

FOUNDATION ANNUAL INVESTMENT POOL RETURNS

CALENDAR YEAR 2019



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This study is based on a survey that Cambridge Associates administers annually to our foundation clients. The report that follows summarizes returns, asset allocation, and other investment-related data for 115 foundations for the calendar year ended December 31, 2019. Included in this year's report are commentary and exhibits that are spread across six separate sections.

Our **INVESTMENT PORTFOLIO RETURNS** section highlights performance results for select trailing periods. Smaller foundations generally performed better than their larger counterparts for calendar year 2019, but larger foundations continue to outperform smaller foundations over the long-term. This section investigates some of the factors that contributed to the variation of peer returns and what made top performers stand out.

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

The **ASSET ALLOCATION** section looks back at changes over the last decade and incorporates data on target asset allocations to lend insights into how foundations are altering their portfolios heading into the future. The 2019 observations are mostly a continuation of longer-term trends that show that foundations in general are increasing allocations to private equity and decreasing exposure to hedge funds and real assets strategies.

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

Meanwhile, the section entitled **PAYOUT FROM THE LONG-TERM INVESTMENT PORTFOLIO** contains a set of analyses that look at spending objectives and policies of private non-operating foundations. These types of foundations are required under the federal tax code to distribute approximately 5% of their assets each year. While most of these foundations' payout objectives are tied closely to this requirement, some also use smoothing-type spending rules like those used more commonly among endowments.

Finally, our **INVESTMENT OFFICE STAFFING AND GOVERNANCE** section of the report looks at topics such as the number of personnel in the investment office and investment committee structure. Also included are analyses on how foundations use outside advisors/consultants and who has decision-making responsibility for asset allocation policy development and manager selection.

Investment Portfolio Returns

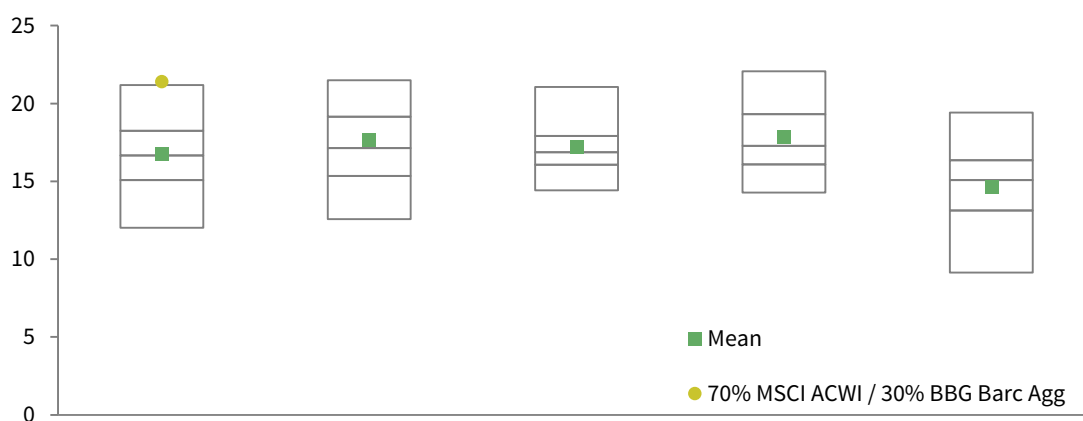
RETURNS IN CALENDAR YEAR 2019

Foundations closed out the 2010s with a banner year for investment performance, as most participants in our study earned their best annual return of the decade in 2019. Propelling foundation portfolios were robust returns from global public equities. US stock markets led the way with the broad-market Russell 3000® Index returning 31%. Private equities underperformed public markets but still produced returns that were well into the double-digits for the year. Bonds, hedge funds, and most real assets strategies posted strong returns as well.

The average return for participating foundations 2019 was 16.8% (Figure 1). The return for a simple benchmark consisting of 70% MSCI ACWI and 30% Bloomberg Barclays Aggregate Bond Index performed considerably better at 21.4%. In fact, the return of this simple benchmark would have fallen in the top 5th percentile of the participant universe.

FIGURE 1 CALENDAR YEAR 2019 TOTAL RETURN SUMMARY

Trailing 1-Yr as of December 31, 2019 • Percent (%)



	All Foundations	Under \$100M	\$100M-\$300M	\$300M-\$1B	Over \$1B
5th Percentile	21.2	21.5	21.1	22.1	19.4
25th Percentile	18.2	19.1	17.9	19.3	16.4
Median	16.7	17.1	16.9	17.3	15.1
75th Percentile	15.1	15.4	16.1	16.1	13.1
95th Percentile	12.0	12.6	14.4	14.3	9.1
Mean	16.8	17.6	17.2	17.8	14.7
<i>n</i>	115	26	34	24	31
70/30 Index	21.4				

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

The participant group is broken out into four separate asset size groups for several of the analyses in this report. Foundations with assets between \$300 million and \$1 billion had the highest average return for 2019 (17.8%), followed closely by those with assets less than \$100 million (17.6%). The largest foundations, which have assets greater than \$1 billion, reported the lowest average return (14.7%) of the separate asset size groups. More than half of the largest foundations (16 of 31) fell in the bottom performance quartile for 2019 (Figure 2).

FIGURE 2 ASSET SIZE OF PARTICIPATING FOUNDATIONS BY 2019 PERFORMANCE QUARTILE

	Number of Participating Foundations			
	Less Than \$100M	\$100M-\$300M	\$300M-\$1B	More Than \$1B
Top Quartile	10	6	9	4
2nd Quartile	5	14	7	3
3rd Quartile	5	11	5	8
Bottom Quartile	6	3	3	16

Source: Foundation data as reported to Cambridge Associates LLC.

The commentary and analysis that follow in this section will explore the factors that contribute to investor returns and the differentials in returns reported across foundations. These factors include asset allocation policy and the implementation of that policy. In addition, different methods in which private investments are incorporated into total returns also impacted the peer performance statistics reported in this study. For foundations greater than \$1 billion, asset allocation and performance reporting of private investments are the primary factors that explain this group's underperformance relative to the other asset size groups for the trailing one-year period.

ASSET ALLOCATION. Figure 3 looks at the relationship between asset allocation and total portfolio returns in 2019. The participant group is broken out into four quartiles based on investment performance and each foundation'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 foundations within each quartile. The chart of index returns provides the context of the market environment for the year.

