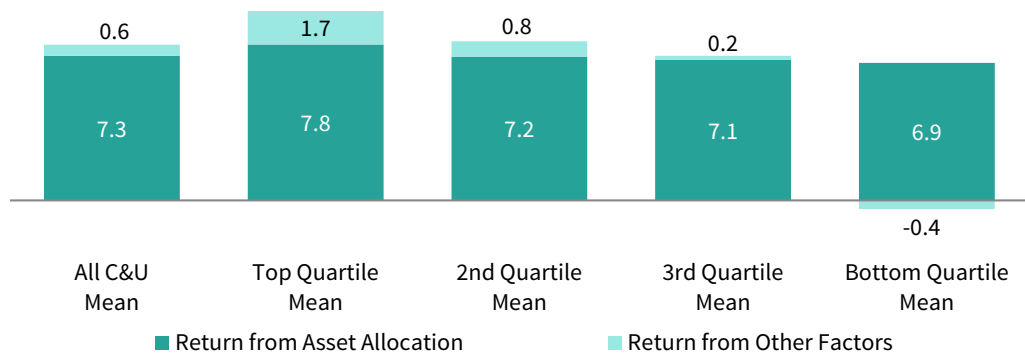
Sources: College and university data as reported to Cambridge Associates LLC.

Note: Asset allocation is averaged across the 11 June 30 periods from 2010 to 2020 for each institution in this analysis.

**ATTRIBUTION.** The attribution model further illustrates the impact of different asset allocation structures on the trailing ten-year return. The average asset allocation return over this period for the top quartile of performers was 7.8% (Figure 17). For the bottom quartile of performers, the average asset allocation return was 90 bps lower at 6.9%. However, similar to our analysis on the trailing one-year data, our attribution model estimates that it was the return from other factors that explained most of the dispersion in returns among the peer group for the trailing ten-year period. Endowments in the top quartile had an average implementation return of 1.7%, while the bottom quartile of performers actually lost value through implementation (-0.4%).

**FIGURE 17 10-YR ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE**

As of June 30, 2020 • Percent (%) • n = 125

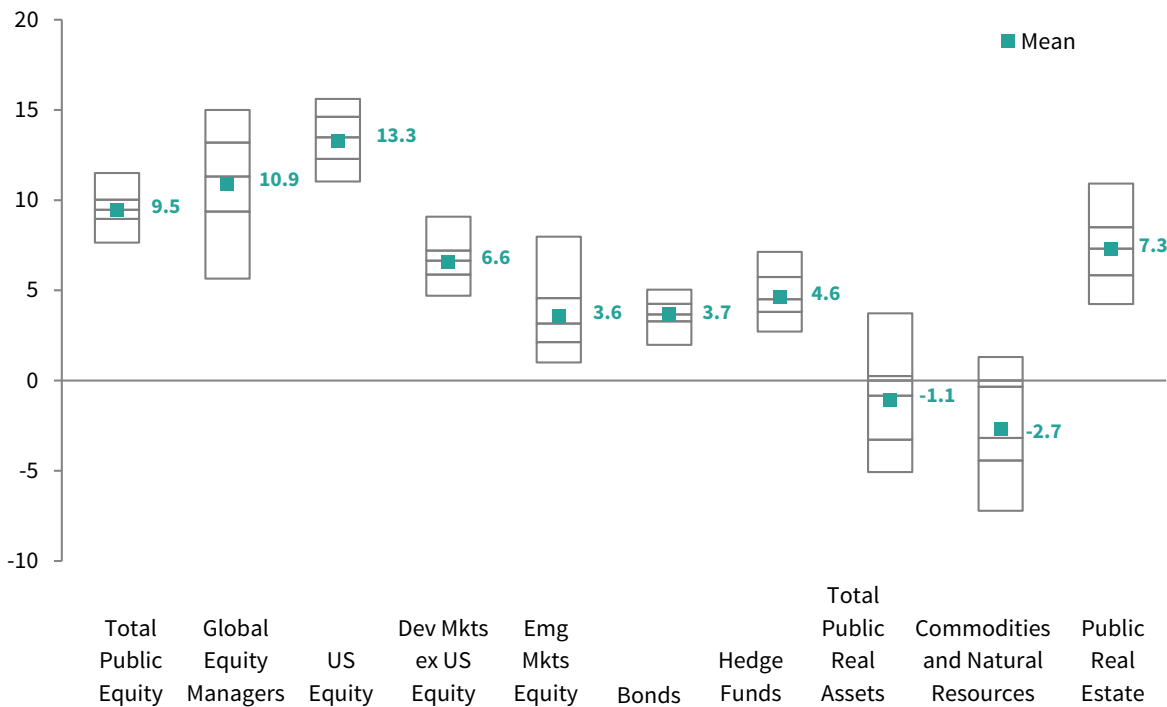


Source: College and university data as reported to Cambridge Associates LLC.

**ASSET CLASS RETURNS.** The range of participants' trailing ten-year asset class returns for marketable asset class strategies are displayed in Figures 18. The total public equity composite return averaged 9.5%, with US equity have the highest average among the geographic regions (13.3%). On average, the hedge fund composite return was 4.6% while bonds was slightly lower (3.7%). The average total public real assets composite, which is a combination of several substrategies, was negative (-1.1) for the trailing ten-year period. Commodities and natural resources-related investments typically make up the largest component of public real assets allocations and was also negative (-2.7%), on average.

**FIGURE 18 DISPERSION OF PARTICIPANTS' 10-YR ASSET CLASS RETURNS: MARKETABLE INVESTMENTS**

Trailing 10-Yr as of June 30, 2020



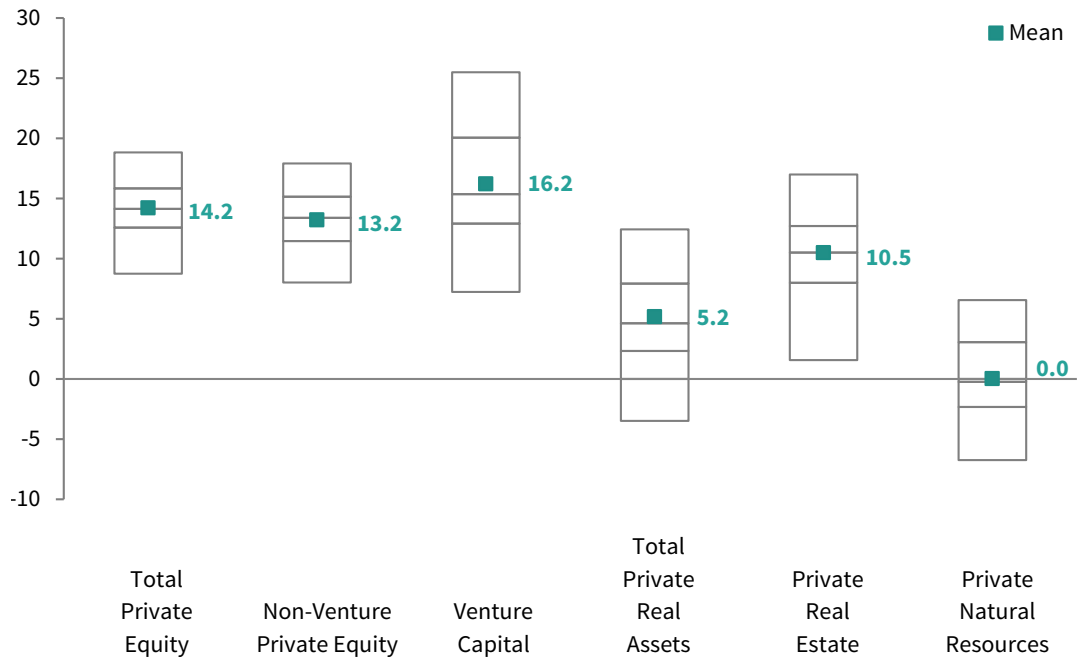
Source: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 66 in the Appendix.

Within private investment strategies, the highest average participant return over the last decade was to venture capital at 16.2% (Figure 19). Approximately one-quarter of endowments that provided data reported a venture capital return of 20% or higher. The range of venture capital returns from the 5th percentile (25.5%) to 95th percentile (7.2%) was over 1,800 bps and was the largest variation among all of the asset class strategies for the trailing ten-year period. The lowest returns in the private investment strategies came from natural resources-related strategies, where the average return was flat (0.0%).

**FIGURE 19 DISPERSION OF PARTICIPANTS' 10-YR ASSET CLASS RETURNS:  
PRIVATE INVESTMENTS**

Trailing 1-Yr as of June 30, 2020



Source: College and university data as reported to Cambridge Associates LLC.

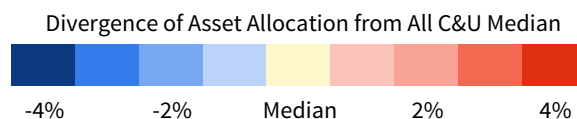
Notes: Private investment return statistics are reported as horizon internal rates of return. For more information, see page 67 in the Appendix.

In Figure 20 the participant group is again broken out into four quartiles based on the ten-year total portfolio return. The table shows the median asset class returns for the endowments that provided data for this same period. Endowments in the top quartile based on total returns also reported returns in several marketable asset classes that were notably higher than those of other participants. In emerging markets equity, the median return for the top performance quartile was 160 bps higher than the median for the overall participant group. The spread was slightly higher in hedge funds, where the median for the top quartile was 170 bps higher than the All C&U median. The outperformance in hedge funds is noteworthy because the top quartile of endowments allocated an average of 21.2% to these strategies over the last decade (Figure 16).

**FIGURE 20 10-YR MEDIAN ASSET CLASS RETURNS BY TOTAL PERFORMANCE QUARTILE: MARKETABLE INVESTMENTS**

Trailing 10-Yr as of June 30, 2020 • Percent (%)

Median Return	Total Public Equity	Global Equity Managers	US Equity	Devel Markets ex US Equity	Emerging Markets Equity	Bonds	Hedge Funds	Total Public Real Assets	Comm and Nat Res	Public Real Estate
Top Quartile	10.4	13.1	13.7	7.0	4.8	3.6	6.2	-0.9	-0.9	--
<i>n</i>	21	11	23	20	20	20	25	6	4	--
2nd Quartile	9.4	11.8	12.9	6.7	3.5	3.5	4.9	-0.8	-2.0	8.3
<i>n</i>	32	10	26	26	22	31	30	10	12	5
3rd Quartile	9.4	8.7	13.8	6.3	2.9	3.7	4.2	-1.4	-3.3	7.3
<i>n</i>	33	8	32	30	29	32	31	17	16	4
Bottom Quartile	9.3	6.7	13.4	6.6	2.6	3.8	3.9	-0.1	-3.9	7.5
<i>n</i>	27	4	27	26	24	27	24	19	16	8
All C&U Median	9.5	11.3	13.5	6.6	3.2	3.7	4.5	-0.8	-3.2	7.3
<i>n</i>	113	33	108	102	95	110	110	52	48	18



Sources: College and university data as reported to Cambridge Associates LLC.

Note: Institutions are assigned to performance quartiles based on their total portfolio return for the ten-year period ending June 30, 2020.

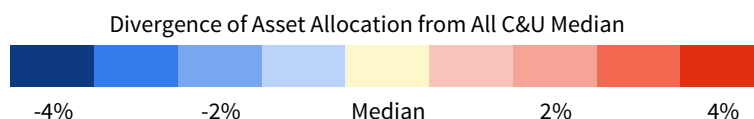
The top-performing endowments also reported outstanding returns in venture capital over the last decade. The IRR for the top quartile of performers (21.0%) was 560 bps higher than that of the overall participant group (Figure 21). In addition to the stellar performance in venture capital, the top quartile had an average ten-year allocation of 10.0% to this strategy, which was nearly double the average of the overall participant group (5.5%). When considering the higher allocations and this magnitude of outperformance, venture capital was a key factor in explaining how the top quartile of performers stood out from other endowments over the last decade.

**RETURNS AFTER SPENDING.** 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. Most participants in this study have fared well in this objective over the trailing ten-year period, with the real return after spending

**FIGURE 21 10-YR MEDIAN ASSET CLASS RETURNS BY TOTAL PERFORMANCE QUARTILE: PRIVATE INVESTMENTS**

Trailing 10-Yr as of June 30, 2020 • Percent (%)

Median Return	Total Private Equity	Non-Venture Private Equity	Venture Capital	Total Private Real Assets	Private Real Estate	Private Natural Resources
Top Quartile	14.5	13.0	21.0	7.9	10.5	-1.6
<i>n</i>	20	21	19	17	19	17
2nd Quartile	15.5	14.5	17.6	5.3	10.8	0.9
<i>n</i>	29	25	24	19	21	21
3rd Quartile	14.3	13.1	15.0	3.9	10.3	-0.6
<i>n</i>	29	29	25	25	21	22
Bottom Quartile	12.8	12.4	13.3	5.2	10.0	-0.3
<i>n</i>	25	23	21	20	18	17
All C&U Median	14.1	13.4	15.4	4.6	10.5	-0.2
<i>n</i>	103	98	89	81	79	77



Sources: College and university data as reported to Cambridge Associates LLC.

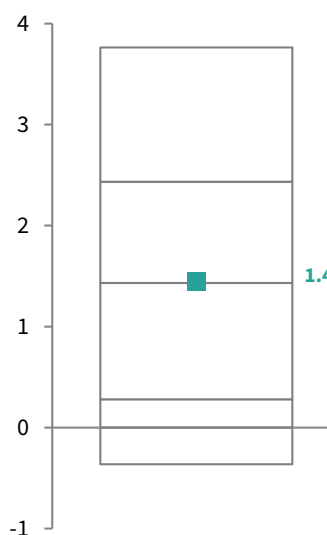
Notes: Institutions are assigned to performance quartiles based on their total portfolio return from the ten-year period ending June 30, 2020. Private investment return statistics are reported as horizon internal rates of return.

averaging 1.4% over this period (Figure 22). Of the endowments that provided returns and spending rates for the last ten years, over 80% (65 of 79) reported a real return after spending that equaled or exceeded 0.0% over the last decade.

**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.

**FIGURE 22 10-YR REAL RETURNS AFTER SPENDING**

As of June 30, 2020 • Percent (%) • *n* = 79



Sources: College and university data as reported to Cambridge Associates LLC.

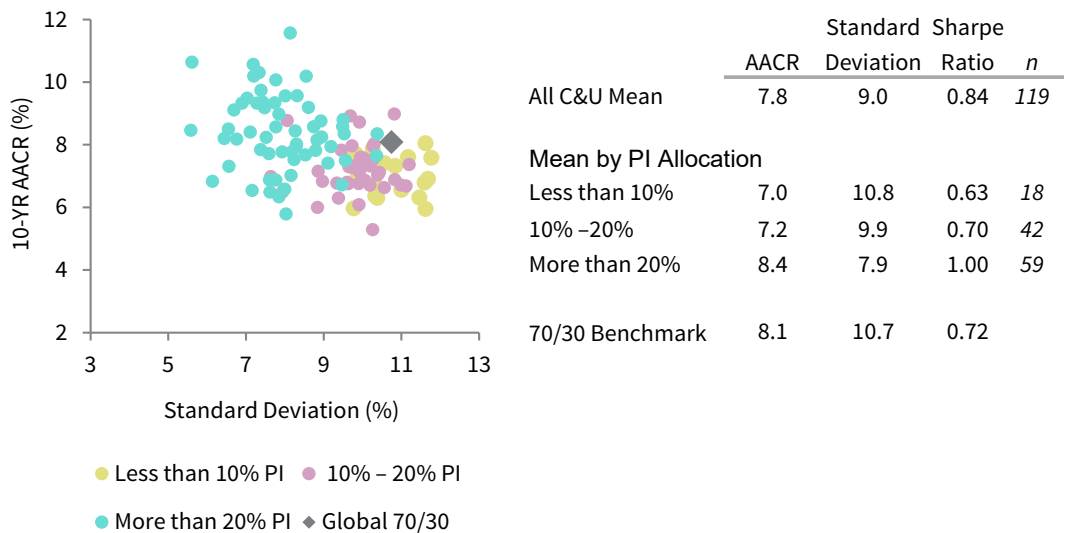
Note: For more information, see page 68 in the Appendix.

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 relative to portfolios that have higher public equity allocations. For this reason, we have split endowments out into subcategories in Figure 23 based on their allocations to private investments.

The average Sharpe ratio for endowments that had an allocation of 20% or more to private investments over ten years was 1.00. In comparison, the average Sharpe ratio was 0.70 for participants that had a private allocation between 10% and 20% and 0.63 for those with a private allocation below 10%. Although the better average Sharpe ratio for the group with the highest private allocations is partly a function of this group's higher average returns, it is also attributable to their lower average standard deviations.

**FIGURE 23 10-YR STANDARD DEVIATION AND SHARPE RATIO**

Periods Ended June 30, 2020



Sources: College and university 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.

## Section 2: 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 that are related to endowment investment policies and 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 colleges and universities 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 colleges and universities intend to carry out their missions in perpetuity.

One term that is often associated with endowment management is intergenerational equity. The concept of intergenerational equity is that future generations should receive financial support from the endowment that is equitable to what is received by today's students 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.

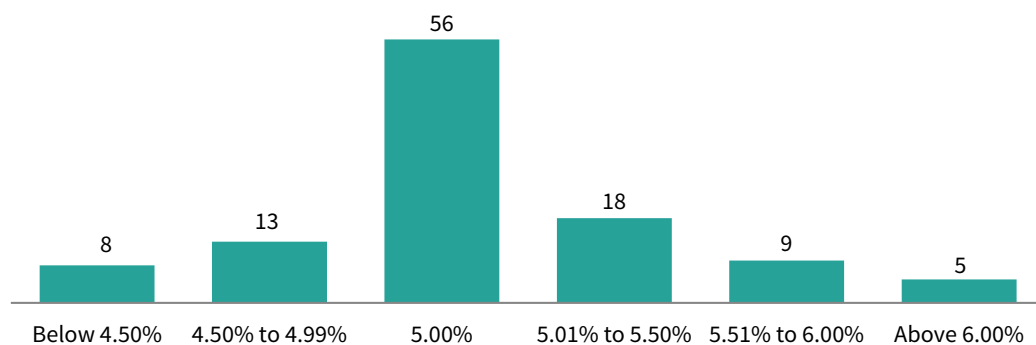
Of the survey participants that specified the primary role for their endowment, 85% indicated it was to maintain intergenerational equity. The remaining 15% of respondents indicated that the primary role of the endowment was to expand its permanent capital so that the endowment could fulfill a bigger 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 a goal that must be met each and every year. By far the most common real return objective is 5%, which was cited by 56 of 109 respondents (Figure 24). Of the remaining respondents, 32 cited an objective of more than 5%, while 21 reported an objective of less than 5%.



**FIGURE 24 REAL TOTAL PORTFOLIO RETURN OBJECTIVES**

n = 109



Source: College and university data as reported to Cambridge Associates LLC.

### **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 classes categories used in their endowment's asset allocation policy.

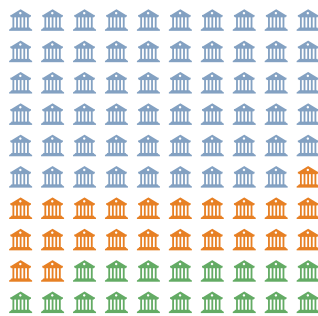
There are differences in the policy frameworks reported among respondents, with some endowments using more detailed categories than others. This is most evident in equity categories, where there are contrasting approaches to the inclusion of geographic regions and private investments into the policy 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 is most common for public equities, with 59% of respondents reporting a single category that captures their entire public equity allocation (Figure 25). The next most common approach (23%) was to assign separate targets based on geographic regions to US, global ex US developed, and emerging market categories. The remaining 18% of respondents use some other combination of geographic regions to represent public equities in their asset allocation policy. One example is using the aforementioned three geographic regions as well as a dedicated global category. Also included in the other bucket are endowments that group US and global ex US developed equities together in a global developed category and endowments that use a single global ex US category without breaking out emerging markets allocations.

Approximately two-thirds of respondents (67%) have a dedicated target to private equity and venture capital 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 19% of respondents use a total private investments category which combines PE/VC together with private real estate and/or private natural resources in their policy framework. The remaining 14% of respondents use a single equity category to capture public equity and PE/VC together in their target asset allocation framework.