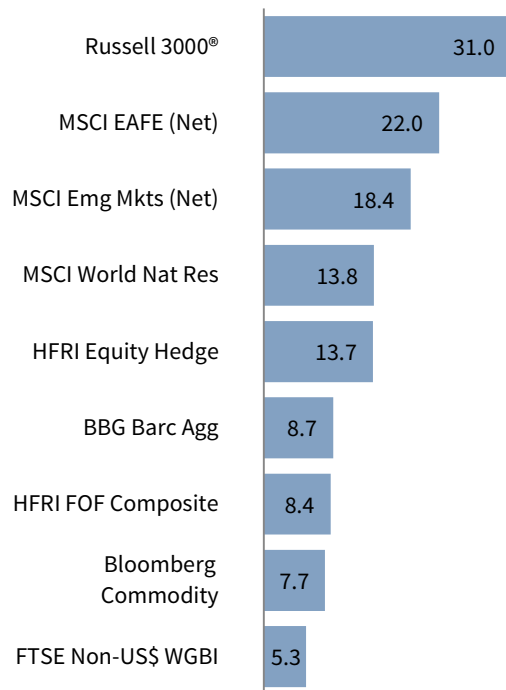
Differences in average asset allocations among the four performance quartiles often correlate with the backdrop of the market environment. In 2019, public equities stood out from other asset classes in terms of relative performance. The modified public market equivalent (mPME¹) benchmarks outperformed each of the major private investment indexes for the trailing one-year period. As one might expect given this context, foundations in the top quartile reported the highest average allocations to public equities and the lowest allocations to private equities.

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

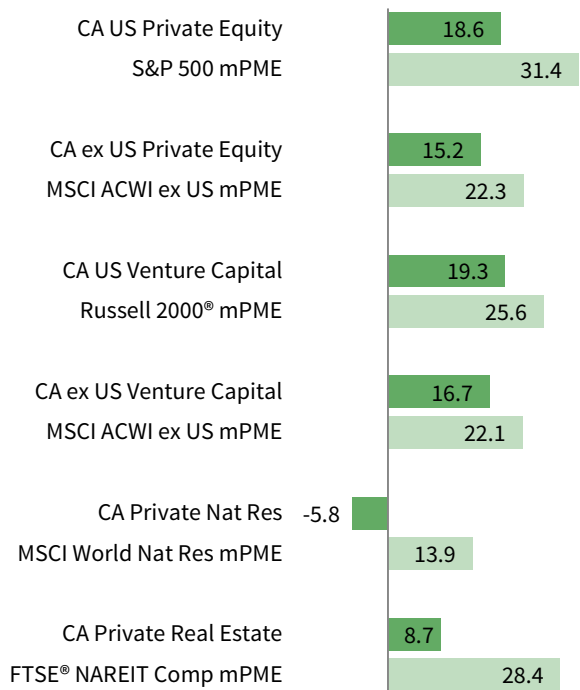
FIGURE 3 ONE-YEAR INDEX RETURNS AND ASSET ALLOCATION OF TOP AND BOTTOM PERFORMERS

As of December 31, 2019 • Percent (%)

Public Indexes

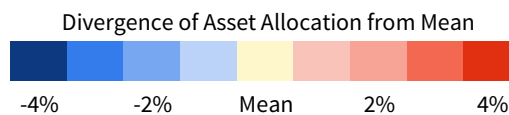


Private Index IRRs and mPME IRRs*



Mean Foundation Asset Allocation by Performance Quartile: December 31, 2018 to December 31, 2019

Quartile	US Equity	DM ex US Eqty	EM Equity	Bonds	Hedge Funds	Dist Sec	PE/VC	Priv RA	Pub RA & ILBs	Cash	Other
Top Quartile	30.6	19.6	7.3	13.3	11.2	1.3	8.5	1.7	2.9	2.9	0.6
2nd Quartile	23.6	15.6	7.3	13.9	14.0	2.2	11.2	3.4	3.7	3.7	1.5
3rd Quartile	20.5	15.0	8.1	11.6	15.4	3.0	13.5	6.3	3.2	3.1	0.4
Bottom Quartile	14.9	12.0	8.0	8.8	16.5	4.3	19.3	7.9	2.3	5.6	0.5
All Fdn Mean	22.5	15.6	7.7	11.9	14.2	2.7	13.1	4.8	3.0	3.8	0.7



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

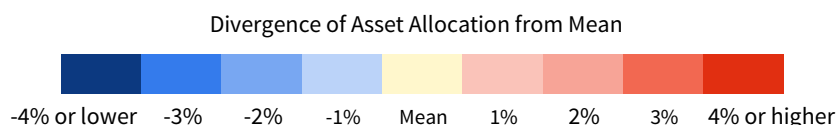
Sources: Foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited, Cambridge Associates LLC, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., the National Association of Real Estate Investment Trusts,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

Note: Analysis includes data for 105 institutions.

The differential in average allocations was largest within US equities, where the average for top performers was more than double than that of the bottom quartile of performers. For total global equities, the top performance quartile had an average of 57.6% while the bottom performance quartile had an average of 34.9%. Figure 4 repeats this analysis for each of the last ten fiscal years and shows how influential these allocations were on relative peer performance in 2019. The divergence in allocations between top and bottom performers for this most recent year was the largest observed over the last decade.

FIGURE 4 MEAN ALLOCATION TO TOTAL PUBLIC EQUITY BY PERFORMANCE QUARTILE
Percent (%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1-Yr Index Returns										
Global PE/VC (IRR)	20.0	7.8	13.2	21.6	12.7	9.8	8.9	20.3	11.4	17.6
MSCI ACWI (TWR)	13.0	-7.1	16.5	23.2	4.5	-2.0	8.2	24.4	-9.1	27.0
Mean Allocation by Quartile*										
Top Quartile	38.3	29.6	44.9	48.6	35.4	34.0	48.3	57.0	33.7	57.6
2nd Quartile	42.2	43.7	43.1	41.5	45.2	43.4	44.5	49.4	44.4	46.5
3rd Quartile	42.8	43.4	38.1	40.2	46.2	46.8	44.1	40.7	51.6	43.6
Bottom Quartile	39.7	44.4	32.9	38.5	47.9	52.6	40.5	38.2	56.2	34.9
All Foundation Mean	40.7	40.1	39.7	42.2	43.7	44.1	44.4	46.5	46.5	45.8
n	73	77	80	84	84	89	93	98	100	105



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

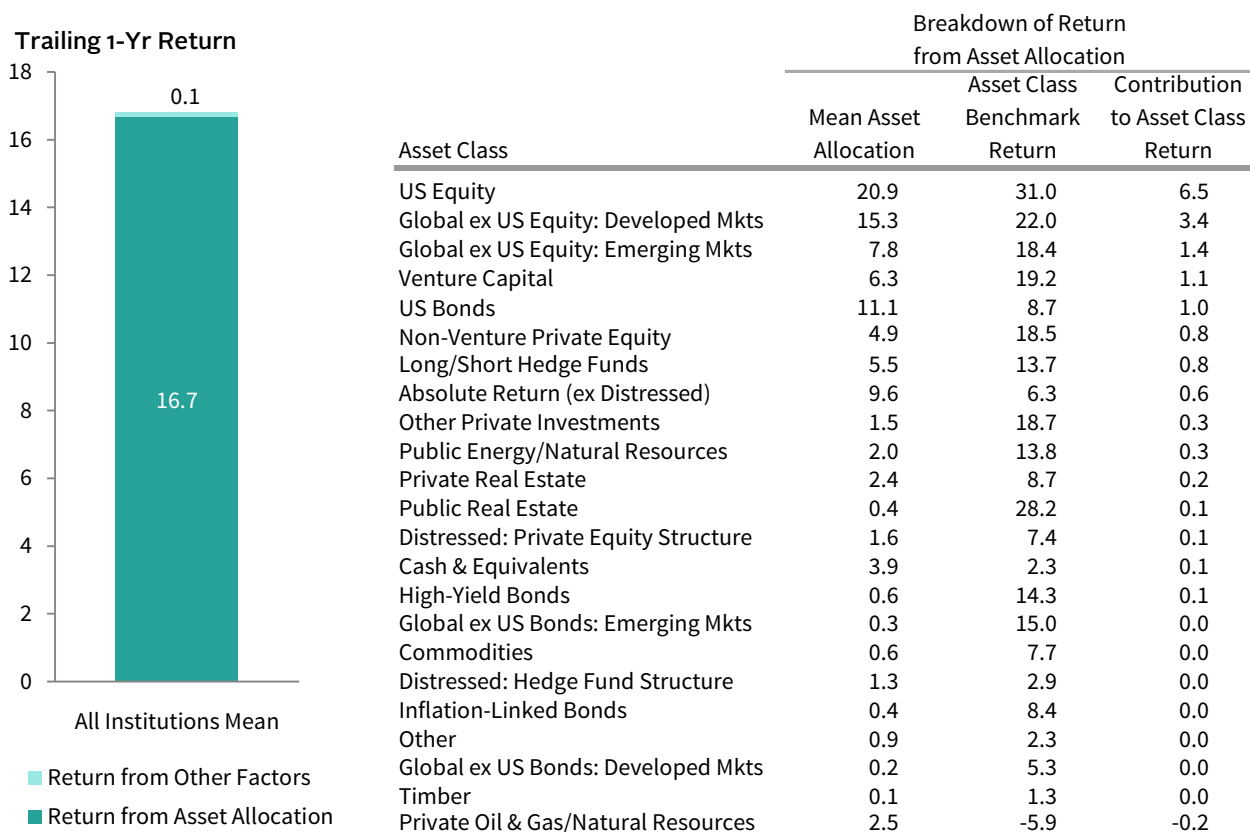
ATTRIBUTION. While asset allocation is a key driver of investment performance, it does not fully account for a portfolio's overall return. The execution or implementation of an asset allocation strategy also contributes to the total returns that portfolios earn. This implementation component can also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

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

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

FIGURE 5 ATTRIBUTION ANALYSIS

As of December 31, 2019 • Percent (%)



Sources: Foundation data as reported to Cambridge Associates LLC. Index data provided by Bloomberg Index Services Limited, BofA Merrill Lynch, Cambridge Associates LLC, Frank Russell Company, FTSE Fixed Income LLC, FTSE International Limited, Hedge Fund Research, Inc., J.P. Morgan Securities, Inc., MSCI Inc., National Association of Real Estate Investment Trusts, and the National Council of Real Estate Investment Fiduciaries. MSCI data provided “as is” without any express or implied warranties.

Notes: Includes data for 105 institutions that provided beginning year asset allocation. Mean asset allocation is as of December 31, 2018. The sum of the contribution to asset class return for all categories in the table equals the amount of the total return that was explained by asset allocation. To be consistent with the methodology in which private investment returns are incorporated into the total portfolio composite calculation, private investment benchmark returns are linked quarterly horizon returns.

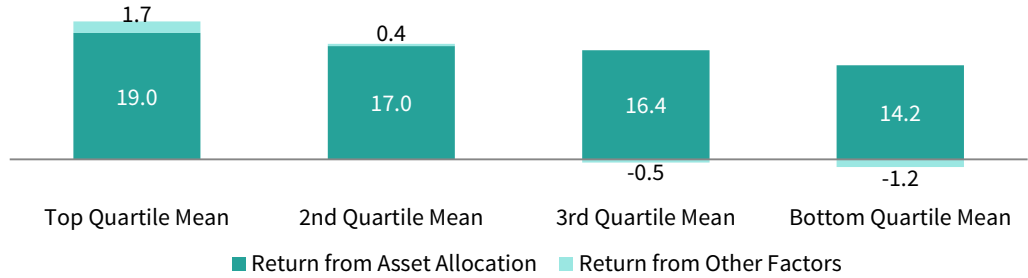
A foundation’s asset allocation usually explains most of the total return that it earns. For fiscal year 2019, the average asset allocation return among participating foundations was 16.7%, which accounted for nearly all of the average total portfolio return reported by the peer group. Each asset classes’ contribution to the average asset class return is a function of its benchmark return as well as the participant group’s average allocation to the category. US equities, which returned 31.0% for the year and had the highest average allocation among the detailed asset classes, had the largest contribution to the average asset class return in this analysis. The effects of implementation were positive for slightly more than half of participating foundations over this same period, with the analysis estimating an average implementation return of 0.1%.

Figure 6 provides a breakdown of the attribution data for the four performance quartiles of the overall respondent group. The top performance quartile had an average asset allocation return of 19.0%, approximately 480 basis points (bps) higher than

the average for the bottom performance quartile. The model estimates that there was smaller gap between the top and bottom performance quartiles when it came to the performance impact of implementation decisions. On average, the top quartile of performers added 170 bps in performance through implementation while the bottom quartile lost 120 bps.

FIGURE 6 ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE

Trailing 1-Yr Return • As of December 31, 2019 • Percent (%)



Source: Foundation data as reported to Cambridge Associates LLC.

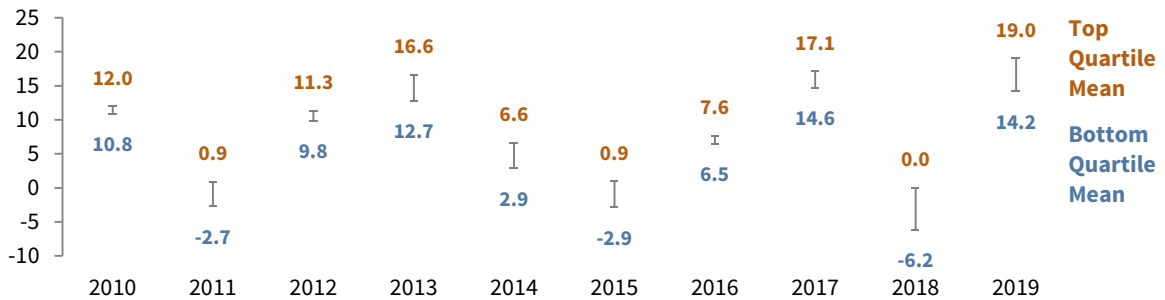
Note: Includes data for 105 institutions that provided beginning year asset allocation.

Figure 7 shows the results of this attribution analysis for each of the last ten calendar years. This differential in asset allocation returns was the second largest observed over the last ten years, with only the previous year having a wider spread. The top quartile’s average implementation return for 2019 was 290 bps higher than the average of the bottom quartile, a differential that was near the middle of the outcomes calculated over the last decade.