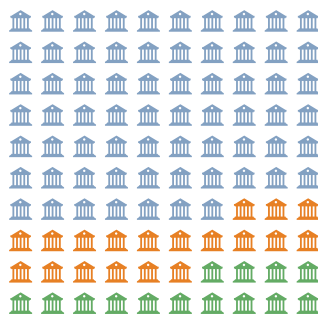
**FIGURE 25 CATEGORIES USED FOR EQUITIES IN ASSET ALLOCATION POLICY**  
Fiscal Year 2020




**Public Equity** (*n* = 145)



-  **59%** capture all public equity under a single target
-  **23%** use separate targets for US, global ex US developed, and emerging markets equities
-  **18%** use some other combination of geographic categories

**Private Equity** (*n* = 137)



-  **67%** have a dedicated target to PE/VC
-  **19%** have a dedicated target to private investments, which captures PE/VC, real estate, and/or natural resources together
-  **14%** include PE/VC along with public equities in a single category

Source: College and university data as reported to Cambridge Associates, LLC.

**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. In certain alternative asset classes, there are no

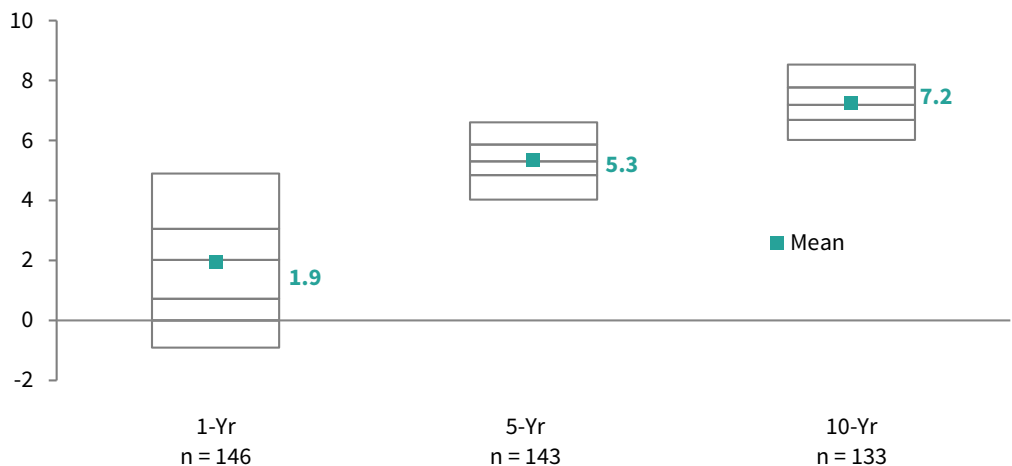
investable proxies and other types of benchmarks are used. Measuring performance relative to the policy benchmark captures the impact not only of manager selection decisions, but also the differences between the portfolio's actual asset allocation and the target asset allocation policy.

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 26 shows the range of policy benchmark returns among the respondent group for select trailing periods. For fiscal year 2020, the difference in policy benchmark returns from the 5th percentile to the 95th percentile was 560 bps. The range between the same percentiles was 270 bps for the trailing five-year period and 290 bps for the trailing ten-year period.

**FIGURE 26 DISPERSION IN POLICY PORTFOLIO BENCHMARK RETURNS**

Periods as of June 30, 2020 • Percent (%)



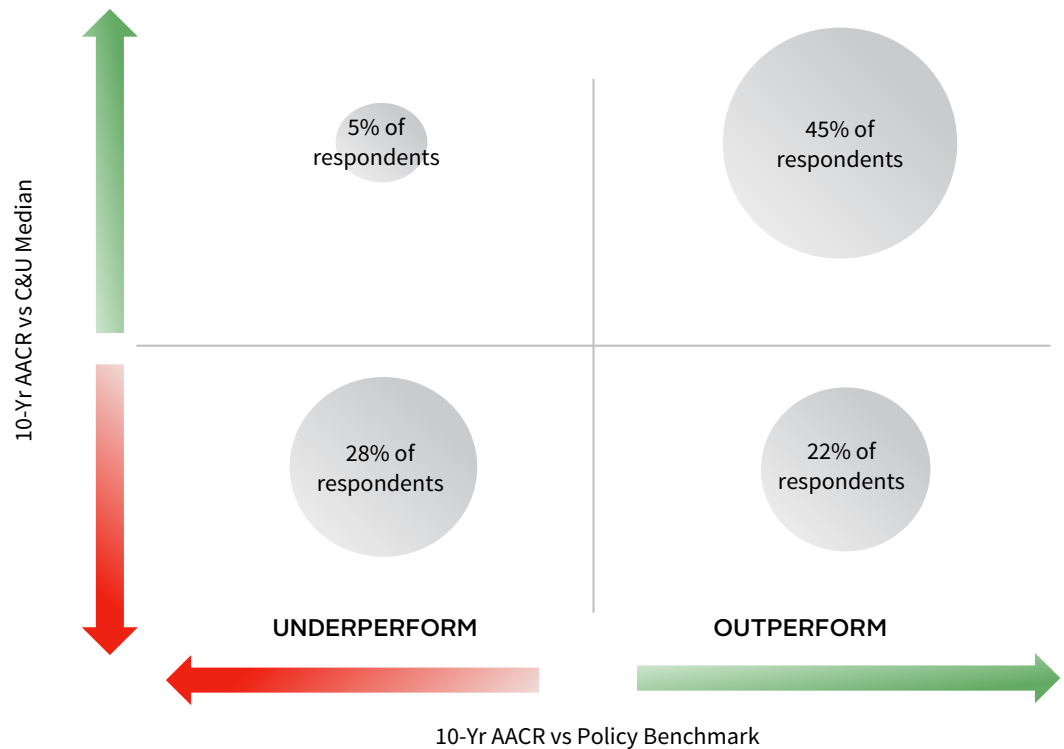
Source: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 68 in the Appendix.

The range of policy benchmark returns for these periods closely resemble the range of actual portfolio returns reported by participants in this study. For the trailing ten-year data set, endowments at the bottom end of the policy benchmark return distribution did not have portfolios that were as well positioned from an asset allocation perspective to outperform other peers over the last decade. 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 27, 22% of respondents experienced this exact scenario for the trailing ten-year period.

**FIGURE 27 EVALUATING INVESTMENT PERFORMANCE: 10-YR RETURN VS POLICY BENCHMARK AND C&U MEDIAN RETURN**

As of June 30, 2020 • n = 128



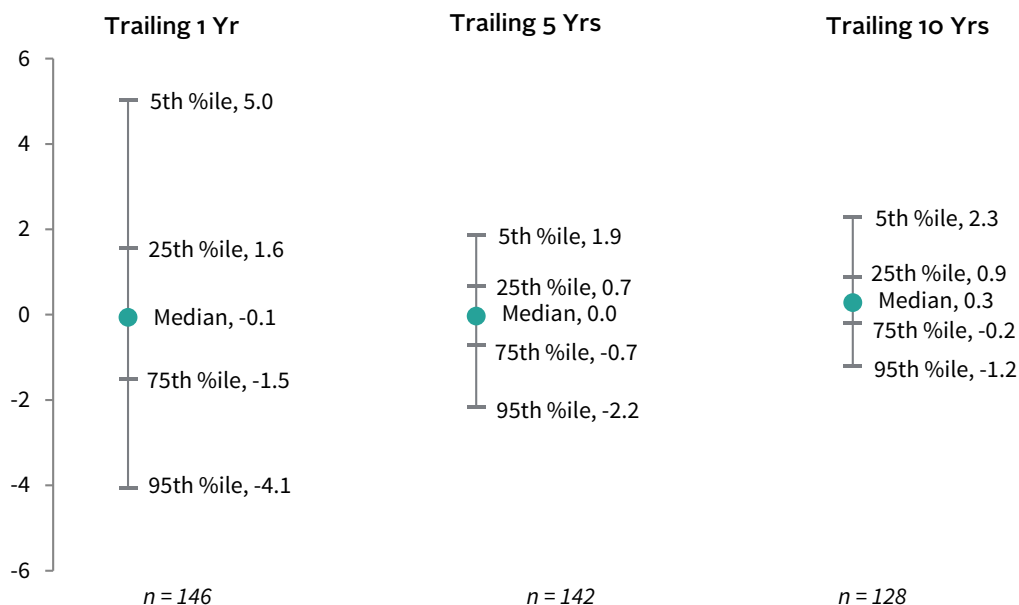
Source: College and university data as reported to Cambridge Associates LLC.

Approximately 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 28). The median spread was -0.1 ppts for fiscal year 2020, which means a majority of the peer group underperformed their policy benchmark over this most recent annual period. As is typically the case, the range of out/underperformance versus the policy benchmark was wider for shorter-term fiscal year 2020 period compared to the longer-term trailing five- and ten-year periods.

**POLICY PORTFOLIO BENCHMARK COMPONENTS.** Almost 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.

**FIGURE 28 RANGE OF OUT/UNDERPERFORMANCE OF TOTAL RETURN VS POLICY PORTFOLIO BENCHMARK**

As of June 30, 2020 • Percentage Points



Source: College and university data as reported to Cambridge Associates LLC.

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

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 different levels of granularity, approaches to benchmarking also can 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 Index for the entire public equity allocation was by far the most common approach. A handful of respondents used a combination of the MSCI World Index, which represents global developed markets, and the MSCI Emerging Markets Index (Figure 29).

Among the endowments that use more granular public equity indexes based on geographic orientation, the Russell 3000® Index was cited by 62% for US equity. The same percentage of respondents used a blend of the MSCI EAFE and MSCI Emerging Markets indexes for global ex US equity. 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.

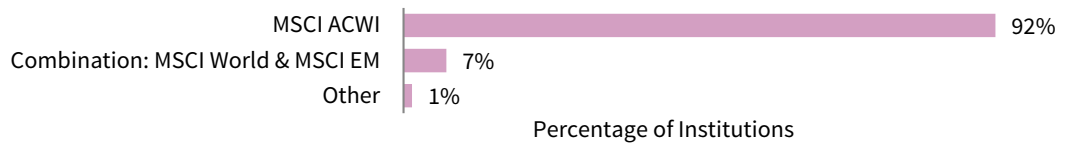
The use of a public index(es) is the most common practice for benchmarking private equity in the policy portfolio benchmark, as 46% of respondents use the actual public index return (Figure 30). Another 7% of respondents add a prespecified percentage or premia to the public index return. The Cambridge Associates private indexes were

cited by 37% 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.

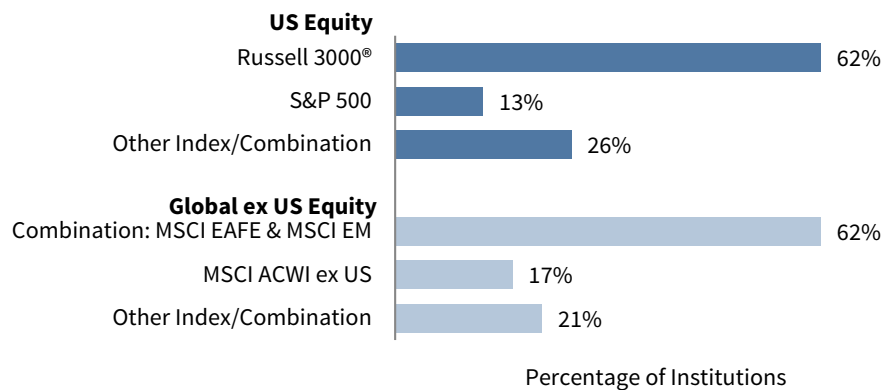
**FIGURE 29 FREQUENTLY USED COMPONENTS OF POLICY PORTFOLIO BENCHMARKS: PUBLIC EQUITY**

As of June 30, 2020

**Institutions That Use a Global Index for All or Most of the Public Equity Allocation (n = 75)**



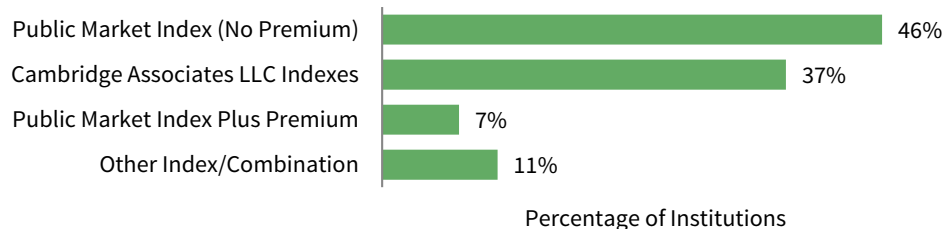
**Institutions That Use Separate Geographic Indexes for the Public Equity Allocation (n = 47)**



Source: College and university data as reported to Cambridge Associates LLC.

**FIGURE 30 FREQUENTLY USED COMPONENTS OF POLICY PORTFOLIO BENCHMARKS: PRIVATE EQUITY**

As of June 30, 2020 • n = 114

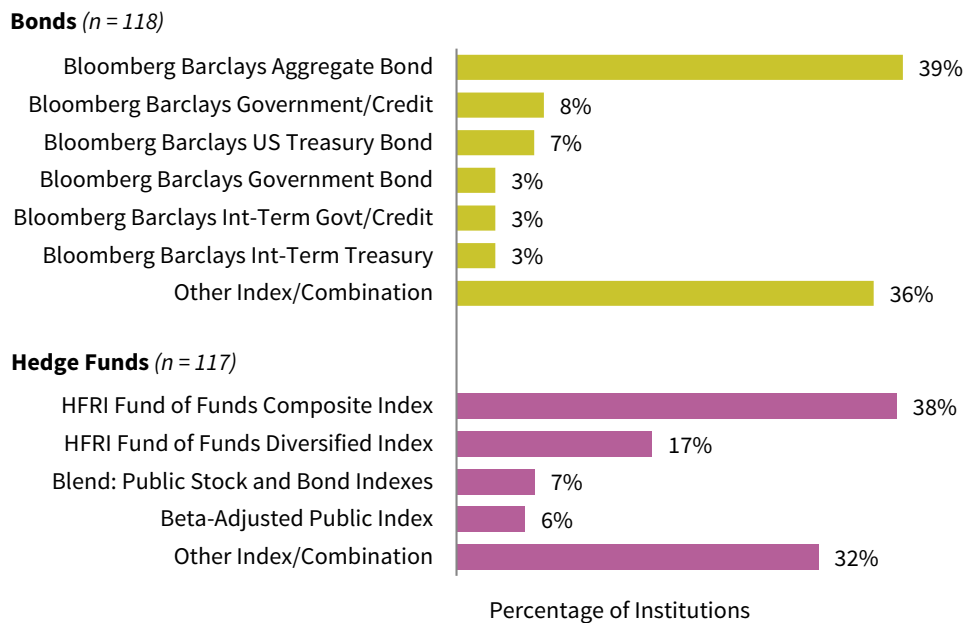


Source: College and university data as reported to Cambridge Associates LLC.

The use of the Bloomberg Barclays Aggregate Bond Index only was the most common benchmarking approach for bonds and was reported by 39% of endowments (Figure 31). 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 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.

**FIGURE 31 FREQUENTLY USED COMPONENTS OF POLICY PORTFOLIO BENCHMARKS: BONDS AND HEDGE FUNDS**

As of June 30, 2020



Source: College and university data as reported to Cambridge Associates LLC.

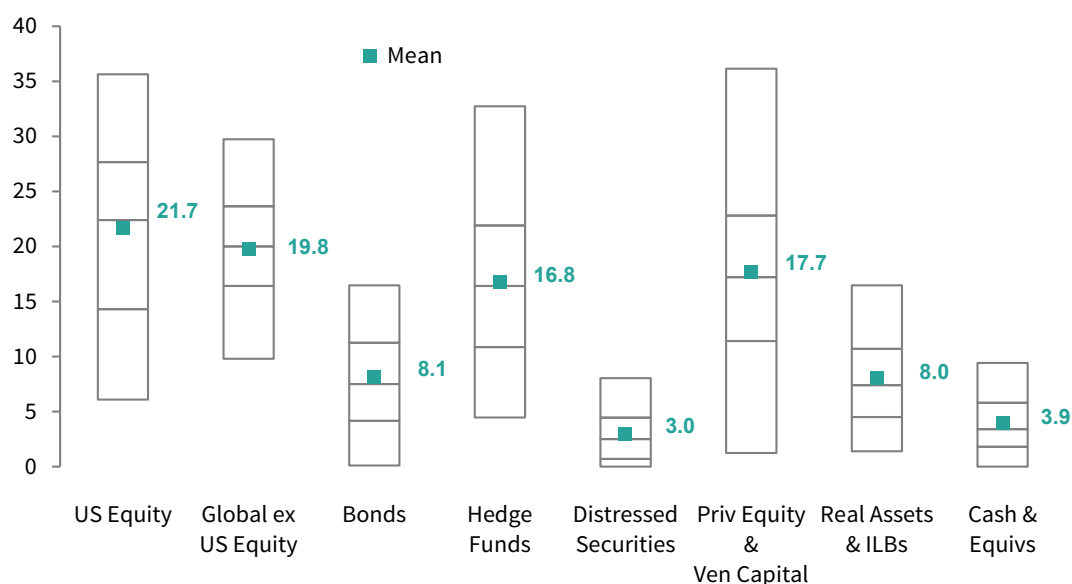
## Section 3: Portfolio Asset Allocation

### 2020 ASSET ALLOCATION

Over 40% of the average long-term investment portfolio (LTIP) consisted of public equity at June 30, 2020. On average, the allocations to US equity (21.7%) were higher than those to global ex US equity (19.8%). Portfolios had significant exposure to alternative assets, with 16.8% allocated to hedge funds and 17.7% allocated to private equity and venture capital, on average. Another 3.0% 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 8.0% of portfolios, on average. Average allocations to bonds and cash were 8.1% and 3.9%, respectively (Figure 32).

**FIGURE 32 ASSET ALLOCATION DISTRIBUTION BY ASSET CLASS**

As of June 30, 2020 • Percent (%) • n = 159



Source: College and university data as reported to Cambridge Associates LLC.

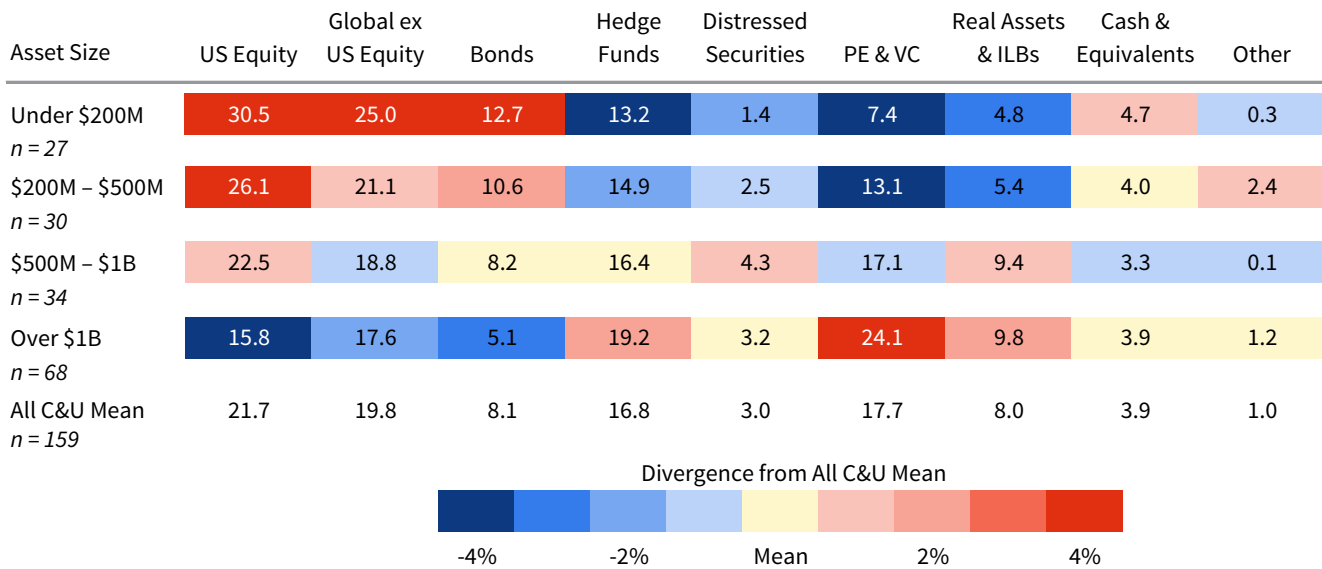
Note: For more information, see page 68 in the Appendix.