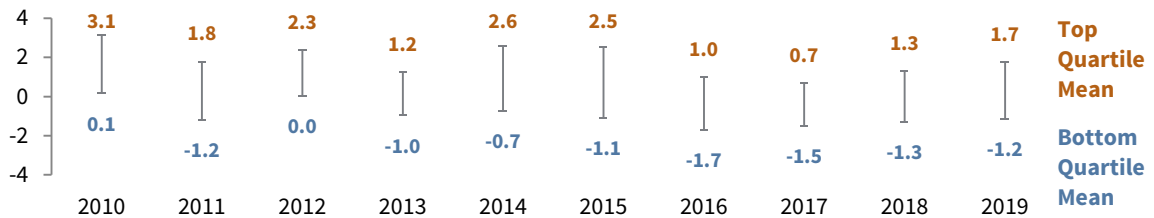
FIGURE 7 ANNUAL ATTRIBUTION ANALYSIS: 2010–19

Based on Trailing 1-Yr Returns as of December 31

Mean Asset Allocation Return: Top Quartile versus Bottom Quartile*



Mean Implementation Return: Top Quartile versus Bottom Quartile*



* Performance quartiles are calculated separately for each calendar year.

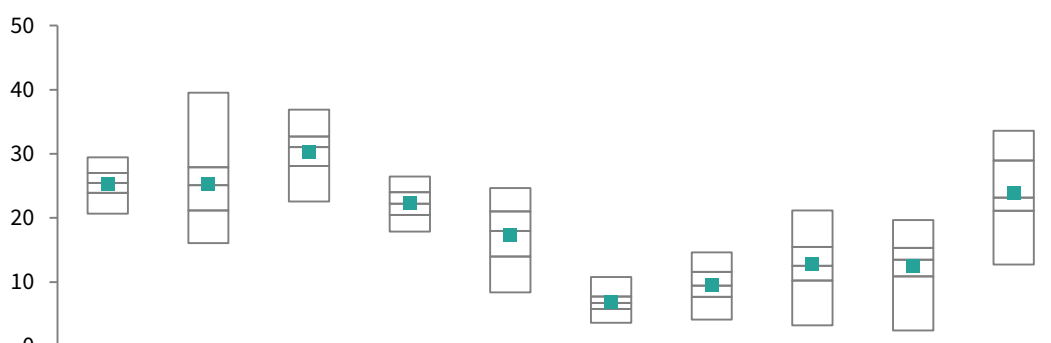
Source: Foundation data as reported to Cambridge Associates LLC.

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

Figure 8 shows the range of participant returns from the 5th to 95th percentile for marketable asset classes. The dispersion in US equity returns was wider than usual, ranging from 36.9% at the top end to 22.6% on the low end. When looking across the geographic regions, the median participant return was within 40 bps or less of the index return for all three sub-strategies (Figure 9).

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

Trailing 1-Yr as of December 31, 2019



	Public Equity ¹	Global Equity ²	US Equity	DM ex US Equity	EM Equity	Bonds	Hedge Funds	Public Real Assets ³	Comm and Nat Res	Public Real Estate
5th Percentile	29.5	39.5	36.9	26.5	24.7	10.8	14.6	21.2	19.7	33.6
25th Percentile	27.0	27.9	32.7	24.0	21.0	7.8	11.6	15.5	15.3	29.0
Median	25.5	25.1	31.1	22.2	18.0	6.8	9.5	12.6	13.5	23.1
75th Percentile	23.9	21.2	28.1	20.5	14.0	5.8	7.7	10.2	10.9	21.1
95th Percentile	20.7	16.1	22.6	17.9	8.4	3.6	4.2	3.3	2.4	12.7
Mean	25.4	25.4	30.3	22.4	17.3	7.0	9.5	12.9	12.6	24.0
<i>n</i>	92	60	87	85	84	89	86	58	53	12
Median by Asset Size										
Less than \$100M	24.8	22.1	29.5	23.0	15.6	6.6	9.6	13.4	13.3	24.2
<i>n</i>	25	17	24	23	22	24	22	16	15	1
\$100M–\$300M	26.3	27.0	31.1	22.2	18.8	6.8	8.8	14.1	13.8	25.5
<i>n</i>	32	24	33	33	33	32	31	21	20	6
\$300M–\$1B	24.4	24.2	31.4	22.1	18.2	6.8	9.8	12.5	12.4	23.3
<i>n</i>	16	10	17	16	16	17	16	14	13	4
More than \$1B	25.3	24.6	31.4	22.2	16.6	6.5	10.2	10.2	15.2	22.1
<i>n</i>	19	9	13	13	13	16	17	7	5	1

Source: Foundation data as reported to Cambridge Associates LLC.

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

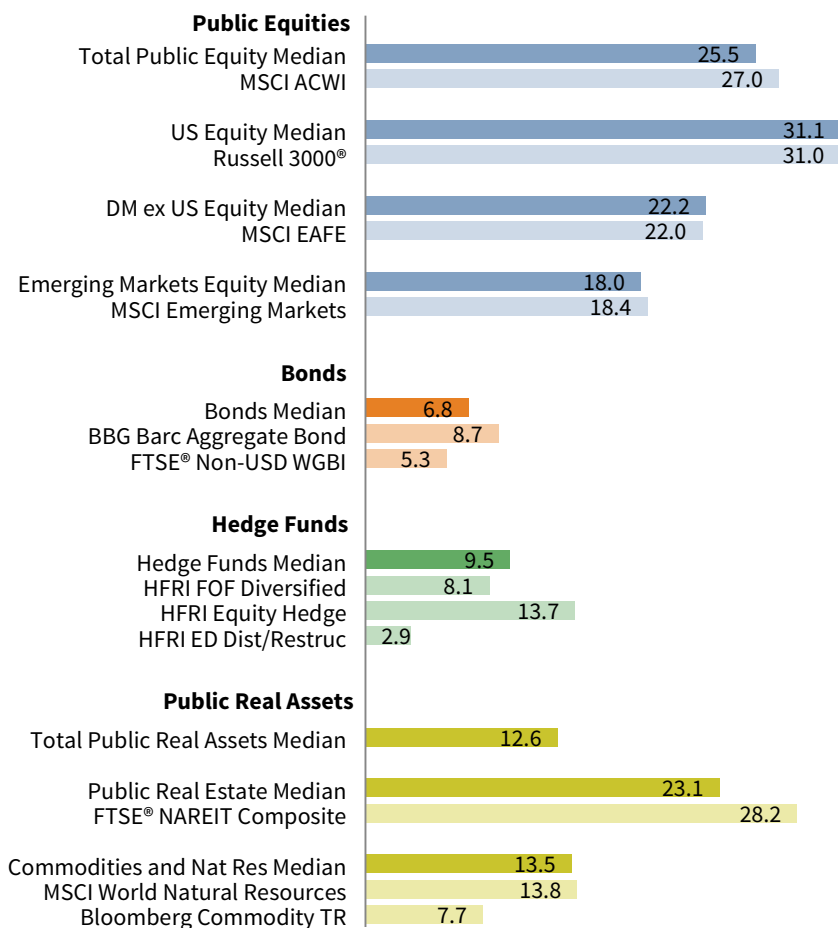
² Global equity includes only investment vehicles that have a mandate to invest in US and international markets.