As Figure 32 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 under \$200 million continue to maintain higher allocations to traditional bonds and equities, while those with assets over \$1 billion have the highest allocations to alternative assets. The differences are most noticeable in the breakdown of public equity versus private equity. The smallest endowments in this study had an average allocation of 55.5% to public equity while the largest endowments had an average of 33.4% (Figure 33). For private equity and venture capital, the largest endowments had an average allocation of 24.1%, while the smallest endowments had an average of 7.4%. Average allocations for a more granular asset allocation framework is included in the appendix of this report.



**FIGURE 33 MEAN ASSET ALLOCATION BY ASSET SIZE**

As of June 30, 2020 • Percent (%)



Sources: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 69 in the Appendix.

**HISTORICAL ASSET ALLOCATION**

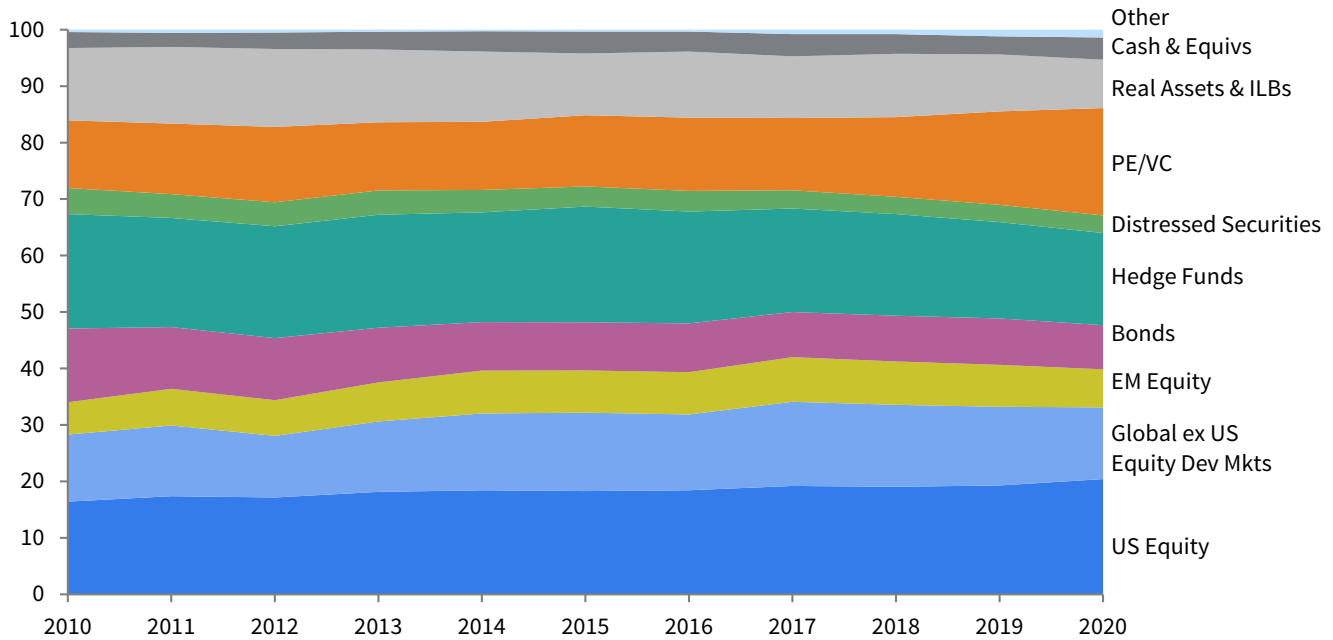
Institutional investors that have adopted the endowment model of investing have seen significant shifts in their asset allocation policies over the last few decades. Exposure to bonds has decreased while the larger equity allocation has become more diversified. The largest endowments pioneered this transition 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 end of the 2000s, most endowments in this study had already built highly diversified portfolios.

Figure 34 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, 2010 and just a little over a year after the stock market bottoms of the GFC. Average public equity allocations were near their all-time low on this date but have ticked back up over the last decade. The biggest increase in public allocations over the last decade have been to US equities, which increased by an average of 4.0 percentage points (ppts). Allocations to private equity and venture increased even more, with the average increasing by 7.0 ppts over the last decade. Bonds (-5.2 ppts), real assets (-4.2 ppts), and hedge funds (-4.0%) all experienced substantial declines on average over this period.

Endowments of various asset sizes followed the same overall trends (Figure 35). Each asset size group saw increases to PE/VC, with the largest endowments reporting the highest average increase (8.4 ppts) and the smallest endowments with the smallest average increase (3.9 ppts). Among US equities, it was endowments between \$500 million and \$1 billion that reported the largest increase (6.6 ppts) over the decade while those over \$1 billion reported the smallest increase (2.4%). All asset size groups reported notable decreases to bonds, hedge funds, and real assets.

### FIGURE 34 HISTORICAL MEAN ASSET ALLOCATION TRENDS

Years Ended June 30 • Percent (%) • n = 125



Source: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 70 in the Appendix.

### FIGURE 35 TRENDS IN ASSET ALLOCATION BY ASSET SIZE

Means as of June 30 • Percent (%)

	US Equity	Global ex US		Bonds	Hedge Funds	Dist Sec	PE/VC	RA & ILBs	Cash & Equiv
		Dev	EM						
<b>Under \$200M (n = 15)</b>									
2010	22.8	16.8	5.2	19.2	17.0	2.7	3.3	10.4	2.4
2020	28.3	19.2	6.6	13.6	13.8	1.0	7.2	5.3	4.6
Change (ppt)									
2010–2020	5.5	2.4	1.3	-5.6	-3.2	-1.7	3.9	-5.1	2.1
<b>\$200M–\$500M (n = 21)</b>									
2010	21.6	13.3	4.9	17.6	17.6	4.1	7.3	10.9	2.7
2020	25.8	14.1	6.5	10.8	13.3	2.6	13.7	5.8	4.1
Change (ppt)									
2010–2020	4.2	0.8	1.6	-6.8	-4.3	-1.5	6.4	-5.1	1.4
<b>\$500M–\$1B (n = 27)</b>									
2010	16.1	11.6	5.5	13.2	21.6	5.9	11.2	11.9	2.7
2020	22.7	13.1	5.8	8.6	15.1	4.6	17.2	9.2	3.5
Change (ppt)									
2010–2020	6.6	1.5	0.4	-4.6	-6.5	-1.3	6.0	-2.7	0.8
<b>Over \$1B (n = 62)</b>									
2010	13.2	10.4	6.2	10.0	21.4	4.7	16.0	14.4	3.0
2020	15.7	10.5	7.3	5.1	18.4	3.2	24.4	10.1	3.9
Change (ppt)									
2010–2020	2.4	0.1	1.1	-4.9	-2.9	-1.5	8.4	-4.4	0.9

Change in Mean Asset Allocation from 2010 to 2020

Source: College and university data as reported to Cambridge Associates LLC.

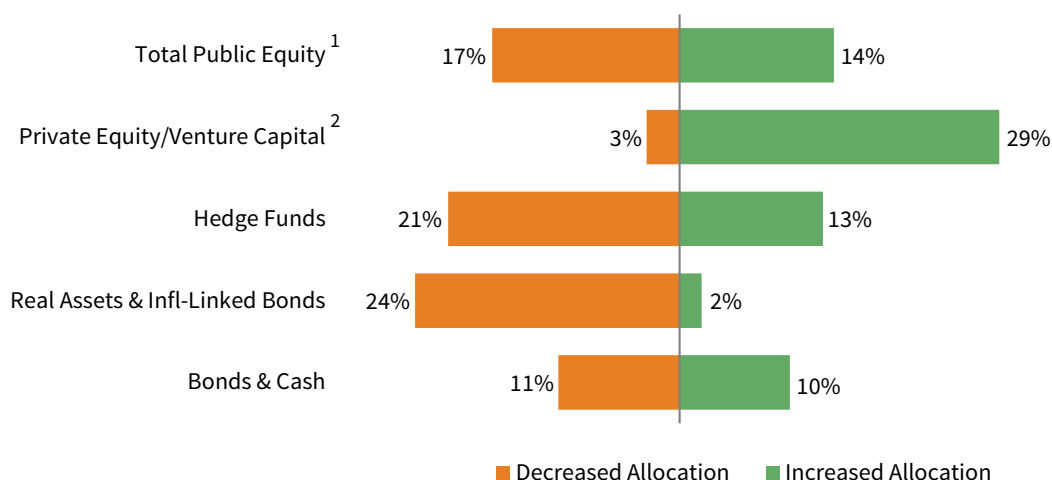
## TARGET ASSET ALLOCATION

Target asset allocation data can be insightful for evaluating whether endowments are altering their long-term asset allocation policies going forward. Our survey requests that participants provide their asset allocation policy exactly as stated in their investment policy statements. While there are differences in how policy frameworks are structured across institutions, we are able to make some general observations as to where endowments are tilting towards increasing or decreasing their allocations in the future.

The trend in target asset allocations for fiscal year 2020 was mostly similar those that have been reported in recent years. Over the last fiscal year, 29% of endowments have increased their target allocation to PE/VC. Just 3% of respondents has decreased their target to this category. The trend was the opposite for real assets, where 24% of endowments have lowered their target and just 2% reported an increase. There continues to be more respondents that are decreasing their target to hedge funds as opposed to those reporting increases. However, the proportion of respondents raising their hedge fund targets (13%) was the highest we have observed from our survey group since 2016. For both total public equities and bonds & cash, the proportion of endowments reporting an increase was slightly small than the proportion reporting a decrease.

**FIGURE 36 CHANGES IN TARGET ASSET ALLOCATION**

June 30, 2019 – June 30, 2020 • Percentage of Institutions Increasing or Decreasing Targets



Source: College and university data as reported to Cambridge Associates LLC.

<sup>1</sup> Total public equity excludes institutions that combine public equity together with PE/VC in a single equity category.

<sup>2</sup> Private equity/venture capital includes institutions that include PE/VC together with private real assets in a single private investments category.

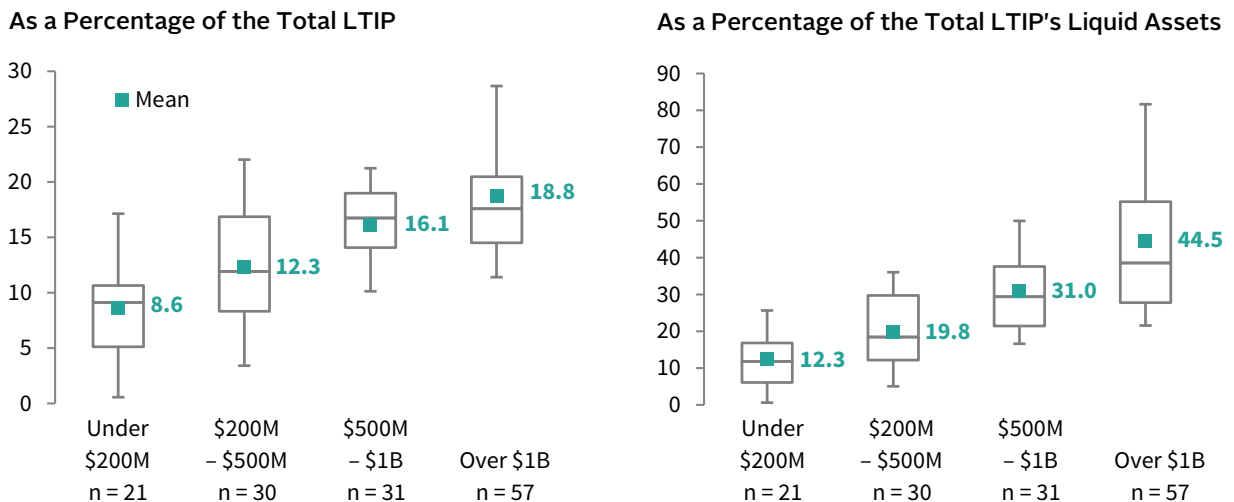
## PRIVATE INVESTMENTS AND UNCALLED CAPITAL COMMITMENTS

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. For the constant group of participants that have provided data for the last ten years, the average asset allocation to private investments has increased from 18.9% to 27.0% over this past decade.

As discussed earlier in this section, private investment allocations generally are higher for larger endowments compared to smaller endowments. Similarly, uncalled capital commitments as a percentage of the total LTIP tends to increase along with portfolio size. Endowments under \$200 million reported an average ratio of 8.6% for fiscal year 2020, while those over \$1 billion reported an average ratio more than double (18.8%). 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 44.5% of their total liquid assets. In contrast, the ratio was 12.3% for endowments under \$200 million.

**FIGURE 37 UNCALLED CAPITAL COMMITTED TO PRIVATE INVESTMENT FUNDS**  
As of June 30, 2020 • Percent (%)



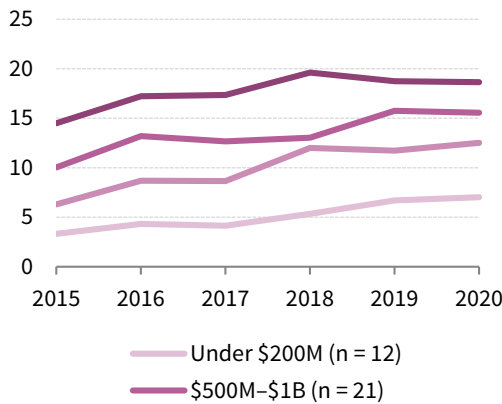
Source: College and university data as reported to Cambridge Associates LLC.  
Note: For more information, see page 70 in the Appendix.

Figure 38 shows the trend over the last five years for these two ratios. The average ratios were considerably higher in 2020 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 dollar amount of uncalled capital commitments increased by more than 141% 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 20% and 18%, respectively. These trends infer that private investment allocations as a percentage of the overall portfolio could continue to rise among endowments into the future.

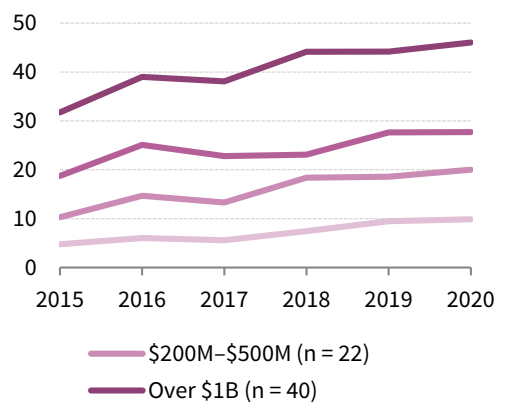
**FIGURE 38 TREND IN UNCALLED CAPITAL COMMITMENTS TO PRIVATE INVESTMENT FUNDS**

Years Ended June 30 • Percent (%)

**Mean Uncalled Capital Commitments as a Percentage of the LTIP**



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



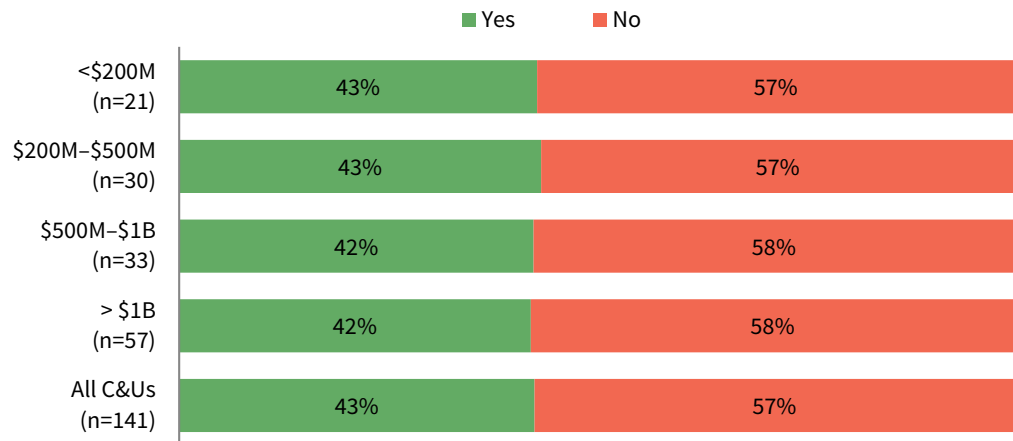
Source: College and university data as reported to Cambridge Associates LLC.

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.

Despite the strong performance of private investments in 2020, a majority of endowments (57%) reported that their private investment programs were cash flow negative for the fiscal year (Figure 39). 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. Remarkably, this proportion is nearly identical across the four asset size subgroups. 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 39 PRIVATE INVESTMENT PROGRAM CASH FLOW BY ASSET SIZE**  
As of June 30, 2020

**Was Your Private Investment Program Cash Flow Positive in 2020?**



Source: College and university 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 2020.

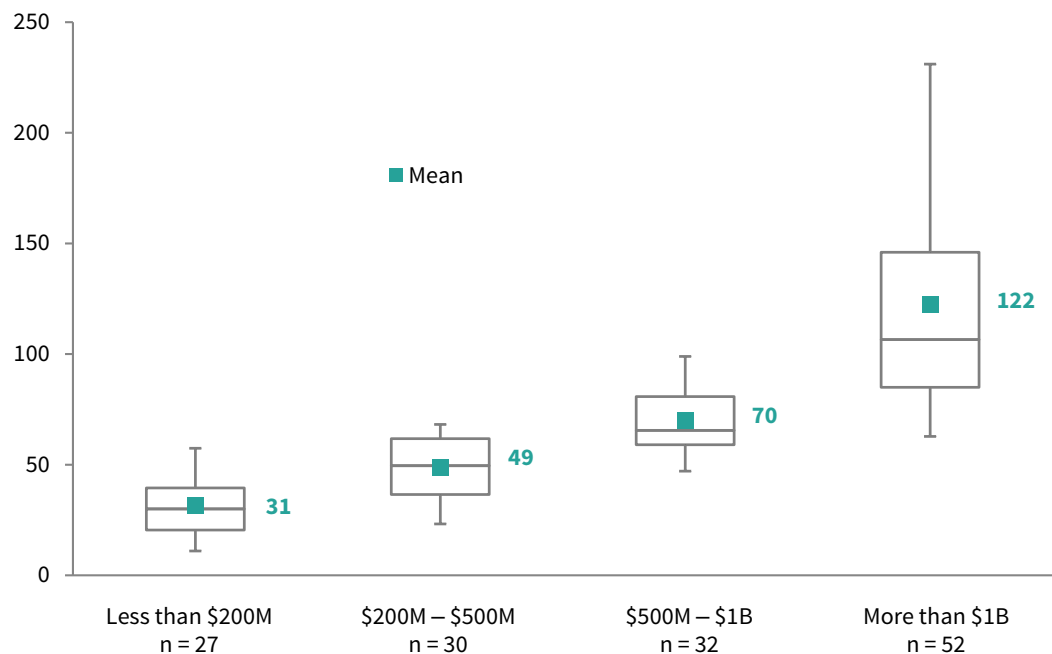
## Section 4: Investment Manager Structures

### 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, colleges and universities with assets over \$1 billion employed 122 external investment managers in 2020 (Figure 40). At the opposite end of the asset size spectrum, endowments with assets less than \$200 million averaged just 31 managers.