³ Public real assets is a composite of public real estate, commodities and natural resources, and inflation-linked bonds.

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

FIGURE 9 MEDIAN MARKETABLE ASSET CLASS RETURNS VERSUS INDEX RETURNS

Trailing 1-Yr as of December 31, 2019



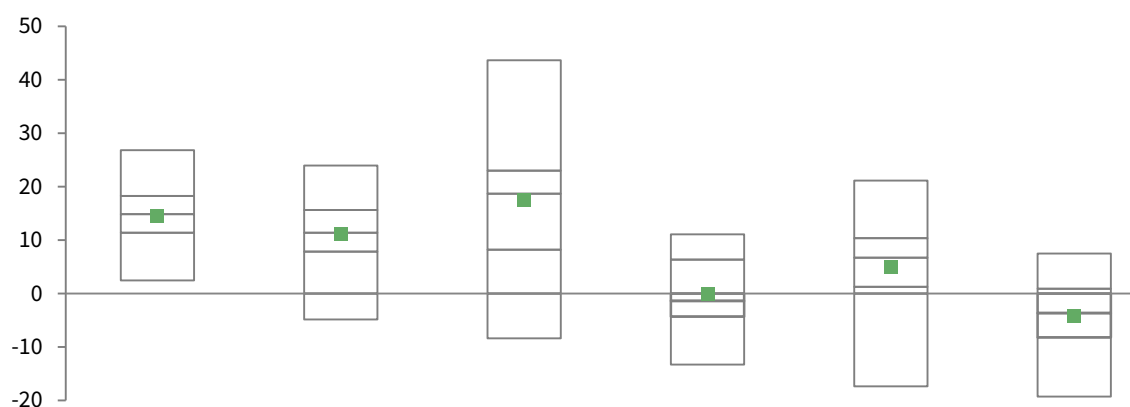
Sources: Foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., and MSCI Inc. MSCI data provided "as is" without any express or implied warranties. MSCI Indexes are net of dividend taxes for global ex US securities.

For private investments, there is typically a wide range of composite returns reported across participating foundations. The return distribution in these categories is somewhat illustrative of the J-curve effect, as returns in the bottom end of the distribution tend to come from foundations with low private investment allocations and presumably less mature private programs. In addition, private investment funds have also exhibited large variations in returns even when comparing funds of the same vintage year, which underscores the importance of manager selection within these asset classes. The largest variation in participant asset class returns in 2019 was in venture capital, where the 5th percentile return was more than 50 percentage points (ppts) higher than that of the 95th percentile (Figure 9).

In most of the private investment asset classes, the median return for foundations greater than \$1 billion was among the lowest of the asset size groups. Given the high allocations that these large foundations have to private investments, this effect was one of the factors in their underperformance versus other asset size groups at the total portfolio level.⁴ Some of this underperformance can be explained by the methodology that many large foundations use to report private investment performance.

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

Trailing 1-Yr as of December 31, 2019



	Private Equity ¹	Non-Venture Private Equity ²	Venture Capital	Private Real Assets ³	Private Real Estate	Private Natural Resources
5th Percentile	26.8	23.9	43.6	11.1	21.1	7.5
25th Percentile	18.3	15.6	23.0	6.4	10.3	0.9
Median	14.8	11.4	18.7	-1.4	6.7	-3.7
75th Percentile	11.4	7.9	8.2	-4.3	1.2	-8.2
95th Percentile	2.5	-4.8	-8.4	-13.3	-17.4	-19.3
Mean	14.6	11.1	17.4	-0.1	5.0	-4.2
<i>n</i>	78	75	63	57	54	61
Median by Asset Size						
Less than \$100M	12.6	11.4	11.7	0.1	5.5	-3.2
<i>n</i>	12	11	10	9	6	8
\$100M-\$300M	13.8	11.5	19.1	-1.4	1.3	-2.2
<i>n</i>	30	30	24	23	17	22
\$300M-\$1B	17.6	12.1	20.4	-1.4	9.5	-4.7
<i>n</i>	20	20	17	16	15	15
More than \$1B	14.1	9.5	12.8	-1.4	7.1	-8.6
<i>n</i>	16	14	12	9	16	16

Source: Foundation data as reported to Cambridge Associates LLC.

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

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

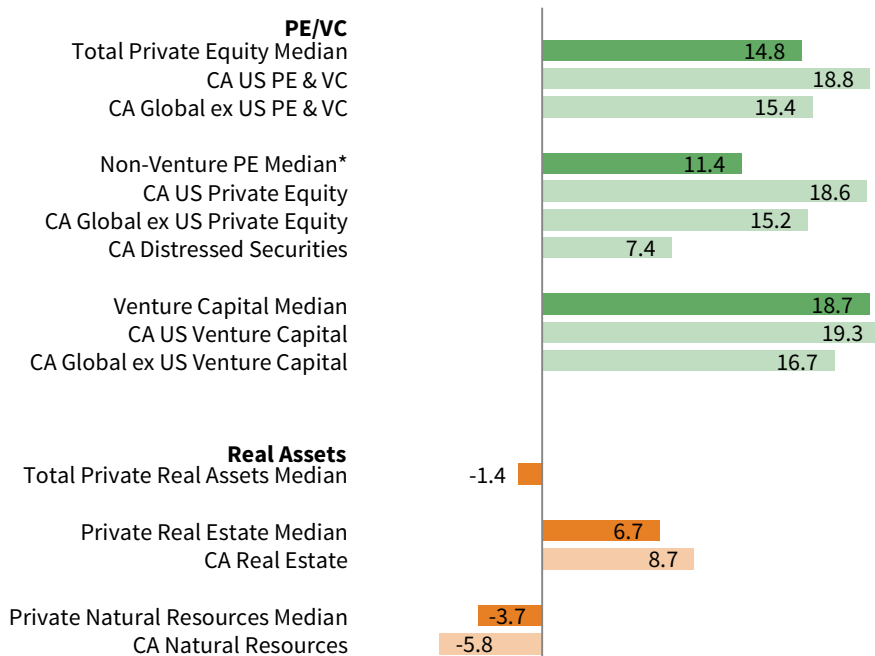
² Non-venture private equity also includes distressed securities that are invested through a private investment vehicle.

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

4 As displayed in Figure 30, the combined average allocation to private investments for foundations greater than \$1 billion was 30.2% as of December 31, 2019.

FIGURE 11 MEDIAN PRIVATE INVESTMENT ASSET CLASS IRRs VERSUS INDEX IRRs

Trailing 1-Yr as of December 31, 2019



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

Sources: Foundation data as reported to Cambridge Associates LLC. Index data are provided by Cambridge Associates LLC.