**FIGURE 40 NUMBER OF EXTERNAL MANAGERS**

As of June 30, 2020



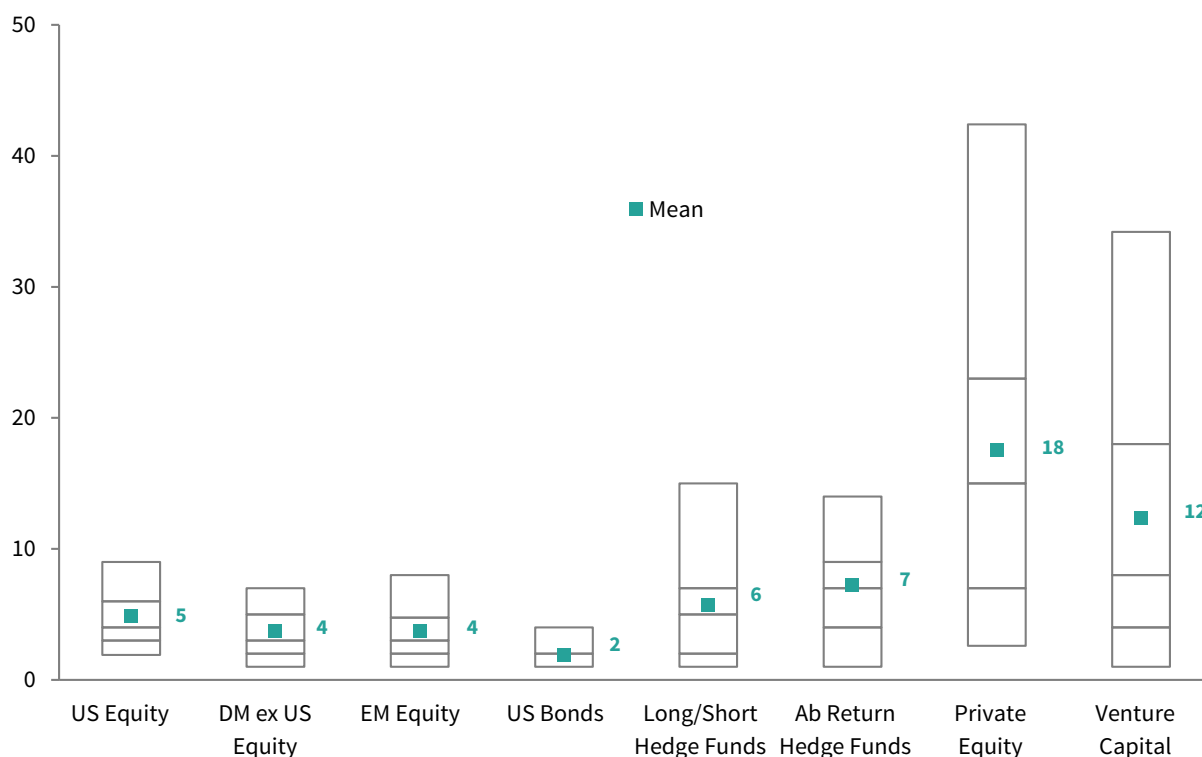
Source: College and university data as reported to Cambridge Associates LLC.

Notes: Funds-of-funds are counted as one separate investment manager. For more information, see page 71 of the Appendix.

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 (40) is almost double the number used at the 75th percentile (21). For portfolios over \$1 billion, 231 managers are employed at the 5th percentile compared to just 63 at the 95th percentile. Much of the variation can be attributed to the management of alternative asset classes. As Figure 41 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 the Appendix of this report.

**FIGURE 41 DISPERSION IN NUMBER OF MANAGERS FOR SELECTED ASSET CLASSES**

As of June 30, 2020



Source: College and university 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. For more information, see page 71 in the Appendix.

## ASSET CLASS IMPLEMENTATION

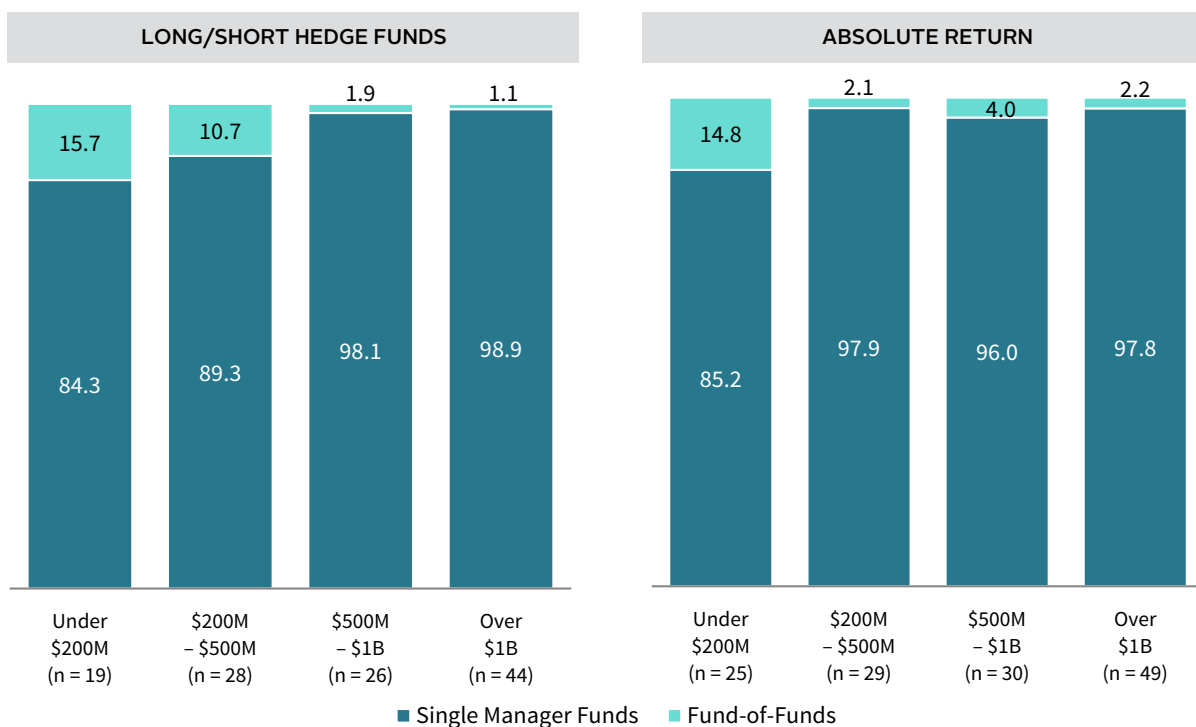
**HEDGE FUNDS.** There are two primary types of investment vehicles that endowments use when implementing their hedge funds allocations. A single manager fund is a type of investment vehicle where the investment manager makes the decisions for the securities and assets held within the fund. In contrast, 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 under \$200 million have the highest exposure to fund-of-funds managers. On average, these smallest endowments use fund-of-funds for 16% and 15% of their long/short hedge funds and absolute return allocations, respectively.

**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.



**FIGURE 42 PORTFOLIO IMPLEMENTATION: HEDGE FUNDS**

As of June 30, 2020 • Equal-Weighted Means (%)



Source: College and university data as reported to Cambridge Associates LLC.

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

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 under \$200 million, an average of 44% of non-venture private equity and 87% of venture capital was invested via fund-of-funds (Figure 43). The experience is the opposite for endowments over \$1 billion where approximately 85% of both non-venture private equity and venture capital was implemented through single manager funds, on average.

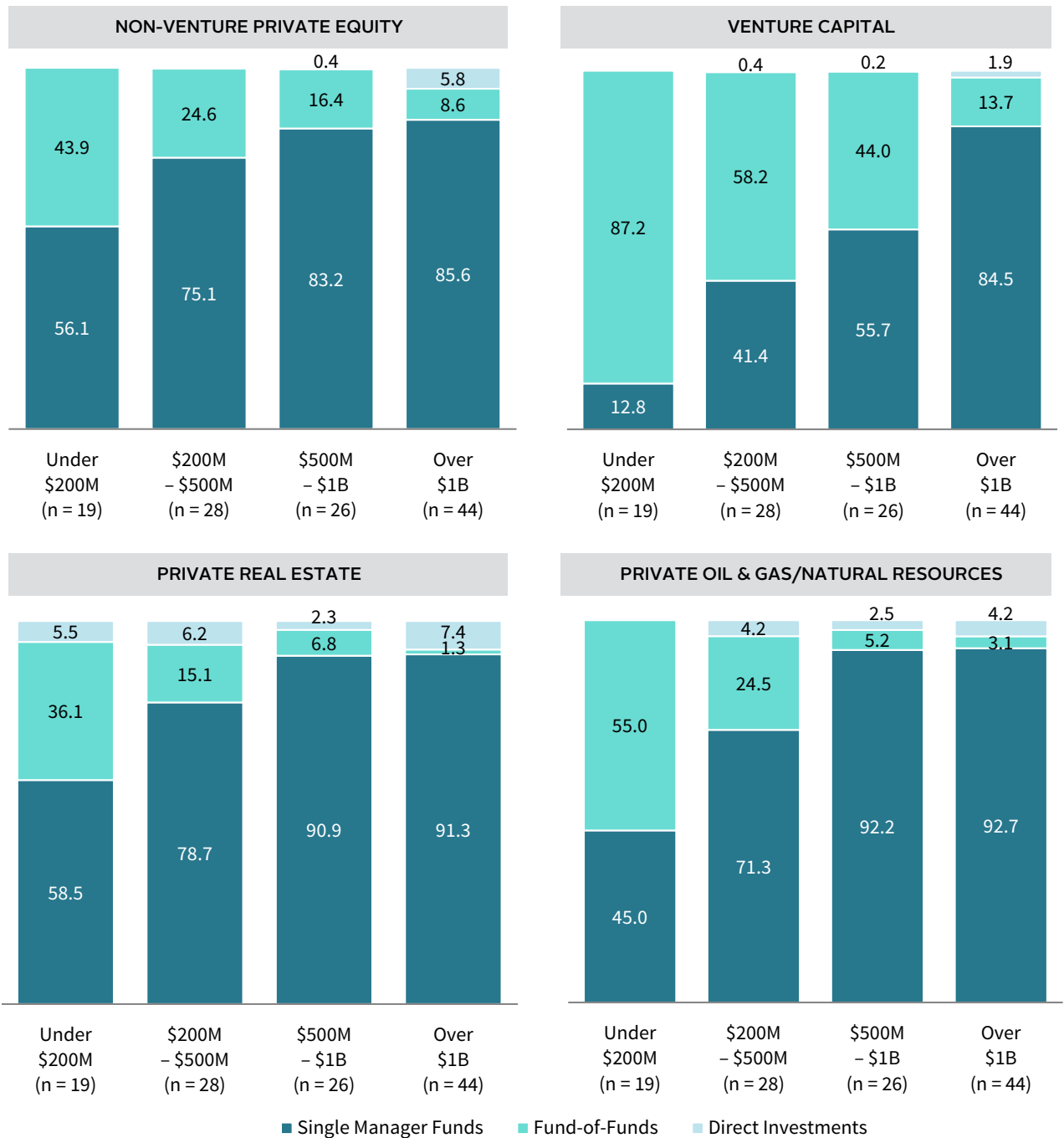
Most of the private real estate allocation is invested in single manager funds across all asset size groups. The same is true for private oil & gas with the exception of endowments under \$200 million. Similar to the private equity categories, the average percentage of allocations implemented through single manager funds is higher as endowment size increases.

**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.

**FIGURE 43 PORTFOLIO IMPLEMENTATION: PRIVATE INVESTMENTS**

As of June 30, 2020 • Equal-Weighted Means (%)



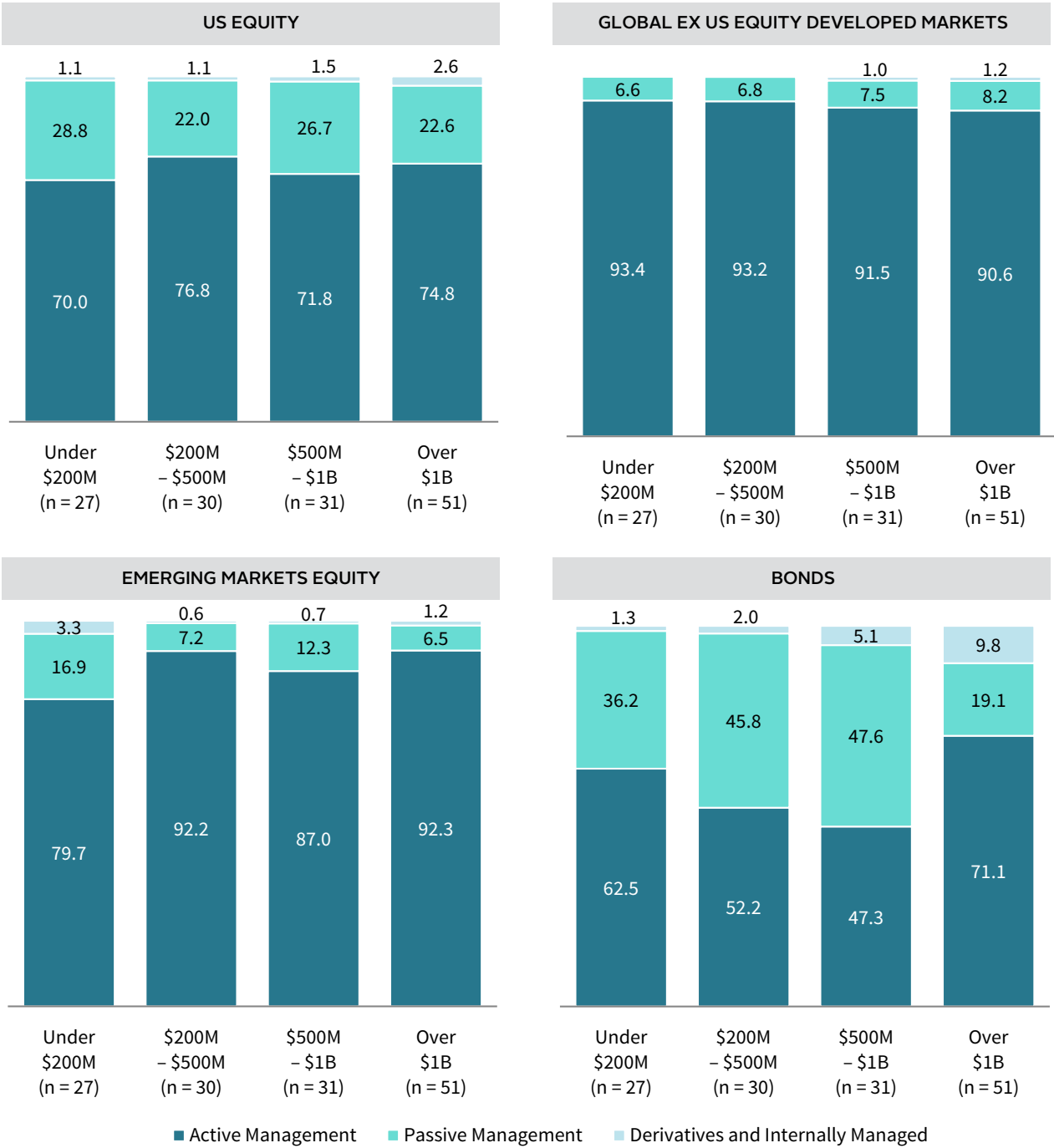
Source: College and university data as reported to Cambridge Associates LLC.

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

Passive management tends to be more common among bonds than it is in the public equity categories. For the three asset size subgroups under \$1 billion, over one-third of the average allocation is implemented passively. The proportion is lower for larger endowments, where an average of 19% of the bond allocation is invested through passive funds.

**FIGURE 44 PORTFOLIO IMPLEMENTATION: TRADITIONAL EQUITIES AND BONDS**

As of June 30, 2020 • Equal-Weighted Means (%)



Source: College and university data as reported to Cambridge Associates LLC.

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

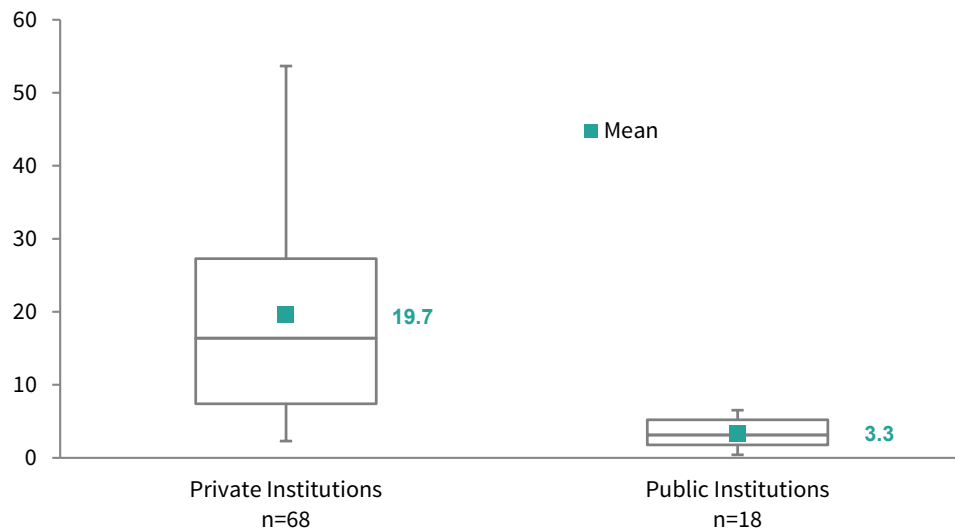
## Section 5: Institutional Support

### ENDOWMENT DEPENDENCE

Most colleges and universities draw the bulk of their revenue from operations (instruction, research, student housing, food services, patient care, etc.). However, since tuition, auxiliary, and research revenue do not fund all of the costs of operating, institutions depend on endowment distributions and gifts for additional support. Spending from the long-term investment portfolio (LTIP) supported an average of 19.7% of the operating budget for private institutions in fiscal year 2020. The range of endowment dependence varies considerably among private institutions, ranging from 2.3% at the 5th percentile to 53.7% at the 95th percentile. Public institutions receive financial support from state appropriations, and as a result, generally rely less on endowment payout to fund the operating budget compared to private institutions. For the 18 public institutions that provided data, endowment dependence averaged 3.3% in fiscal year 2020 (Figure 45).

**FIGURE 45 ENDOWMENT DEPENDENCE**

Fiscal Year 2020 • Percent (%)



Source: College and university data as reported to Cambridge Associates LLC.

Note: For more information, see page 71 in the Appendix.

### SPENDING POLICIES

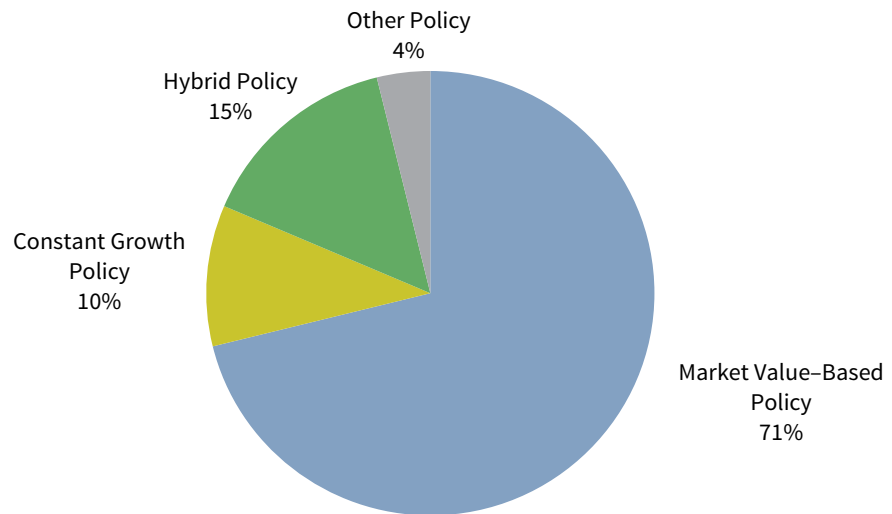
An institution's endowment spending policy serves as a bridge that links the investment portfolio and the enterprise. The spending policy should be designed to balance the needs of current and future generations of stakeholders, with the goals of providing appropriate levels of support to operations and preserving, or even growing, endowment purchasing power.<sup>2</sup>

<sup>2</sup> William Prout et al., "Spending Policy Practices," Cambridge Associates LLC, 2020.

The majority (71%) 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 46). 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.

**FIGURE 46 SPENDING RULE TYPES**

Fiscal Year 2020 • n = 156



Source: College and university data as reported to Cambridge Associates LLC.

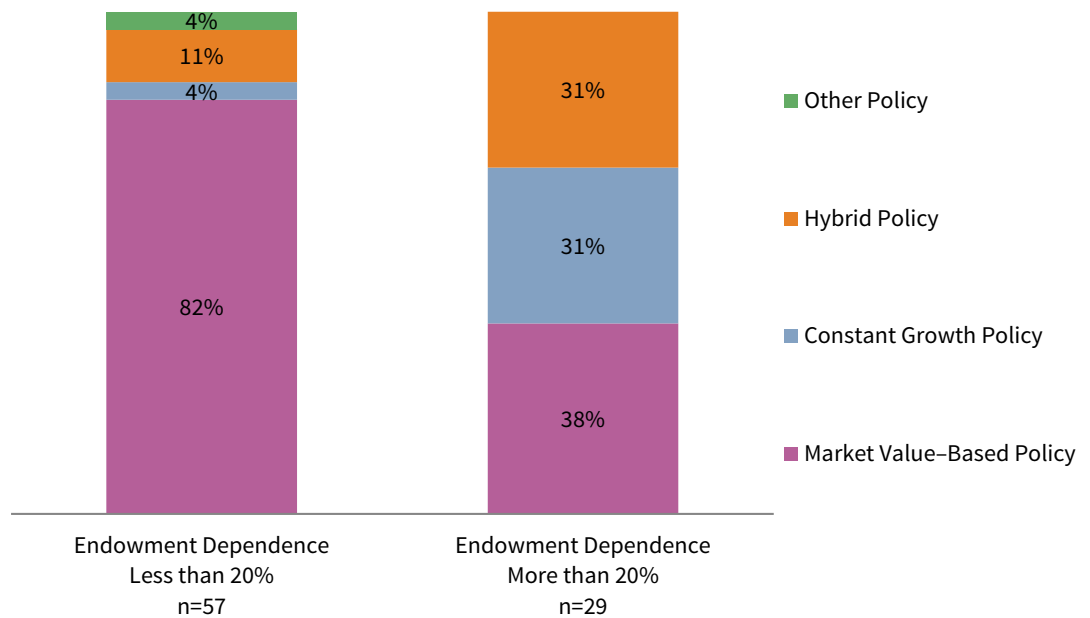
Approximately 10% of respondents use a constant growth rule. This rule type increases the prior year’s spending amount by a measure of inflation and/or a prespecified percentage. Institutions tend to use this rule type when the endowment is a significant source of operating revenue and volatility in 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.

Another 15% 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 market-value rule. A hybrid rule essentially has the effect of spending a percentage of an exponentially weighted average market value that is adjusted for inflation.

The level of endowment dependence is seemingly a key factor that institutions consider when determining the appropriate spending policy. The more predictable stream of spending dollars presumably makes the constant growth and hybrid rules appealing to institutions with higher endowment dependence. Among institutions with endowment dependence above 20%, a market value–based rule was most commonly cited but was followed closely by the constant growth and hybrid rule types. In constant, a market value–based rule was used by the vast majority (82%) of institutions that have lower levels of endowment dependence (Figure 47).

**FIGURE 47 SPENDING RULE TYPES VERSUS ENDOWMENT DEPENDENCE**

Fiscal Year 2020 • Percent (%)



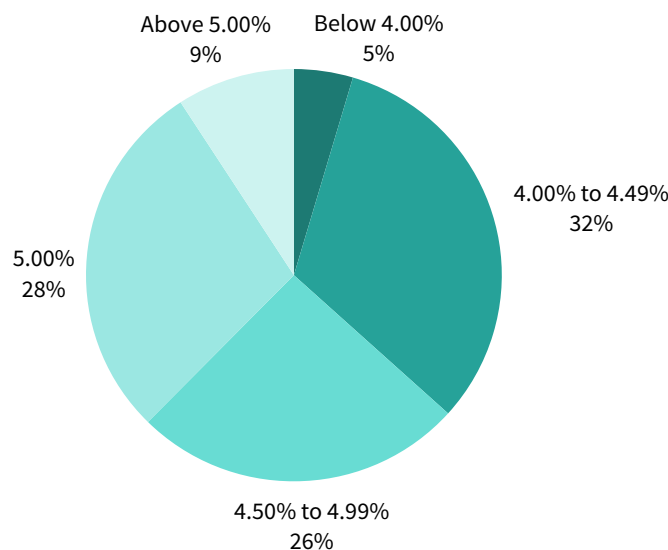
Source: College and university data as reported to Cambridge Associates LLC.

**TARGET SPENDING RATES.** A market value–based rule dictates spending a percentage of the endowment’s market value, which is most often represented by a moving average over a smoothing period. A pre-specified target spending rate is applied to the average market value to determine how much of the endowment should be distributed on an annual basis. Some institutions with a market value–based policy allow some discretion by setting a pre-specified range within which the target spending rate may fall. For the purposes of comparing target spending rates in our analysis, we assume the midpoint for institutions that use a discretionary range.

The target spending rate for most endowments in this study within lies somewhere from 4% to 5%. The single most commonly cited rate continues to be 5% (28% of respondents). Approximately one-third of respondents (32%) use a rate that falls from 4% to 4.49%, while another 26% of respondents use a rate that falls from 4.5% to 4.99%. Just 9% of respondents reported a spending rate above 5% (Figure 48).

**FIGURE 48 TARGET SPENDING RATES FOR MARKET VALUE-BASED RULES**

Fiscal Year 2020 • n = 109



Source: College and university data as reported to Cambridge Associates LLC.

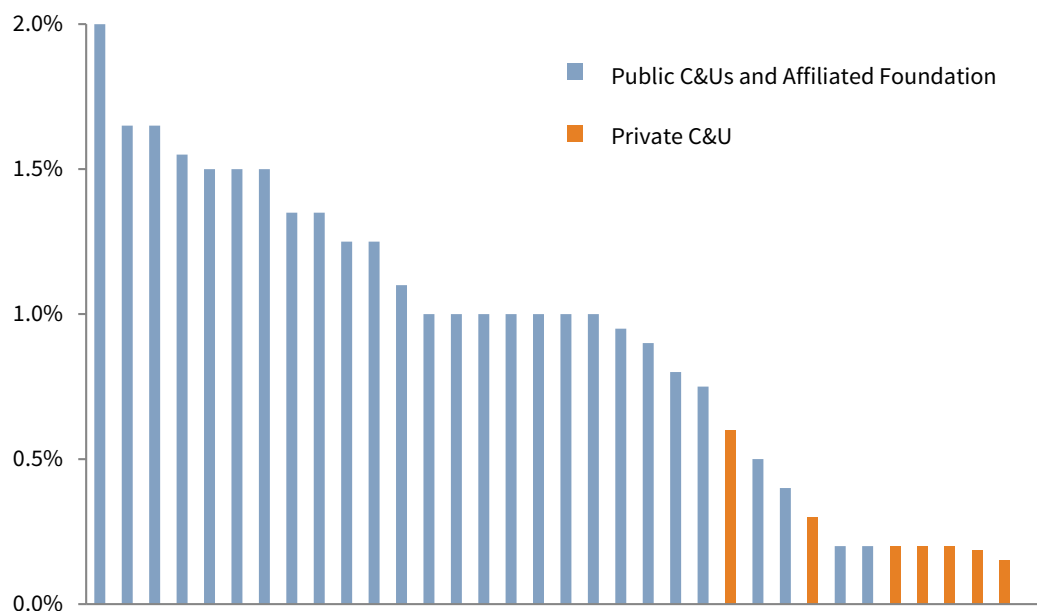
Most endowments with a market value-based rule keep their target spending rate consistent from one year to the next. However, over the long-term there are many that do make changes. Of the 62 institutions that reported policy data in both 2010 and 2020, less than half (47%) maintained the same rate over the ten-year period. Over the last decade, 39% of respondents have decreased their target spending rate, while 15% have increased their rate.

In addition to supporting the university's annual operating budget, some institutions may assess a fee on the endowment and other assets under management that goes beyond the spending policy distribution. The fee covers internal investment management costs, and in many instances, can also pay for expenses related to fundraising. In the case of a separate management company or affiliated foundation, this administrative fee covers the cost of operating that organization. Of the 46 institutions that reported an administrative fee, 33 were public universities or affiliated foundations and 13 were private universities.

The wide range of fees reported among respondents can be attributed to the level of services provided, as well as the amount of assets under management. In instances where the fee covers both internal investment management costs and fundraising expenses, the rate will be higher compared to other instances where the fee solely covers investment costs. When it comes to comparing similar organizations like affiliated-foundations, our data shows that larger asset pools tend to charge lower fees than smaller asset pools. The administrative fee rates for the 27 public universities and affiliated foundations that provided data ranged from 0.2% to 2.0% of assets under management and the median was 1.0%. For the seven private universities that provided data, the rate ranged from 0.15% to 0.60% (Figure 49).

**FIGURE 49 ADMINISTRATIVE FEES CHARGED TO THE ENDOWMENT**

Fiscal Year 2020 • n = 34



Source: College and university data as reported to Cambridge Associates LLC.

### NET FLOW RATE

The combination of the total outflows (spending and other appropriations) and inflows for the portfolio constitutes the net flow rate. The net flow rate is calculated as a percentage of the LTIP market value at the beginning of the fiscal year. Net flow can lend insight into the liquidity needs for the portfolio. As is typically the case, the average net flow rate among participants was negative (-1.9%) in fiscal year 2020, meaning the amount of withdrawals from the portfolio surpassed the amount of additions for most respondents. The average outflow rate was -4.6%, while the average inflow rate was 2.6%.

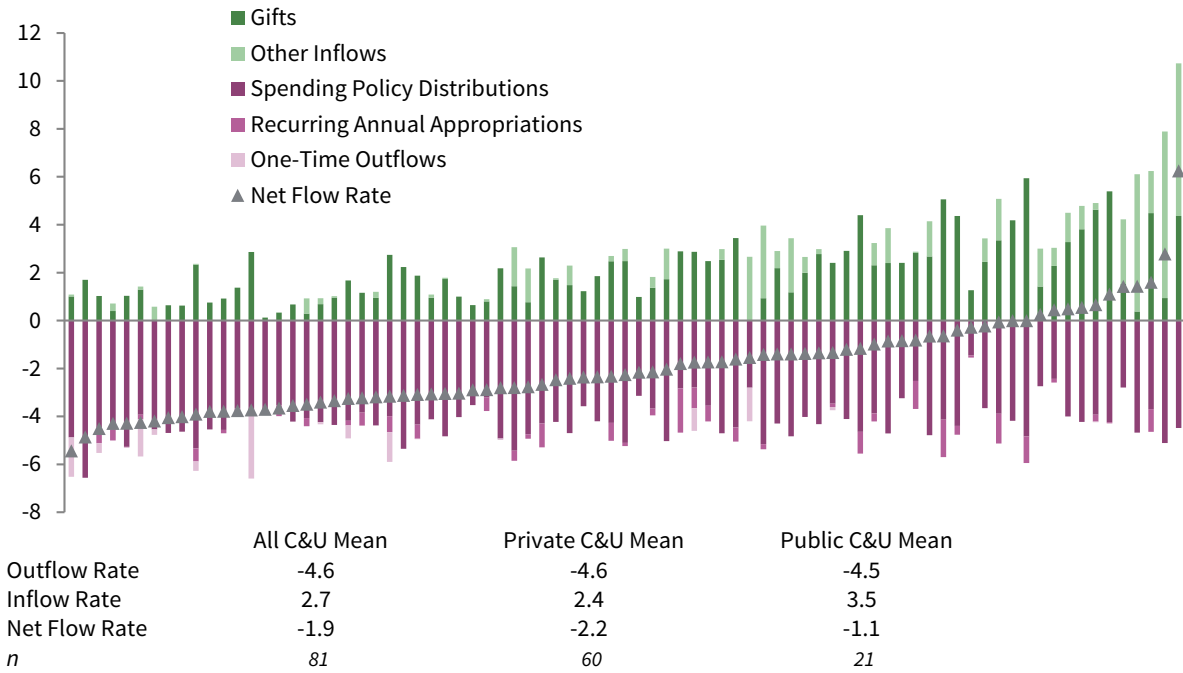
Inflows are mainly driven by endowed gifts and are represented by the dark green shading in the bar chart on Figure 50. On average gifts represented 76% of total inflows received among participants in fiscal year 2020. Some institutions receive additional inflows from operations or other sources, which is represented by the light green shading. The endowment spending policy distribution (dark pink shading) represents the biggest chunk of outflows, while other recurring spending and one-time appropriations (light pink shading) make up a smaller portion. On average, spending policy distributions represented 91% of total outflows in fiscal year 2020.

Public institutions had a higher average net flow rate (-1.1%) in fiscal year 2020 compared to private institutions (-2.2%). This was attributable to the fact that inflow rates for public institutions tend to be higher than those for private institutions. The average outflow rates for both types of institutions were nearly identical over this past year.



**FIGURE 50 NET FLOW RATES FOR FISCAL YEAR 2020**

Percent (%) • n = 81

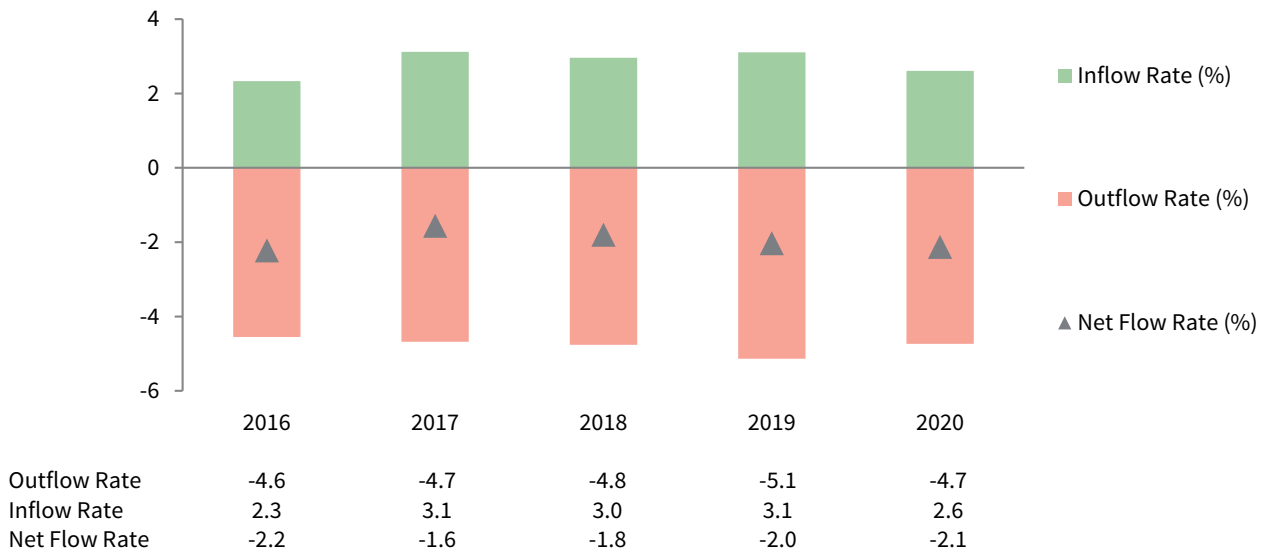


Source: College and university data as reported to Cambridge Associates LLC.

Figure 51 shows the average net flow rate for the 36 participants that provided a detailed breakdown of flows over the last five years. The average rates track within a relatively narrow band over this five-year period, ranging from a low of -2.2% to a high of -1.6%.

**FIGURE 51 HISTORICAL AVERAGE NET FLOW RATES**

Fiscal Years 2016–2020 • n = 36



Source: College and university data as reported to Cambridge Associates LLC.

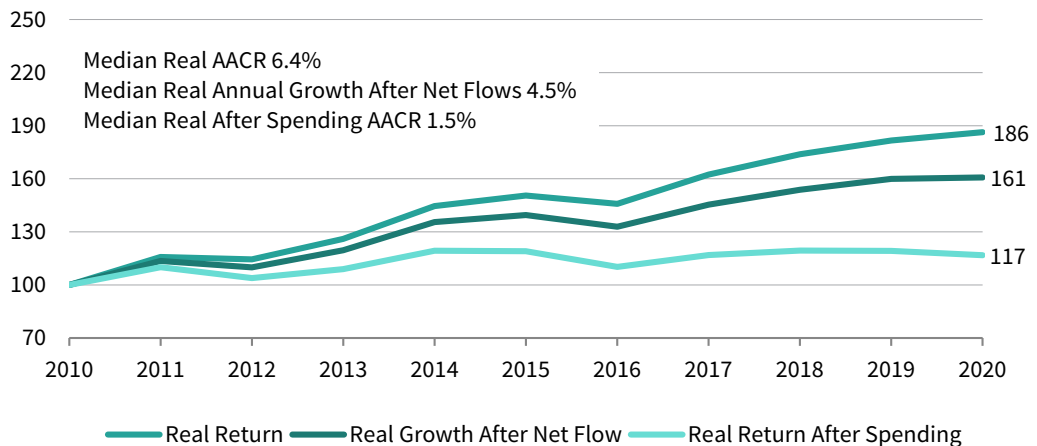
Often the evaluation of endowment health is focused on the relationship of investment performance and endowment spending or payout rate. A key objective has been to achieve real investment returns that exceed the average annual payout rate over the long term. However, institutions often expand programs and facilities so that budgets grow at a faster rate than inflation, thus necessitating additional endowment growth to maintain the endowment's role in the enterprise. Evaluating the net flow rate along with traditional investment performance metrics is important to ensuring that the portfolio keeps up with enterprise growth and maintains its role in supporting the institution.

Figure 52 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 2010, the portfolio would have nearly doubled on an inflation-adjusted basis by the end of fiscal year 2020, growing to \$186 in real dollars. After deducting the annual spending distributions from real investment performance, the investment would have ended the decade with \$117 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.

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 61% 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 52 CUMULATIVE DOLLAR GROWTH AFTER INFLATION, NET FLOWS, AND SPENDING**

Years Ended June 30 • Base Year 2010 = \$100 • n = 80



Source: College and university data as reported to Cambridge Associates LLC.

## ASSET COMPOSITION

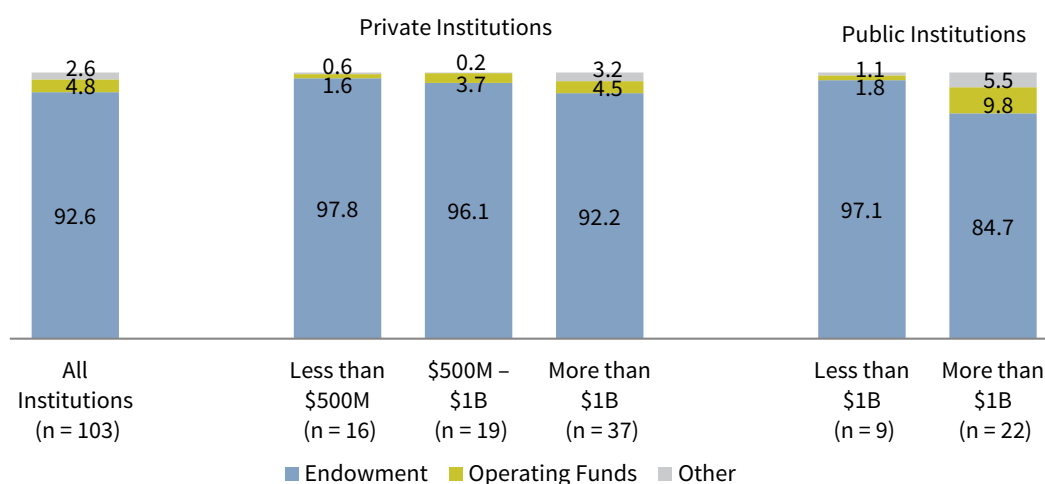
While the terms long-term investment pool and endowment are often used interchangeably, they are not synonymous. Understanding the types of assets that come together in the LTIP is important to understanding the portfolio's role.

**LONG-TERM INVESTMENT PORTFOLIO.** The LTIP is the group of assets for which institutions report their asset allocation and returns in this study. Endowment assets compose all or the vast majority of the LTIP for most respondents. On average, 92.6% of the LTIP were endowment assets as of June 30, 2020 (Figure 53).

In addition to endowment assets, many institutions invest a portion of their operating funds and/or other assets in the LTIP. On average, operating funds and other assets represented 4.8% and 2.6% of the LTIP, respectively. Examples of other assets in the LTIP include life income and annuity funds, special purpose funds, and assets invested by external organizations. The average composition of the LTIP is mostly similar when the respondent group is broken down across public and private institutions in different size bands. Institutions with portfolios over \$1 billion tend to have a higher proportion of non-endowment assets in their LTIP than other institutions.