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

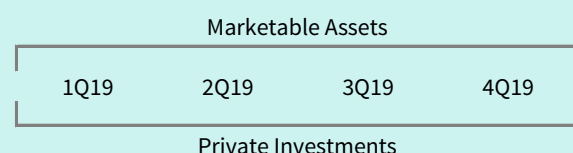
RETURN CALCULATION METHODOLOGIES. The methodology foundations use to account for private investments in their total portfolio return calculation is important to consider when evaluating investment performance over shorter time periods. The most frequently used approach among all participants was to report private investment returns on a current basis. The second most frequently used methodology was the lagged basis.

Under the current basis, the total portfolio return incorporates all investment activity for private investments for the entire calendar 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 2019 total return represents performance for the period of October 1, 2018, to September 30, 2019. When assessing the impact of these two methodologies, it is important to consider private investment returns for both fourth quarter 2018 and fourth quarter 2019. With the lagged basis methodology, performance for the former period will be included in the one-year total return calculation, and performance for the latter period will be excluded.

PERFORMANCE REPORTING METHODOLOGIES

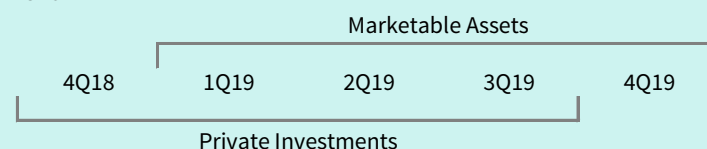
Current Basis

Total investment pool return for 2019 includes marketable asset and private investment performance for January 1, 2019, to December 31, 2019.



Lagged Basis

Total investment pool return for 2019 includes marketable asset performance for January 1, 2019, to December 31, 2019, and private investment performance for October 1, 2018, to September 30, 2019.



Methodologies Used by Participants

Asset Size	Current Basis	Lagged Basis	Other	No PI Allocation
Under \$100M	58%	0%	0%	42%
<i>n</i>	15	0	0	11
\$100M – \$300M	94%	6%	0%	0%
<i>n</i>	32	2	0	0
\$300M – \$1B	88%	8%	0%	4%
<i>n</i>	21	2	0	1
Over \$1B	48%	48%	3%	0%
<i>n</i>	15	15	1	0
All Institutions	72%	17%	1%	10%
<i>n</i>	83	19	1	12

Source: Foundation data as reported to Cambridge Associates LLC.

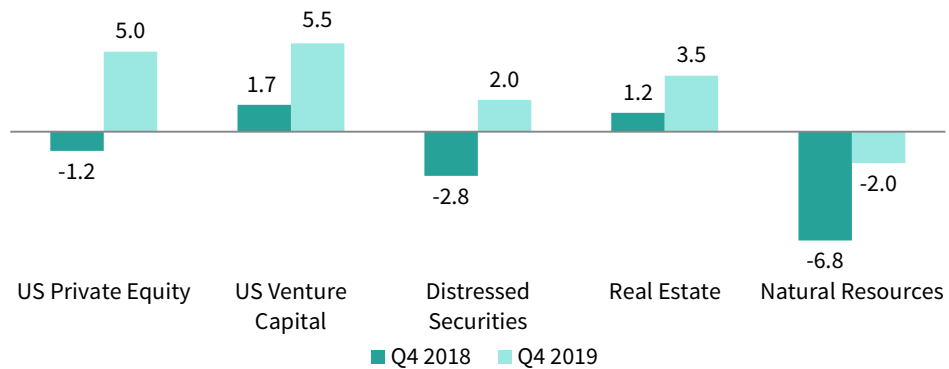
Notes: Private investments include non-venture private equity, venture capital, distressed securities (private equity structure), private oil & gas/natural resources, timber, private real estate, and other private investments. Institutions with no significant private investment allocations (<1% of their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

Private investment index returns for fourth quarter 2019 were significantly stronger than they were for the same quarter from one year prior (Figure 12). For foundations with large allocations to private investments, the lagged reported methodology will result in a lower total portfolio return compared to the current basis for calendar year 2019. Among foundations with greater than \$1 billion, there was an even split in the number of foundations using the current basis versus the lagged basis. The current basis was used by nearly all participating foundations with less than \$1 billion that had private investment allocations.

Another reporting issue that can impact peer returns is the method in which net returns are calculated. All except one participant in this study provided performance on a net-of-fee basis. Of all the foundations that report net of fees, the vast majority

(89%) deduct solely external manager fees in their net calculation (Figure 13). Another 9% of foundations deduct some investment oversight costs but are gross of the major expense categories. 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. Just 3% of respondents deduct external manager fees plus all or most oversight costs, including the major cost drivers. The practice of deducting oversight costs is most likely to be carried out by larger foundations.

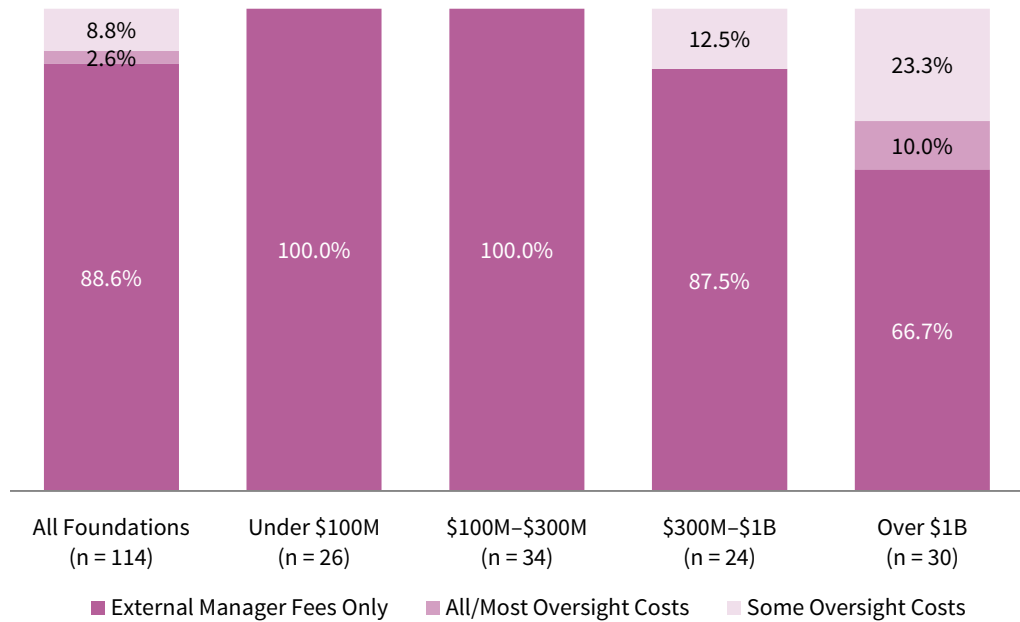
FIGURE 12 CAMBRIDGE ASSOCIATES' PRIVATE INVESTMENT INDEX RETURNS
Percent (%)



Source: Cambridge Associates LLC.