**FIGURE 53 COMPOSITION OF LONG-TERM INVESTMENT PORTFOLIO**

Equal-Weighted Means as of Fiscal Year End 2020



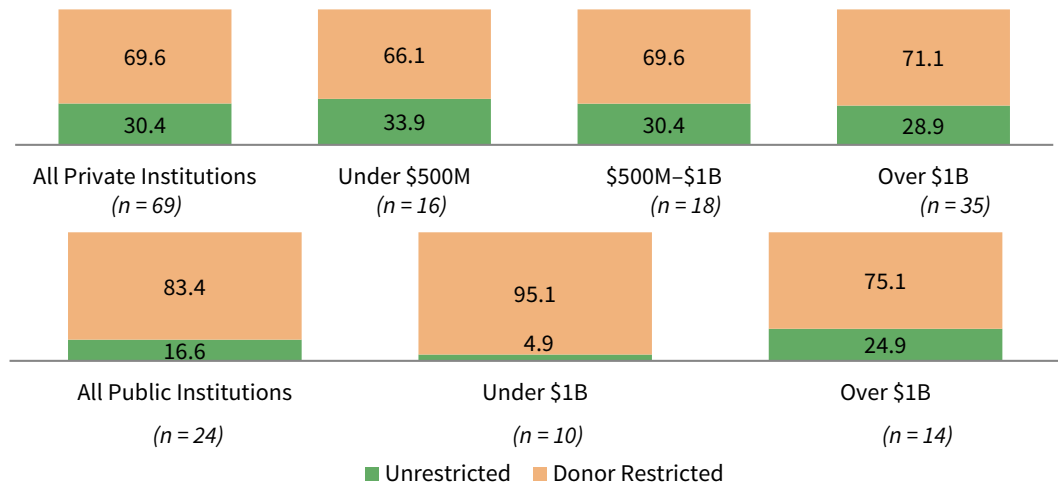
Source: College and university data as reported to Cambridge Associates LLC.

**ENDOWMENT.** On average, 69.6% of endowment assets were donor restricted at private institutions, while the remaining assets were unrestricted (Figure 54). When private institutions are broken out by asset size, the largest endowments had a slightly higher proportion of donor-restricted assets compared to the smallest endowments (71.1% versus 66.1%).

The proportion of endowment consisting of donor-restricted assets (83.4%) was higher at public institutions. For public institutions, there was a greater differential between large and smaller endowments in composition. On average, donor-restricted assets represented 75.1% of endowment for those greater than \$1 billion compared to 95.1% for endowments less than \$1 billion.

**FIGURE 54 CLASSIFICATION OF ENDOWMENT FUNDS**

Equal-Weighted Means as of Fiscal Year End 2020



Source: College and university data as reported to Cambridge Associates LLC.

**OPERATING FUNDS AND OTHER LIQUIDITY SOURCES.** For many institutions, the LTIP is not the only investment pool or source of liquidity. Assessing liquidity sources outside of the LTIP can help to inform liquidity needs within the LTIP. Operating funds and lines of credit are the two most common sources of short-term liquidity for our clients.

Slightly more than half of respondents (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 34.1%, but this percentage varies considerably across respondents (Figure 55). The remaining 47% of respondents hold all operating reserves outside of the LTIP. Operating funds held outside of the LTIP tend to be the first source of liquidity when immediate funding is needed.<sup>3</sup>

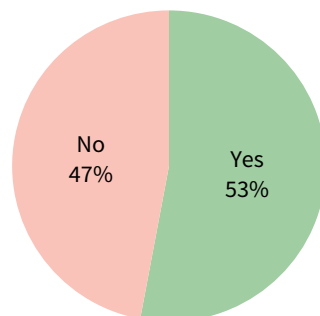
In addition to operating funds, 57 institutions reported having access to extra liquidity through a line of credit. One-third of those institutions had drawn upon their line of credit as of June 30, 2020.

<sup>3</sup> Please see Tracy Filosa et al., “Disruption, Liquidity Sources and the Role of the Endowment,” Cambridge Associates LLC, 2020, for a more in-depth discussion on this topic.

**FIGURE 55 OPERATING FUNDS**

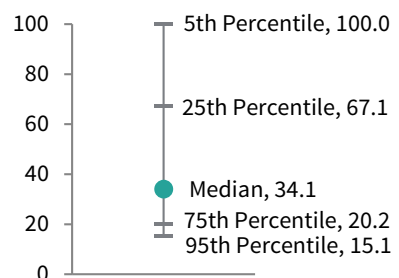
Fiscal Year 2020

**Operating Funds Invested in the LTIP**  
(n = 85)



**Percentage (%) of Operating Funds Invested in the LTIP**

(n = 50)



Source: College and university data as reported to Cambridge Associates LLC.

## Section 6: Investment Office Staffing and Governance

### 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 77% of respondents with assets between \$500 million and \$1 billion indicated they had a CIO in place. The percentage is drastically lower for endowments less than \$500 million, where only 22% 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 common for endowments of this size to outsource some or the entire portfolio to an OCIO.

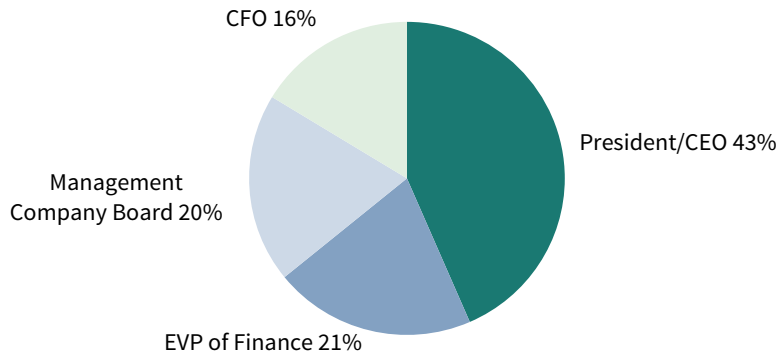
Where there is a CIO, the position typically reports directly to the CEO or president of the institution. Some large public universities have created legally separate management companies who are charged with managing the universities' investments. In these cases, the CIO (or CEO of the Management Company) will report directly to the Management Company Board (Figure 56).

### INVESTMENT OFFICE STAFFING AND GOVERNANCE RESPONSES

The majority of this year's participants (100 of 159) responded to this section of our survey including 23 endowments with assets over \$3 billion, 33 that fall between \$1 billion and \$3 billion, 26 that fall between \$500 million and \$1 billion, and 18 under \$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.

**FIGURE 56 CHIEF INVESTMENT OFFICER REPORTING LINES**

Fiscal Year 2020 • n = 92



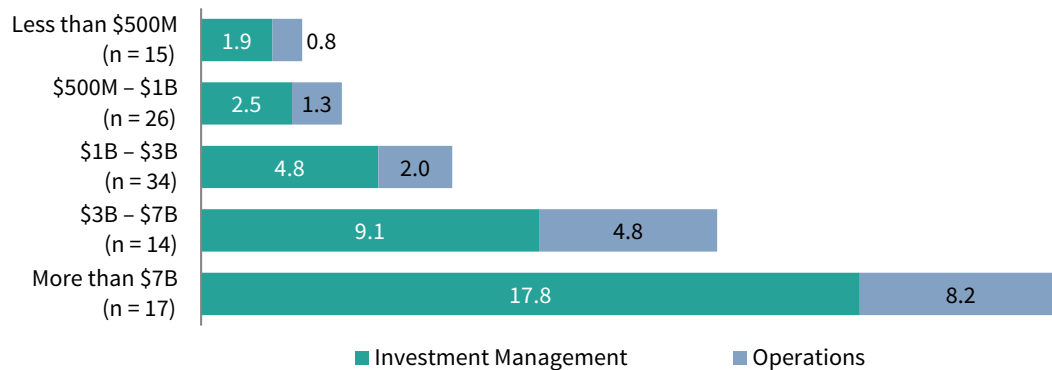
Source: College and university data as reported to Cambridge Associates LLC.

**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 results show that investment office staffing typically correlate 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 26.1 full-time equivalents (FTEs) split between investment management and operations, while endowments with assets between \$3 billion and \$7 billion are roughly half the size at 14.0 FTEs (Figure 57). Endowments under \$1 billion have much smaller in-house investment resources (if any) and use outside professionals to manage or assist in managing the investment portfolio.

**FIGURE 57 AVERAGE STAFFING LEVELS**

Fiscal Year 2020 • Number of FTEs



Source: College and university data as reported to Cambridge Associates LLC.

Personnel consists of a mixture of senior-, mid-, and junior-level positions. Senior investment professionals typically carry the title of investment director, managing director, or vice president 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 58 provides the average FTEs by asset size and position levels for investment management and operations positions.

**FIGURE 58 AVERAGE INVESTMENT STAFF BY FUNCTION**

Fiscal Year 2020 • Number of FTEs

	Investment Management			Investment Operations		
	Senior	Mid	Junior	Senior	Mid	Junior
More than \$7B	6.4	5.2	6.2	1.5	2.6	4.7
<i>n</i>	16	15	16	15	16	16
\$3B – \$7B	3.0	3.5	3.6	1.0	1.7	3.0
<i>n</i>	13	8	12	10	13	12
\$1B – \$3B	1.9	1.8	1.6	1.2	1.1	1.6
<i>n</i>	29	14	26	12	21	20
\$500M – \$1B	1.3	1.2	1.2	1.0	1.0	1.1
<i>n</i>	13	5	13	6	18	10
Less than \$500M	1.0	1.0	1.0	1.0	1.0	1.0
<i>n</i>	5	2	6	2	5	5

Source: College and university data as reported to Cambridge Associates LLC.

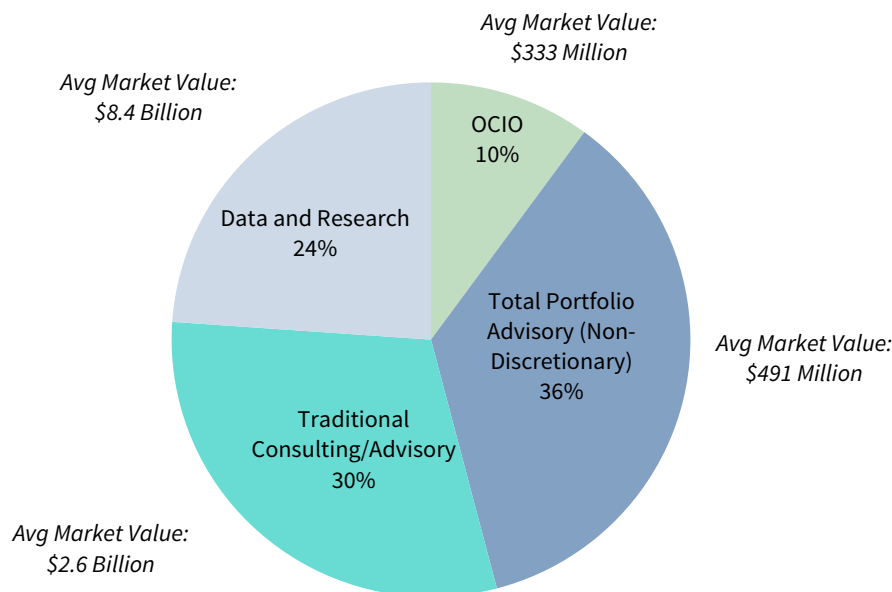
Notes: Office leadership positions (CFO/CIO), IT, and Legal support are not included in the analysis. Only institutions with personnel at the specific staffing level are included in each category. Therefore, the sum of the personnel across each category will not equal the total investment office FTEs.

**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 59 broadly illustrates how the 159 participants in this study work with outside advisors or consultants. Endowments, with assets under \$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.

Of study participants, 10% 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.

## FIGURE 59 USE OF EXTERNAL ADVISORS AND CONSULTANTS

Fiscal Year 2020 • n = 159



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

Of institutions in our study, 36% 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, 24% 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 utilizing consultants in this fashion is \$8.4 billion.

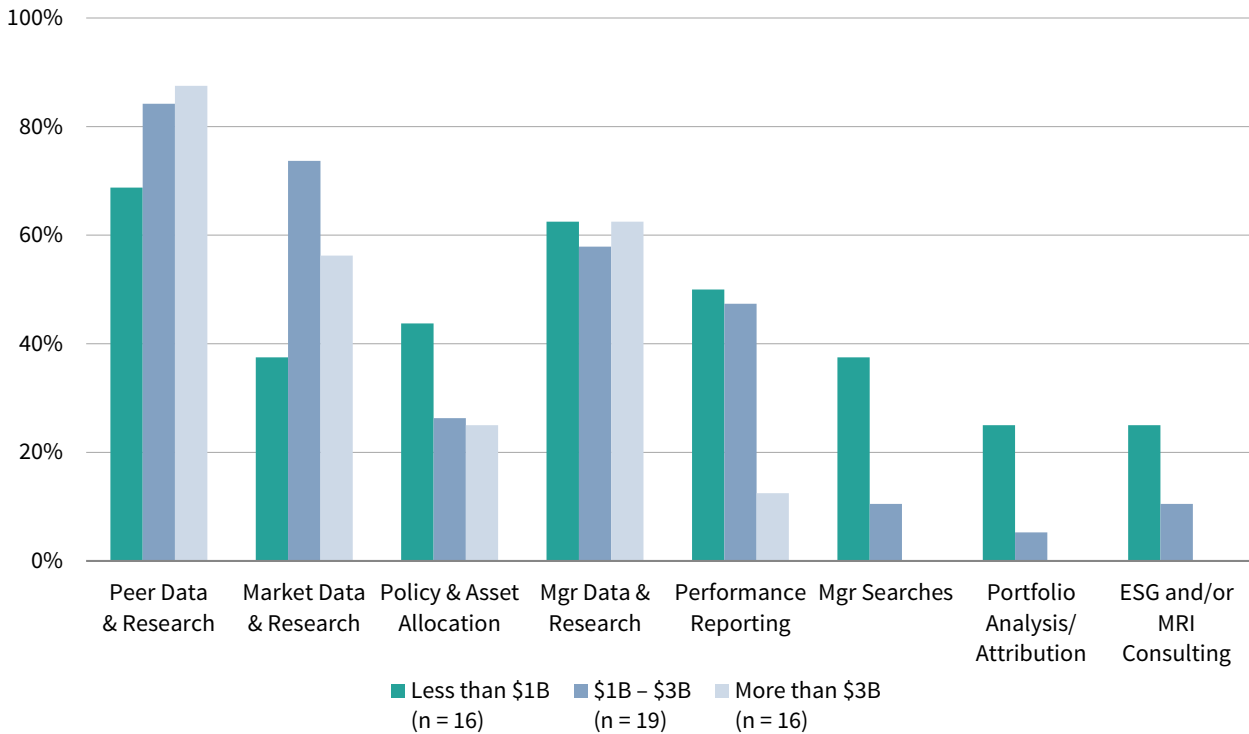
The remaining 30% of survey participants use external resources for a range of traditional consulting services, including asset allocation reviews, manager searches, alternative assets management, ESG/MRI consulting, and performance reporting.

Figure 60 examines the range of services other than portfolio management that are most commonly utilized 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 more consistent across all asset sizes.



**FIGURE 60 USE OF EXTERNAL ADVISORS AND CONSULTANTS: TYPES OF SERVICES**

Fiscal Year 2020 • n = 51 • Percent of Institutions (%)



Source: College and university 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 types of arrangements.

## GOVERNANCE

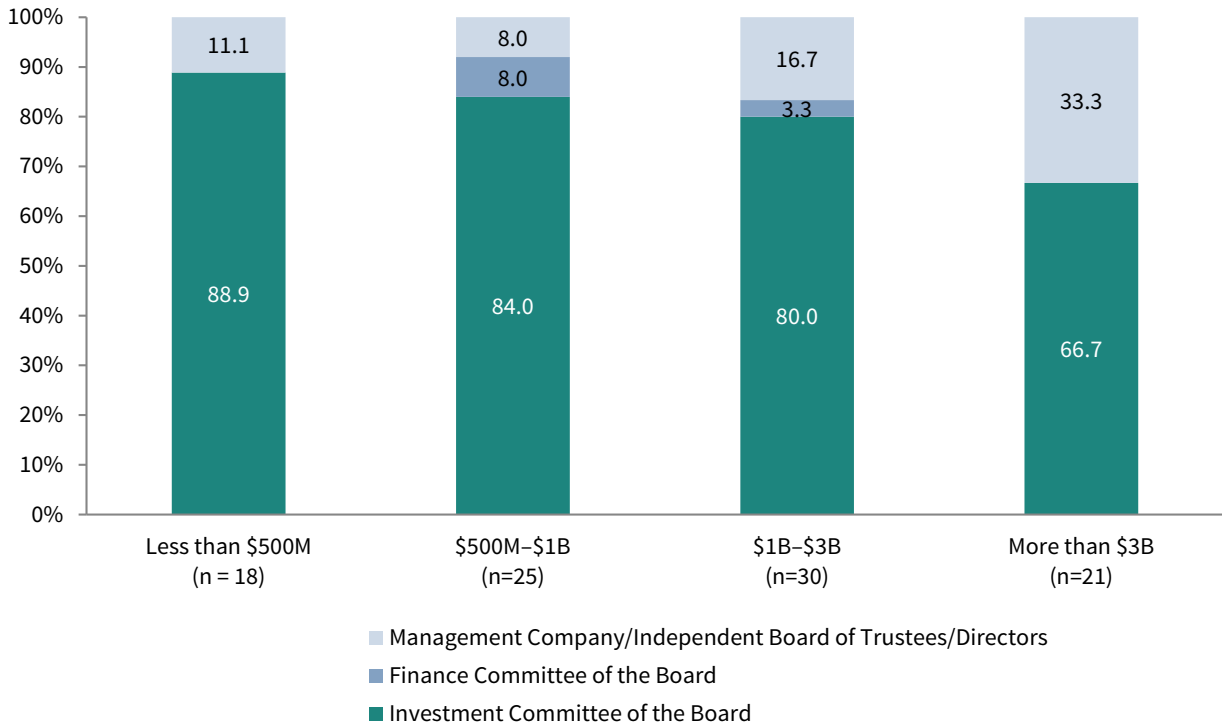
Good governance is one key factor to a successful investment program. To create the conditions for good governance, endowments should assess whether they have in place the appropriate model for portfolio oversight and management, are upholding their fiduciary responsibilities, and are learning about 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 61).

Some of the largest university 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 university.

**FIGURE 61 GOVERNING BODY OF OVERSIGHT COMMITTEE BY ORGANIZATION TYPE**

Fiscal Year 2020 • Percent of Institutions (%)



Source: College and university data as reported to Cambridge Associates LLC.

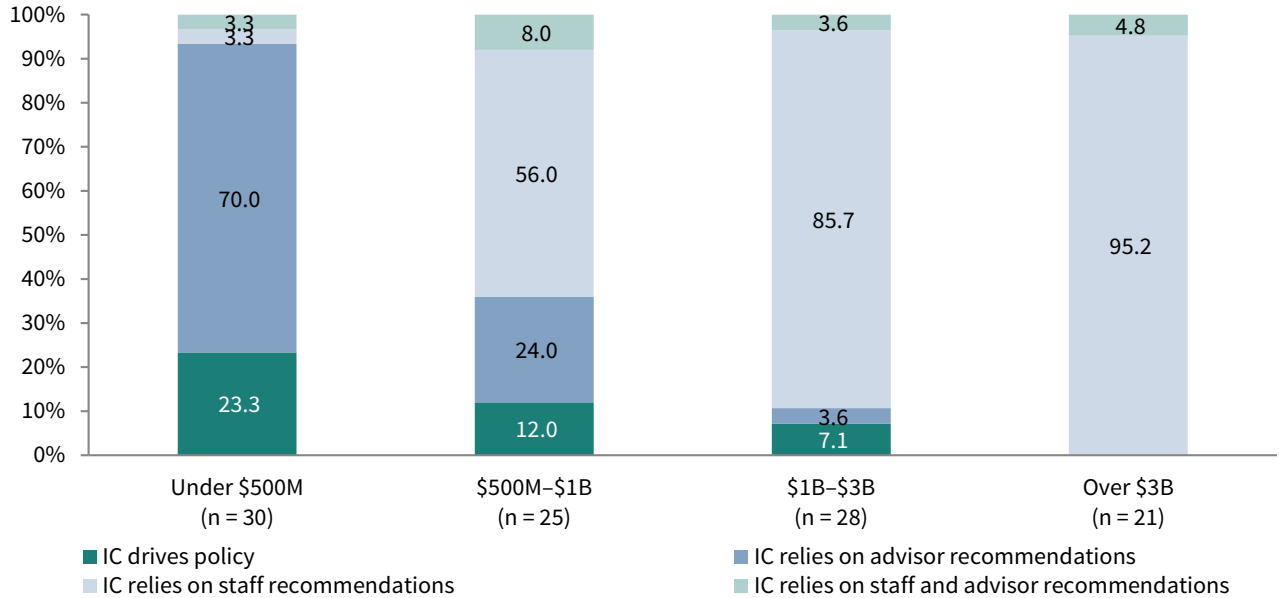
**DECISION-MAKING RESPONSIBILITY.** To help quantify the dynamic between the governing body (hereafter referred to as simply investment committee) and those managing the endowment (internal investment office or outside advisor), we asked who possessed decision-making responsibility for four integral 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.

There is a strong relationship between asset allocation policy development and size of the portfolio. For nearly all of participating endowments over \$3 billion (95%), asset allocation policy is developed by committees acting on staff recommendations (Figure 62). In contrast, just 3% of committees at endowments under \$500 million rely solely on staff recommendations. Among these smaller endowments, committees depend far more on the recommendations of outside advisors or drive the policy autonomously.

When it comes to rebalancing, both the investment committee’s role and the advisor’s role in portfolio rebalancing is steadily diminished as endowment size rises. Among endowments under \$500 million, 60% rely on advisors to make rebalancing decisions and 33% have their investment committee control this function. For endowments over \$500 million, total staff discretion is most common (Figure 63).

**FIGURE 62 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: ASSET ALLOCATION POLICY DEVELOPMENT**

Fiscal Year 2020 • Percent of Institutions (%)



Source: College and university data as reported to Cambridge Associates LLC.

Note: Investment Committee (IC) is shorthand for governing body.

**FIGURE 63 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: PORTFOLIO REBALANCING**

Fiscal Year 2020 • Percent of Institutions (%)

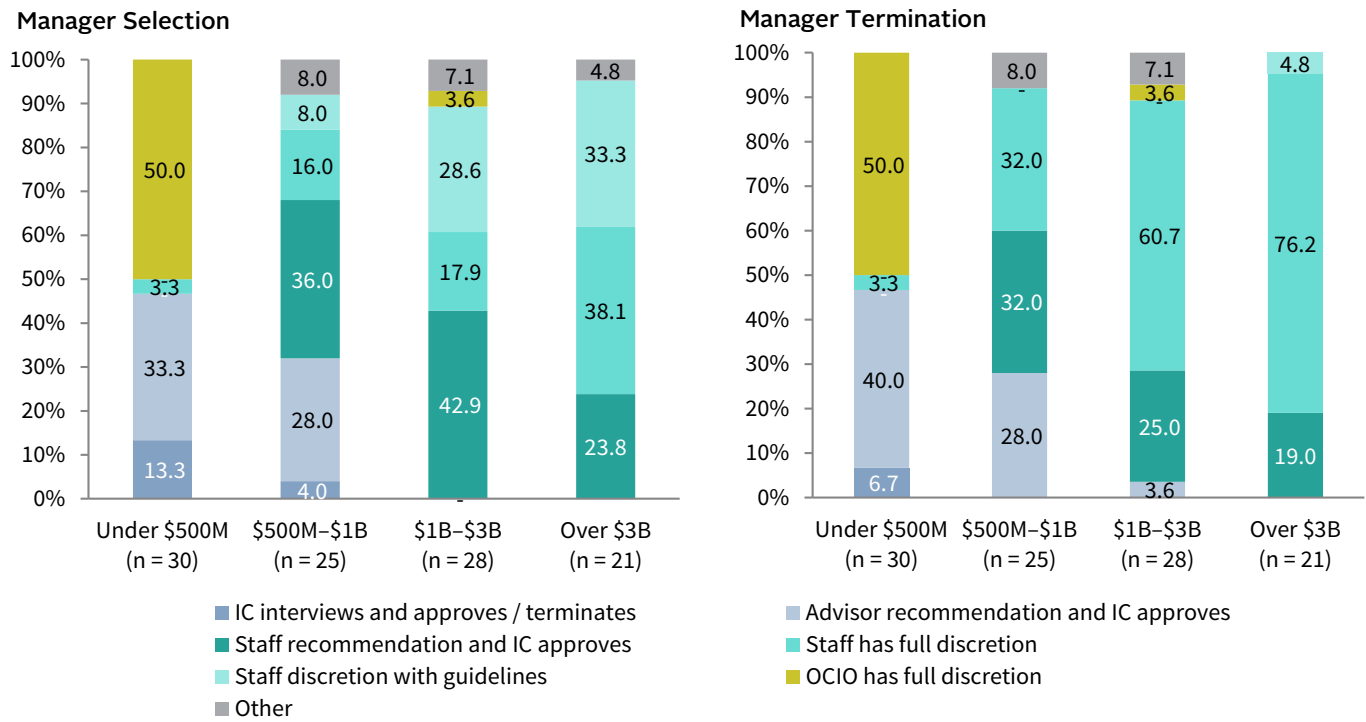


Source: College and university data as reported to Cambridge Associates LLC.

The process of manager selection and termination also involves committees, advisors, and staff, but with different degrees of discretion (Figure 64). Advisors play a significant role in both selection and termination of investment managers at endowments under \$500 million, with 50% 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 over \$3 billion.

**FIGURE 64 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: MANAGER SELECTION AND TERMINATION**

Fiscal Year 2020 • Percent of Institutions (%)



Source: College and university data as reported to Cambridge Associates LLC.

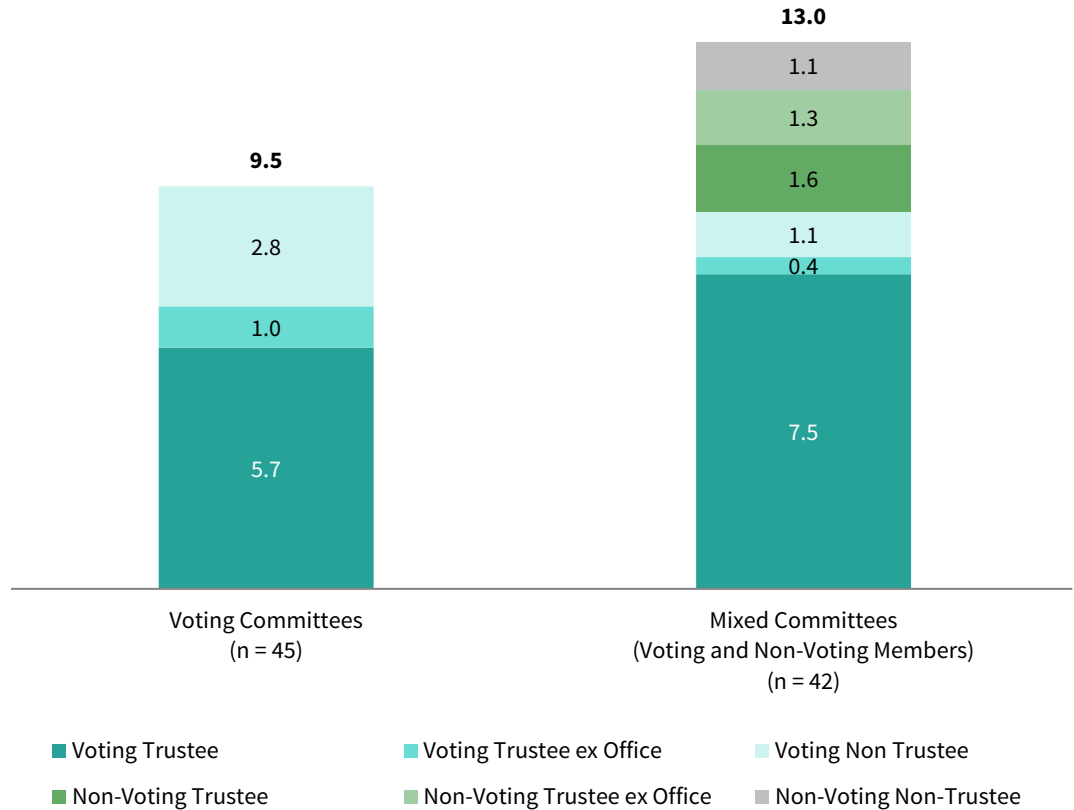
Notes: Investment Committee (IC) is shorthand for governing body. "Other" includes IC approval based on staff and advisor recommendations.

**INVESTMENT COMMITTEE COMPOSITION.** Two types of committees emerged from our survey data. We found that just over half of investment committees (45 of 87) are fully composed of voting members, while the remaining investment committees also include non-voting members. While mandatory voting encourages accountability, there can be good reasons to include non-voting members. Organizations should weigh the benefit of these advisory members against the prospects of an oversized committee.

On average, the size of voting committees is 9.5 members, comprising 5.7 trustees, 2.8 non-trustees, and 1.0 ex officio members. Examples of ex officio committee members include the president of the college 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 13.0 people (Figure 65).

**FIGURE 65 PROFILE OF INVESTMENT COMMITTEE MEMBERS**

Fiscal Year 2020



Source: College and university 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 70% of their committee members have investment experience. This composition does change when viewed by asset size. Organizations with assets under \$500 million reported an average of 57% of committee membership having professional investment experience. At endowments over \$3 billion, the percentage of committee members that were investment professionals was 78% (Figure 66).

### FIGURE 66 PERCENT OF INVESTMENT COMMITTEE WHO ARE INVESTMENT PROFESSIONALS

Fiscal Year 2020 • Percent of Institutions (%)



Source: College and university data as reported to Cambridge Associates LLC.

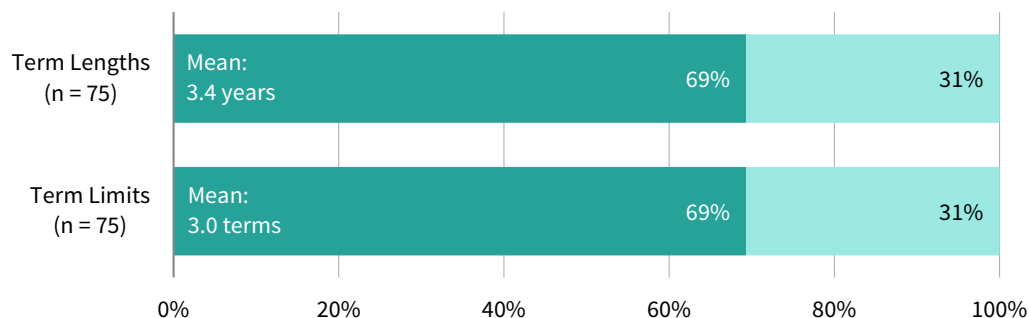
**COMMITTEE TERM LENGTH AND LIMITS.** Setting guidelines for terms can help manage member turnover and mitigate committee stagnation. The use of term lengths for investment committee members was cited by 69% of respondents, with the average term being 3.4 years (Figure 67). The same number of respondents use term limits for committee members and the average limit is 3.0 terms. The prevalence of these guidelines for investment committee chairs was lower, with term lengths and limits being used by 53% and 48% of respondents, respectively. 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 or chair, and view turnover as disruptive to long-term investment policy.

**INVESTMENT COMMITTEE MEETINGS.** Our survey responses show that the majority of endowments (71%) 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 85%.

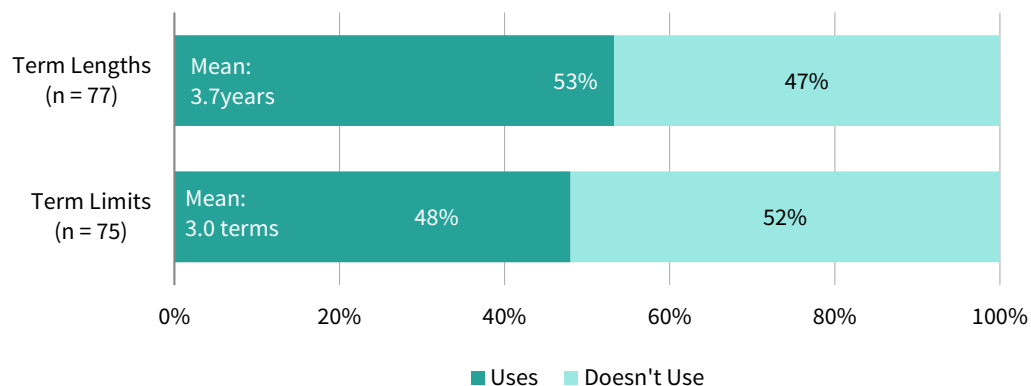
**FIGURE 67 INVESTMENT COMMITTEE TERM LENGTHS AND LIMITS**

As of June 30, 2020

**Investment Committee Member**



**Investment Committee Chair**



Source: College and university 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.

Except for one respondent, participants have a conflict of interest policy for investment committee members. These policies require disclosure (46%), recusal (21%), or both disclosure and recusal (23%). Decisions on conflict are resolved case by case in 10% of participants. Policies may differ by asset class, with institutions requiring disclosure for long-only equity conflicts and recusal for private equity conflicts, for example. Most institutions (91%) also have a conflict of interest policy in place for investment staff. Sixty-three percent of policies require disclosure only, 14% require recusal, and 20% require disclosure and recusal. ■

## Notes on the Data

The notation of n denotes the number of institutions included in each analysis.

Returns for periods greater than one-year are annualized.

The simple portfolio benchmark consisting of 70% MSCI ACWI Index / 30% Bloomberg Barclays Aggregate Bond Index is 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.

Private indexes are pooled horizon IRRs, net of fees, expenses, and carried interest.

### PROFILE OF RESPONDENTS

This report includes data for 159 colleges and universities. Twenty are public institutions, 28 are foundations affiliated with public institutions, and 111 are private institutions. All participants provided investment pool data as of June 30, 2020.

The 159 participants in this study reported long-term investment portfolio (LTIP) assets as of June 30, 2020, totaling \$480 billion. The mean LTIP size was \$3.0 billion and the median was \$892.8 million.

Twenty-seven participants have an LTIP size below \$100 million while 68 have an asset size above \$1 billion. The remaining 64 participants have an LTIP size between \$100 million and \$1 billion. The participants with LTIP sizes greater than \$1 billion controlled 92% 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.

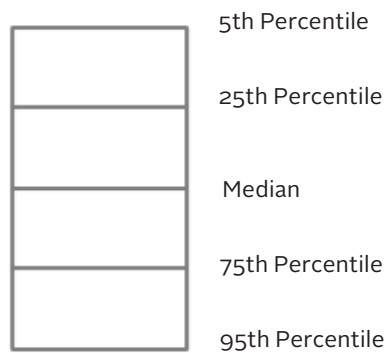


## **MODIFIED PUBLIC MARKET EQUIVALENT (MPME) INDEXES**

Under Cambridge Associates' mPME methodology, 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. The mPME analysis evaluates what return would have been earned had the dollars invested in private investments been invested in the public market instead.

## **PERCENTILE RANKINGS**

The percentile rankings throughout this report are in ascending order so that the highest return in the data set is 0 and the lowest return is 100. The graphs that show the range of data are organized to highlight various percentile breaks as displayed below:



## Appendix: Investment Portfolio Returns

### FISCAL YEAR 2020 TOTAL RETURN SUMMARY

Trailing 1-Yr as of June 30, 2020 • Percent (%)

	All C&Us	Under \$200M	\$200M – \$500M	\$500M – \$1B	Over \$1B
5th %ile	7.4	3.7	5.3	4.8	8.8
25th %ile	4.1	2.3	3.5	3.7	5.6
Median	2.1	1.2	2.0	1.5	3.3
75th %ile	0.4	0.3	0.3	-0.4	1.0
95th %ile	-2.0	-2.2	-2.0	-3.4	-1.1
Mean	2.3	1.0	1.7	1.3	3.5
n	159	27	30	34	68
70/30 Index	5.5				

Sources: College and university 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.

### EXAMPLE OF 1-YR ATTRIBUTION ANALYSIS: ALL C&U MEAN

As of June 30, 2020 • Percent (%) • n = 158

Asset Class	Breakdown of Return from Asset Allocation			
	Beginning Year	Asset Class	Contribution to	
	Mean Asset Allocation	Benchmark Return	Asset Class Return	Index
US Equity	20.5	6.5	1.3	Russell 3000
Venture Capital	6.8	11.8	0.8	CA US Venture Capital
US Bonds	7.8	8.7	0.7	BBG Barc Agg Bond
Non-Venture Private Equity	7.3	9.0	0.6	CA US Private Equity
Other Private Investments	1.2	9.8	0.1	CA US PE/VC
Other	1.0	5.5	0.1	70% Global Eq / 30% Bond
Cash & Equivalents	3.2	1.6	0.1	91-Day T-Bill
Long/Short Hedge Funds	7.2	0.7	0.0	HFRI Equity Hedge
Inflation-Linked Bonds	0.4	8.3	0.0	BBG Barc US TIPS
Global ex US Bonds-Dev Mkts	0.2	0.9	0.0	FTSE Non-US\$ WGBI
Global ex US Bonds-Emg Mkts	0.2	0.5	0.0	JPM EMBI Glob Div
Timber	0.2	0.3	0.0	NCREIF Timberland
High Yield Bonds	0.3	0.0	0.0	BBG Barc High Yield
Private Real Estate	2.9	-1.8	0.0	CA Real Estate
Absolute Return	10.2	-0.5	0.0	HFRI FOF Conservative
Public Real Estate	0.6	-8.1	-0.1	FTSE NAREIT Composite
Commodities	0.3	-17.4	-0.1	Bloomberg Commodity
Distressed-HF Structure	1.5	-4.9	-0.1	HFRI ED: Dist/Rest
Distressed-PE Structure	1.6	-3.7	-0.1	CA Distressed Securities
Global ex US Equity-Emg Mkts	7.4	-3.4	-0.2	MSCI Emg Mkts (N)
Public Energy / Nat Res	1.6	-28.6	-0.4	MSCI World Nat Res (N)
Global ex US Equity-Dev Mkts	14.2	-5.1	-0.7	MSCI EAFE (N)
Private Oil & Gas / Nat Res	3.5	-23.8	-0.9	CA Natural Resources
<i>Return from Asset Allocation (Sum of Contributions)</i>			<i>1.1</i>	
<i>+/- Return from Other Factors</i>			<i>1.2</i>	
<b>Mean Total Portfolio Return</b>			<b>2.3</b>	

Sources: College and university 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.

Note: 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.

## DISPERSION OF PARTICIPANTS' 1-YR ASSET CLASS RETURNS: MARKETABLE INVESTMENTS

Trailing 1-Yr as of June 30, 2020 • Percent (%)

	Total Public Equity	Global Equity Managers	US Equity	Dev Mkts ex US Equity	Emg Mkts Equity	Bonds	Hedge Funds	Total Public Real Assets	Commodities and Natural Resources	Public Real Estate
5th %ile	9.3	20.0	16.7	3.6	10.6	11.7	8.5	-1.8	23.0	0.2
25th %ile	3.4	6.8	9.3	-1.8	-1.6	8.9	4.0	-12.4	-13.5	-6.9
Median	1.4	1.1	6.5	-4.4	-5.1	6.5	1.0	-19.8	-21.3	-12.5
75th %ile	-0.9	-2.6	3.1	-6.5	-9.6	4.7	-1.8	-25.8	-31.0	-14.5
95th %ile	-2.9	-9.0	-1.5	-9.5	-17.5	1.0	-5.4	-34.0	-38.5	-22.8
Mean	1.8	3.1	7.3	-3.7	-4.5	6.6	0.8	-18.6	-19.0	-11.5
<i>n</i>	124	74	122	116	120	127	125	67	70	35
<b>Median by Asset Size</b>										
Less than \$200M	-0.2	-1.2	3.8	-5.2	-4.5	7.2	1.1	-14.7	-19.8	-6.9
<i>n</i>	26	15	26	24	26	26	26	18	18	6
\$200M – \$500M	1.5	-2.5	6.9	-4.6	-7.1	7.7	-0.3	-19.9	-22.1	-10.3
<i>n</i>	29	18	30	29	30	30	29	21	19	5
\$500M – \$1B	2.0	1.3	7.3	-5.1	-6.2	6.2	1.1	-16.5	-23.2	-13.4
<i>n</i>	29	14	25	25	25	26	28	14	11	14
More than \$1B	2.1	3.6	7.2	-2.5	-3.8	6.0	1.6	-25.4	-23.9	-14.2
<i>n</i>	40	27	41	38	39	45	42	14	22	10

Source: College and university data as reported to Cambridge Associates LLC.