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

FIGURE 13 TYPES OF FEES DEDUCTED IN CY 2019 NET RETURN CALCULATION
As of December 31, 2019 • Percent (%)



Source: Foundation 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.

LONGER-TERM RETURNS

The average foundation return was 7.5% for the trailing ten-year period, underperforming the 70/30 benchmark by 20 bps (Figure 14). The lone asset size subgroup to outperform the simple benchmark over the last decade was foundations greater than \$1 billion, which had an average return of 8.5% (Figure 15). Figure 16 shows the rolling average ten-year return for the overall participant group over the last decade. The average return for this most recent ten-year period, while slightly lower than what was reported as of the end of the previous calendar year, is one of the highest from the last decade.

FIGURE 14 TOTAL RETURNS SUMMARY: TRAILING 3-, 5-, AND 10-YR

Years Ended December 31, 2019 • Percent (%)

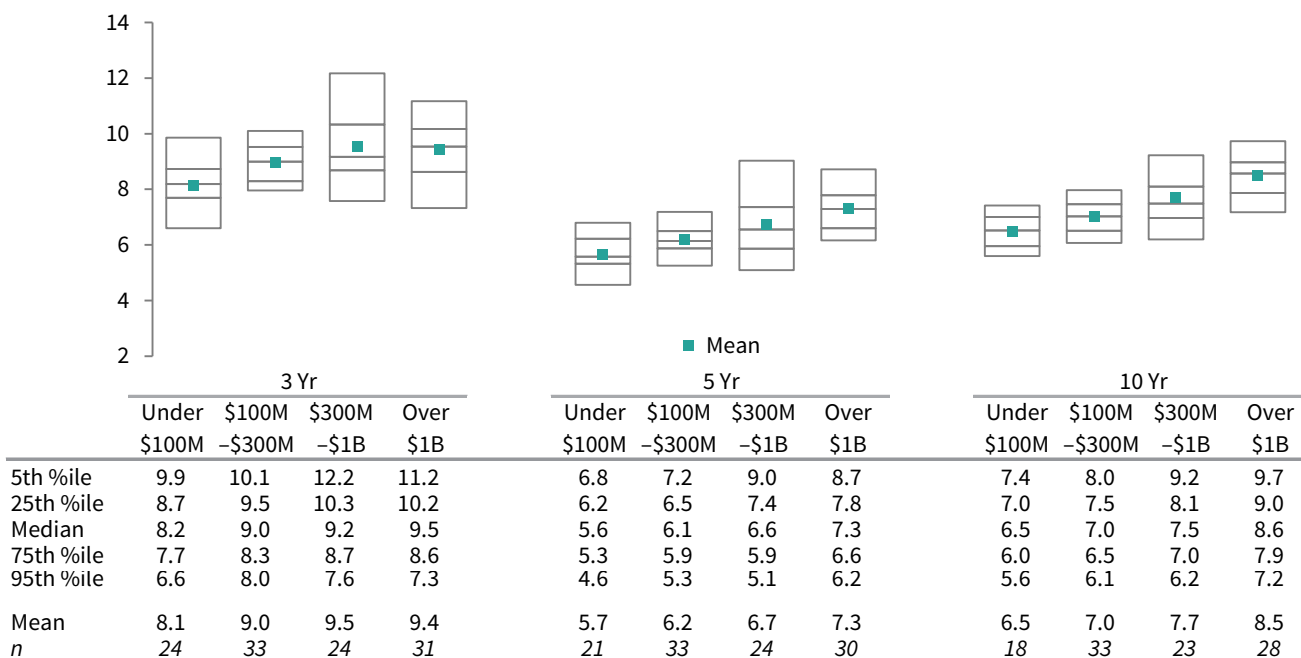
	Nominal AACRs			Real After Spending AACRs		
	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr
All Foundations						
5th Percentile	11.1	8.2	9.5	3.9	1.7	2.6
25th Percentile	9.8	7.2	8.1	2.5	0.7	1.9
Median	9.0	6.3	7.4	1.4	-0.7	0.7
75th Percentile	8.2	5.8	6.6	0.4	-1.4	-0.1
95th Percentile	7.1	5.0	5.8	-0.5	-2.0	-0.3
Mean	9.0	6.5	7.5	1.6	-0.4	1.0
<i>n</i>	112	108	102	41	38	25
70/30 Index	10.3	7.2	7.7			

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

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

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

Years Ended December 31, 2019 • Percent (%)

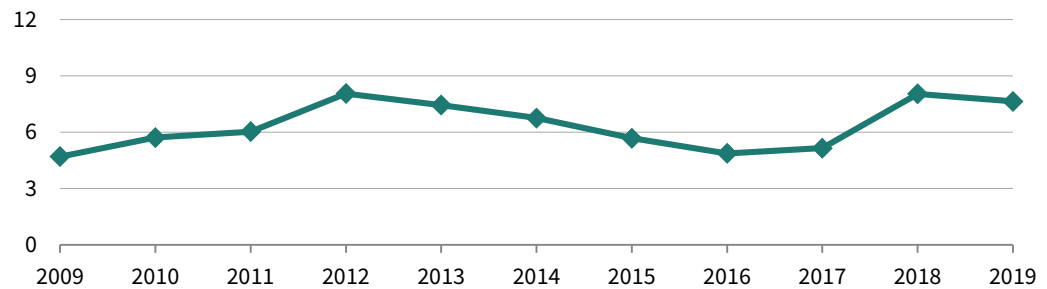


Source: Foundation data as reported to Cambridge Associates LLC.

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

FIGURE 16 ROLLING 10-YR AVERAGE ANNUAL COMPOUND RETURNS

Years Ended December 31 • Percent (%)



Source: Foundation data as reported to Cambridge Associates LLC.

Note: Analysis includes data for 63 institutions that provided returns for the last 20 years.

A common objective when managing a long-term pool of capital is to preserve the purchasing power of the pool. To achieve this goal a foundation must earn a return that offsets or exceeds its spending rate and the inflation rate. Most of the foundations in this study that provided returns and spending rates over the last decade have fared well in this objective. The average real return after spending was 1.0% over the trailing ten-year period (Figure 14).