## DISPERSION OF PARTICIPANTS' 1-YR ASSET CLASS RETURNS: PRIVATE INVESTMENTS

Trailing 1-Yr as of June 30, 2020 • Percent (%)

	Total Private Equity	Non- Venture Private Equity	Venture Capital	Total Private Real Assets	Private Real Estate	Private Natural Resources
5th %ile	20.5	21.1	29.5	2.2	11.0	-5.5
25th %ile	14.2	12.2	19.6	-9.4	3.1	-19.2
Median	9.5	7.5	13.2	-15.3	-1.7	-24.6
75th %ile	6.2	2.3	7.9	-21.6	-6.3	-29.7
95th %ile	-1.9	-3.4	-2.8	-31.3	-28.5	-36.5
Mean	10.1	7.8	13.6	-14.5	-1.5	-23.3
<i>n</i>	115	108	105	102	105	106
<b>Median by Asset Size</b>						
Less than \$200M	8.5	6.7	11.8	-12.5	0.4	-22.0
<i>n</i>	19	19	17	17	12	16
\$200M – \$500M	8.4	6.2	11.5	-20.3	-4.7	-26.4
<i>n</i>	30	30	28	28	26	24
\$500M – \$1B	9.1	7.1	16.4	-15.4	0.7	-28.7
<i>n</i>	26	23	22	25	25	25
More than \$1B	13.6	10.0	16.3	-14.2	-1.7	-22.5
<i>n</i>	40	36	38	32	42	41

Source: College and university data as reported to Cambridge Associates LLC.

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

## TOTAL RETURNS SUMMARY: TRAILING 3-, 5-, AND 10-YR

Years Ended June 30, 2020 • Percent (%)

	Nominal AACRs		
	3 Yr	5 Yr	10 Yr
<b>All C&amp;Us</b>			
5th %ile	8.9	7.7	10.1
25th %ile	6.7	6.2	8.3
Median	5.4	5.2	7.5
75th %ile	4.5	4.5	6.8
95th %ile	3.1	3.6	6.1
Mean	5.7	5.4	7.7
<i>n</i>	158	158	149
70/30 Index	6.7	6.4	8.1

Sources: College and university 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: The Global 70/30 Benchmark is composed of 70% MSCI ACWI Index/30% Bloomberg Aggregate Bond Index.

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

Years Ended June 30, 2020 • 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	5.8	7.3	8.0	9.9	6.0	6.5	6.6	8.3	7.6	8.0	8.7
25th %ile	4.9	6.1	6.2	7.8	4.8	5.7	5.8	7.0	7.1	7.7	7.6	9.2
Median	4.6	5.1	4.8	6.5	4.6	5.1	4.8	6.1	6.7	6.9	7.1	8.3
75th %ile	3.8	4.1	4.0	5.6	4.2	4.3	4.4	5.2	6.3	6.6	6.8	7.5
95th %ile	2.9	3.4	3.1	3.6	3.5	3.5	3.5	4.1	6.0	5.4	6.3	6.8
Mean	4.5	5.1	5.1	6.7	4.6	5.0	4.9	6.1	6.7	7.0	7.3	8.5
<i>n</i>	27	30	34	67	27	30	34	67	22	30	31	66

Source: College and university data as reported to Cambridge Associates LLC.

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

## DISPERSION OF PARTICIPANTS' 5-YR ASSET CLASS RETURNS: MARKETABLE INVESTMENTS

As of June 30, 2020

	Total Public Equity	Global Equity Managers	US Equity	Dev Mkts ex US Equity	Emg Mkts Equity	Bonds	Hedge Funds	Total Public Real Assets	Commodities and Natural Resources	Public Real Estate
5th %ile	8.8	13.2	12.0	5.8	7.7	5.2	5.5	2.3	3.0	7.1
25th %ile	6.8	8.8	10.5	3.7	3.1	4.4	3.8	-1.6	-2.0	4.0
Median	6.1	7.0	9.5	2.7	2.2	3.6	2.8	-3.7	-7.0	2.3
75th %ile	5.5	4.7	8.1	1.9	1.0	3.0	1.4	-6.8	-10.9	1.3
95th %ile	3.8	2.4	6.1	0.0	-1.0	1.7	-0.5	-12.5	-16.1	-1.7
Mean	6.2	7.5	9.2	2.8	2.4	3.6	2.4	-4.5	-6.8	2.6
<i>n</i>	121	56	119	111	115	120	118	61	62	23

### Median by Asset Size

Less than \$200M	5.7	4.8	9.0	2.1	1.8	3.7	1.5	-2.2	-6.5	-0.8
<i>n</i>	26	8	26	22	25	25	24	16	15	2
\$200M – \$500M	6.5	5.5	9.8	2.8	2.5	3.8	2.0	-3.5	-6.3	4.2
<i>n</i>	27	11	28	27	28	28	27	19	17	2
\$500M – \$1B	6.2	6.0	10.1	2.3	2.3	3.1	2.7	-3.5	-6.7	2.3
<i>n</i>	28	12	24	24	23	24	25	12	11	11
More than \$1B	6.0	8.2	9.3	3.3	2.4	3.8	3.5	-8.0	-8.4	3.0
<i>n</i>	40	25	41	38	39	43	42	14	19	8

Source: College and university data as reported to Cambridge Associates LLC.

## DISPERSION OF PARTICIPANTS' 10-YR ASSET CLASS RETURNS: MARKETABLE INVESTMENTS

As of June 30, 2020

	Total Public Equity	Global Equity Managers	US Equity	Dev Mkts ex US Equity	Emg Mkts Equity	Bonds	Hedge Funds	Total Public Real Assets	Commodities and Natural Resources	Public Real Estate
5th %ile	11.5	15.0	15.6	9.1	8.0	5.0	7.1	3.7	1.3	10.9
25th %ile	10.0	13.2	14.6	7.2	4.6	4.3	5.7	0.2	-0.3	8.5
Median	9.5	11.3	13.5	6.6	3.2	3.7	4.5	-0.8	-3.2	7.3
75th %ile	9.0	9.4	12.3	5.9	2.1	3.3	3.8	-3.3	-4.4	5.8
95th %ile	7.6	5.7	11.0	4.7	1.0	2.0	2.7	-5.1	-7.2	4.2
Mean	9.5	10.9	13.3	6.6	3.6	3.7	4.6	-1.1	-2.7	7.3
<i>n</i>	113	33	108	102	95	110	110	52	48	18

### Median by Asset Size

Less than \$200M	9.3	8.5	12.8	6.3	3.0	3.7	4.0	-0.8	-3.2	5.5
<i>n</i>	24	6	24	21	17	22	20	14	14	1
\$200M – \$500M	9.9	11.9	14.2	6.5	2.9	3.6	4.2	-0.6	-2.0	8.4
<i>n</i>	26	4	26	24	25	27	26	17	14	2
\$500M – \$1B	9.5	10.6	14.1	6.7	3.3	3.5	4.4	0.0	-3.5	7.3
<i>n</i>	27	8	23	24	22	22	24	10	9	9
More than \$1B	9.4	12.0	13.1	6.9	3.5	3.8	5.6	-3.4	-3.8	6.9
<i>n</i>	36	15	35	33	31	39	40	11	11	6

Source: College and university data as reported to Cambridge Associates LLC.

## DISPERSION OF PARTICIPANTS' 5-YR ASSET CLASS RETURNS: PRIVATE INVESTMENTS

As of June 30, 2020

	Total Private Equity	Non-Venture Private Equity	Venture Capital	Total Private Real Assets	Private Real Estate	Private Natural Resources
5th %ile	17.9	17.1	21.0	8.5	12.9	2.0
25th %ile	14.7	14.1	16.9	3.2	9.0	-1.6
Median	12.2	11.3	13.2	0.2	7.1	-3.5
75th %ile	9.6	9.0	8.7	-2.2	4.9	-7.3
95th %ile	5.3	4.5	1.4	-8.3	-4.2	-11.9
Mean	11.8	11.2	12.5	0.4	6.1	-4.4
<i>n</i>	114	106	100	93	94	95
<b>Median by Asset Size</b>						
Less than \$200M	11.1	10.2	12.1	-1.0	7.8	-2.4
<i>n</i>	19	18	15	15	11	13
\$200M – \$500M	12.0	11.5	11.1	-2.7	4.4	-4.5
<i>n</i>	29	29	25	22	17	19
\$500M – \$1B	10.9	10.3	12.3	-0.1	8.6	-5.1
<i>n</i>	26	23	22	24	24	24
More than \$1B	13.6	12.8	15.6	1.3	6.6	-3.5
<i>n</i>	40	36	38	32	42	39

Source: College and university data as reported to Cambridge Associates LLC.

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

## DISPERSION OF PARTICIPANTS' 10-YR ASSET CLASS RETURNS: PRIVATE INVESTMENTS

As of June 30, 2020

	Total Private Equity	Non-Venture Private Equity	Venture Capital	Total Private Real Assets	Private Real Estate	Private Natural Resources
<b>Trailing 10-Yr</b>						
5th %ile	18.8	17.9	25.5	12.4	17.0	6.5
25th %ile	15.8	15.1	20.1	7.9	12.7	3.1
Median	14.1	13.4	15.4	4.6	10.5	-0.2
75th %ile	12.6	11.5	12.9	2.3	8.0	-2.3
95th %ile	8.8	8.0	7.2	-3.5	1.6	-6.7
Mean	14.2	13.2	16.2	5.2	10.5	0.0
<i>n</i>	103	98	89	81	79	77
<b>Median by Asset Size</b>						
Less than \$200M	12.3	12.3	12.7	4.4	11.7	0.0
<i>n</i>	14	14	9	11	7	7
\$200M – \$500M	13.8	12.7	15.1	2.3	10.7	-1.9
<i>n</i>	28	28	24	19	12	16
\$500M – \$1B	13.6	13.0	15.2	4.6	11.3	-0.9
<i>n</i>	26	23	22	23	22	20
More than \$1B	15.5	14.3	18.8	5.4	9.6	0.8
<i>n</i>	35	33	34	28	38	34

Source: College and university data as reported to Cambridge Associates LLC.

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

## REAL RETURNS AFTER SPENDING: TRAILING 3-, 5-, AND 10-Yr

Years Ended June 30, 2020 • Percent (%)

	3 Yr	5 Yr	10 Yr
<b>All C&amp;Us</b>			
5th %ile	3.2	1.8	3.8
25th %ile	1.1	0.6	2.4
Median	-0.3	-0.6	1.4
75th %ile	-1.7	-1.6	0.3
95th %ile	-3.2	-2.8	-0.4
Mean	-0.3	-0.5	1.4
<i>n</i>	99	86	79

Sources: College and university data as reported to Cambridge Associates LLC.

## Appendix: Investment Policy

### DISPERSION IN POLICY PORTFOLIO BENCHMARK RETURNS

Periods as of June 30, 2020 • Percent (%)

	1-Yr	5-Yr	10-Yr
5th %ile	4.9	6.6	8.5
25th %ile	3.1	5.9	7.8
Median	2.0	5.3	7.2
75th %ile	0.7	4.8	6.7
95th %ile	-0.9	4.0	6.0
Mean	1.9	5.3	7.2
<i>n</i>	146	143	133

Source: College and university data as reported to Cambridge Associates LLC.

## Appendix: Portfolio Asset Allocation

### ASSET ALLOCATION DISTRIBUTION BY ASSET CLASS

As of June 30, 2020 • Percent (%) • *n* = 159

	US Equity	Global ex US Equity	Bonds	Hedge Funds	Distressed Securities	Priv Equity & Ven Capital	Real Assets & ILBs	Cash & Equivs
5th %ile	35.6	29.7	16.5	32.7	8.0	36.2	16.5	9.4
25th %ile	27.7	23.7	11.3	21.9	4.5	22.8	10.7	5.8
Median	22.4	20.0	7.5	16.4	2.5	17.2	7.4	3.4
75th %ile	14.3	16.4	4.2	10.9	0.7	11.4	4.5	1.8
95th %ile	6.1	9.8	0.1	4.5	0.0	1.2	1.4	0.0
Mean	21.7	19.8	8.1	16.8	3.0	17.7	8.0	3.9

Source: College and university data as reported to Cambridge Associates LLC.

## MEAN ASSET ALLOCATION BY ASSET SIZE

As of June 30, 2020 • Percent (%)

	Asset Size				
	All C&Us (n = 159)	Less than \$200M (n = 27)	\$200M – \$500M (n = 30)	\$500M – \$1B (n = 34)	More than \$1B (n = 68)
<b>US Equity</b>	<b>21.7</b>	<b>30.5</b>	<b>26.1</b>	<b>22.5</b>	<b>15.8</b>
<b>Global ex US Equity</b>	<b>19.8</b>	<b>25.0</b>	<b>21.1</b>	<b>18.8</b>	<b>17.6</b>
Developed Markets	13.0	18.1	14.2	13.0	10.5
Emerging Markets	6.7	6.9	6.9	5.8	7.1
<b>Bonds</b>	<b>8.1</b>	<b>12.7</b>	<b>10.6</b>	<b>8.2</b>	<b>5.1</b>
US Bonds	7.6	12.0	10.5	7.8	4.5
Global ex US Bonds (DM)	0.1	0.3	0.0	0.0	0.2
Global ex US Bonds (EM)	0.1	0.1	0.0	0.1	0.1
High-Yield Bonds	0.3	0.3	0.1	0.3	0.3
<b>Hedge Funds</b>	<b>16.8</b>	<b>13.2</b>	<b>14.9</b>	<b>16.4</b>	<b>19.2</b>
Long/Short Hedge Funds	6.9	4.3	5.7	6.4	8.8
Absolute Return (ex Distressed)	9.8	9.0	9.2	10.0	10.4
<b>Distressed Securities</b>	<b>3.0</b>	<b>1.4</b>	<b>2.5</b>	<b>4.3</b>	<b>3.2</b>
Hedge Fund Structure	1.4	0.8	0.9	2.0	1.5
Private Equity Structure	1.6	0.6	1.6	2.3	1.7
<b>PE &amp; VC</b>	<b>17.7</b>	<b>7.4</b>	<b>13.1</b>	<b>17.1</b>	<b>24.1</b>
Non-Venture Private Equity	8.4	2.0	6.0	8.5	12.0
Venture Capital	7.6	3.1	4.7	7.1	11.0
Other Private Investments	1.7	2.3	2.4	1.5	1.2
<b>Real Assets &amp; Infl-Linked Bonds</b>	<b>8.0</b>	<b>4.8</b>	<b>5.4</b>	<b>9.4</b>	<b>9.8</b>
Private Real Estate	3.1	0.5	1.3	3.9	4.4
Public Real Estate	0.5	0.6	0.6	0.9	0.3
Commodities	0.3	0.4	0.2	0.1	0.3
Public Energy/Nat Resources	0.9	1.6	1.6	0.9	0.5
Private O&G/Nat Resources	2.7	1.1	1.4	3.2	3.7
Timber	0.1	0.0	0.0	0.2	0.2
Infl-Linked Bonds	0.4	0.7	0.3	0.3	0.4
<b>Cash &amp; Equivalents</b>	<b>3.9</b>	<b>4.7</b>	<b>4.0</b>	<b>3.3</b>	<b>3.9</b>
<b>Other</b>	<b>1.0</b>	<b>0.3</b>	<b>2.4</b>	<b>0.1</b>	<b>1.2</b>

Source: College and university data as reported to Cambridge Associates LLC.



## HISTORICAL MEAN ASSET ALLOCATION TRENDS

Years Ended June 30, 2020 • Percent (%)

	Constant Universe											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
US Equity	16.4	17.4	17.1	18.1	18.4	18.3	18.4	19.2	19.0	19.3	20.4	
Global ex US Equity Devel Mkts	11.9	12.5	10.9	12.5	13.6	13.9	13.5	14.9	14.5	13.9	12.7	
Emerging Markets Equity	5.7	6.5	6.3	6.9	7.6	7.5	7.5	7.9	7.7	7.4	6.7	
Bonds	13.1	10.9	11.0	9.7	8.6	8.5	8.6	8.0	8.1	8.2	7.8	
Hedge Funds	20.3	19.3	19.8	20.0	19.5	20.5	19.8	18.3	18.0	17.1	16.3	
Distressed Securities	4.6	4.2	4.2	4.3	4.0	3.6	3.6	3.2	3.1	3.1	3.1	
PE/VC	12.0	12.5	13.4	12.1	12.1	12.6	13.0	12.8	14.1	16.5	19.0	
Real Assets & Infl-Linked Bonds	12.8	13.6	13.8	12.9	12.4	10.9	11.7	10.9	11.2	10.1	8.6	
Cash & Equivalents	2.8	2.5	2.9	3.1	3.6	3.9	3.5	3.9	3.5	3.2	3.9	
Other	0.4	0.6	0.5	0.4	0.3	0.3	0.3	0.8	0.8	1.2	1.4	

Source: College and university data as reported to Cambridge Associates LLC.

Note: Analysis is based on a constant universe that includes 125 institutions that provided asset allocation data for each year from 2010 to 2020.

## UNCALLED CAPITAL COMMITTED TO PRIVATE INVESTMENT FUNDS

As of June 30, 2020 • Percent (%)

### Uncalled Capital Commitments as a Percentage of the Total LTIP

	Under \$200M	\$200M – \$500M	\$500M – \$1B	Over \$1B
5th %ile	17.1	22.0	21.2	28.7
25th %ile	10.7	16.9	19.0	20.5
Median	9.1	11.9	16.7	17.6
75th %ile	5.1	8.3	14.1	14.5
95th %ile	0.6	3.4	10.1	11.4
Mean	8.6	12.3	16.1	18.8
<i>n</i>	21	30	31	57

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

	Under \$200M	\$200M – \$500M	\$500M – \$1B	Over \$1B
5th %ile	25.7	36.0	50.0	81.7
25th %ile	16.8	29.7	37.6	55.2
Median	11.8	18.4	29.4	38.5
75th %ile	6.1	12.2	21.4	27.8
95th %ile	0.6	5.0	16.6	21.5
Mean	12.3	19.8	31.0	44.5
<i>n</i>	21	30	31	57

Source: College and university 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.

## Appendix: Investment Manager Structures

### NUMBER OF EXTERNAL MANAGERS

As of June 30, 2020

	Less than \$200M	\$200M – \$500M	\$500M – \$1B	More than \$1B
5th %ile	57	68	99	231
25th %ile	40	62	81	146
Median	30	50	66	107
75th %ile	21	37	59	85
95th %ile	11	23	47	63
Mean	31	49	70	122
<i>n</i>	27	30	32	52

Source: College and university data as reported to Cambridge Associates LLC.

Note: Funds-of-funds are counted as one separate investment manager.

### DISPERSION IN NUMBER OF MANAGERS FOR SELECTED ASSET CLASSES

As of June 30, 2020

	US Equity	DM ex US Equity	EM Equity	US Bonds	Long/Short Hedge Funds	Ab Return Hedge Funds	Private Equity	Venture Capital
5th %ile	9	7	8	4	15	14	42	34
25th %ile	6	5	5	2	7	9	23	18
Median	4	3	3	2	5	7	15	8
75th %ile	3	2	2	1	2	4	7	4
95th %ile	2	1	1	1	1	1	3	1
Mean	5	4	4	2	6	7	18	12
<i>n</i>	139	136	138	128	121	139	133	129

Source: College and university 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.

## Appendix: Institutional Support

### ENDOWMENT DEPENDENCE

Fiscal Year 2020 • Percent (%)

	Private Institutions	Public Institutions
5th %ile	53.7	6.5
25th %ile	27.3	5.2
Median	16.4	3.1
75th %ile	7.4	1.8
95th %ile	2.3	0.4
Mean	19.7	3.3
<i>n</i>	68	18

Source: College and university data as reported to Cambridge Associates LLC.

## PARTICIPANTS

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  
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  
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  
Jewish Theological Seminary of America  
Johns Hopkins University  
Kalamazoo College  
KU Endowment  
Kentucky; University of  
Lafayette College  
University of Louisiana at Lafayette Foundation  
Lebanese American University  
Lehigh University  
Lewis and Clark College  
Louisiana State University Foundation  
Loyola University Chicago  
Lycoming College  
Macalester College  
MIT Investment Management Company  
Mercy College  
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.  
University of Oregon Foundation  
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  
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  
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.  
Trinity University

## PARTICIPANTS (CONT)

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The UCLA Foundation  
UNC Management Company, Inc.  
UNCG Endowment Partners, LP  
Union Theological Seminary  
University of California, San Francisco  
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  
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Webb Institute  
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Wesleyan University  
Western New England University  
Wichita State University Foundation  
William & Mary Foundation  
Williams College  
Yale University  
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