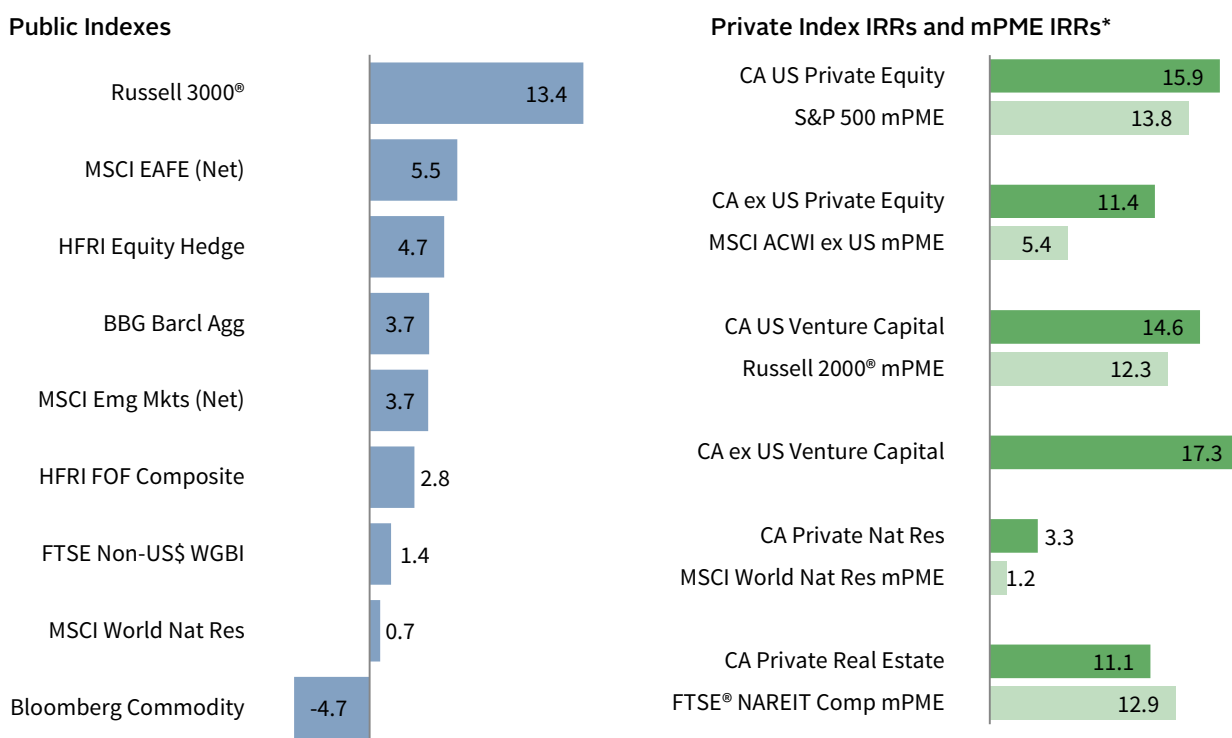
TEN-YEAR ASSET ALLOCATION. Figure 17 looks at the relationship between asset allocation and investment performance for participating foundations over the last ten years. Each of the private investment indexes listed in this analysis, except for real estate, outperformed its mPME benchmark for the trailing ten-year period. Given this backdrop, it is not surprising to see that the top quartile of performers had the highest average allocations to PE/VC and private real assets over this period. The combined average allocation to these private investment categories over the last decade was 25.4% for the foundations in the top quartile. In contrast, the bottom quartile of performers had the lowest average allocations to the private asset classes.

ATTRIBUTION. The attribution model further illustrates the impact of different asset allocation structures, particularly differences in private investment allocations, on the trailing ten-year return. The average asset allocation return over this period for the top quartile of performers was 7.9% (Figure 18). For the bottom quartile of performers, the average asset allocation return was 150 bps lower at 6.4%. Our attribution model estimates that the differential in return from other factors—mainly implementation decisions—was nearly the same between the top and bottom quartiles of performers (140 bps).

Historically, the range of returns among private investment funds has been much wider than what has been experienced in marketable asset classes (Figure 19). Foundations with higher private investment allocations have more potential for earning a larger return from implementation, and the potential for excess return can be very significant in certain periods. For the trailing ten-year period, the top quartile of performers had an average implementation return of 1.2% while the bottom quartile

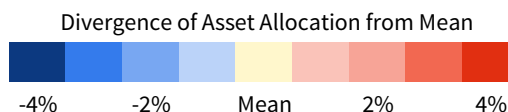
of performers actually lost value through implementation (-0.2%). The ranges of asset class composite returns across the entire participant group for the trailing five- and ten-year periods are listed in Figures 20 and 21. Also included in these tables are median composite return for the four asset size groups.

FIGURE 17 10-YR INDEX RETURNS AND ASSET ALLOCATION OF TOP AND BOTTOM PERFORMERS
As of December 31, 2019 • Percent (%)



Mean Foundation Asset Allocation by Performance Quartile: December 31, 2009 to December 31, 2019

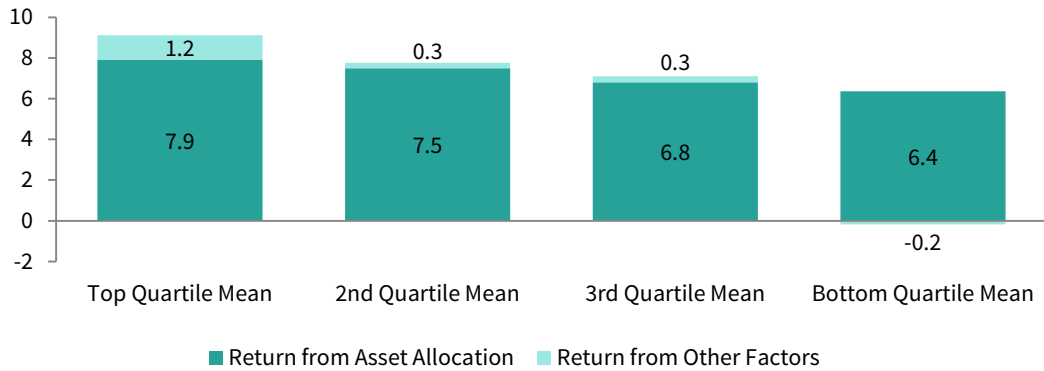
Quartile	US Equity	DM ex US Eqty	EM Equity	Bonds	Hedge Funds	Dist Sec	PE & VC	Priv RA	Pub RA & ILBs	Cash	Other
Top Quartile	19.4	11.6	8.0	9.0	15.8	3.1	17.1	8.3	2.9	4.6	0.1
2nd Quartile	22.3	14.4	6.9	11.4	17.4	3.4	11.1	5.2	4.0	3.3	0.6
3rd Quartile	21.2	16.4	7.5	12.8	16.6	3.3	7.7	4.0	7.2	3.5	0.1
Bottom Quartile	20.0	16.5	7.4	15.2	18.3	2.6	5.1	2.9	6.6	4.9	0.5
All Fdn Mean	20.7	14.7	7.5	12.1	17.0	3.1	10.3	5.1	5.2	4.1	0.3



* Private indexes are pooled horizon IRRs, net of fees, expenses, and carried interest. The CA Modified Public Market Equivalent (mPME) replicates private investment performance under public market conditions. The public index's shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns.
Sources: Foundation data as reported to Cambridge Associates LLC. Index data are provided by Bloomberg Index Services Limited, Cambridge Associates LLC, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., the National Association of Real Estate Investment Trusts, Standard & Poor's, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: Analysis includes data for 71 institutions.

FIGURE 18 10-YR ATTRIBUTION ANALYSIS BY PERFORMANCE QUARTILE

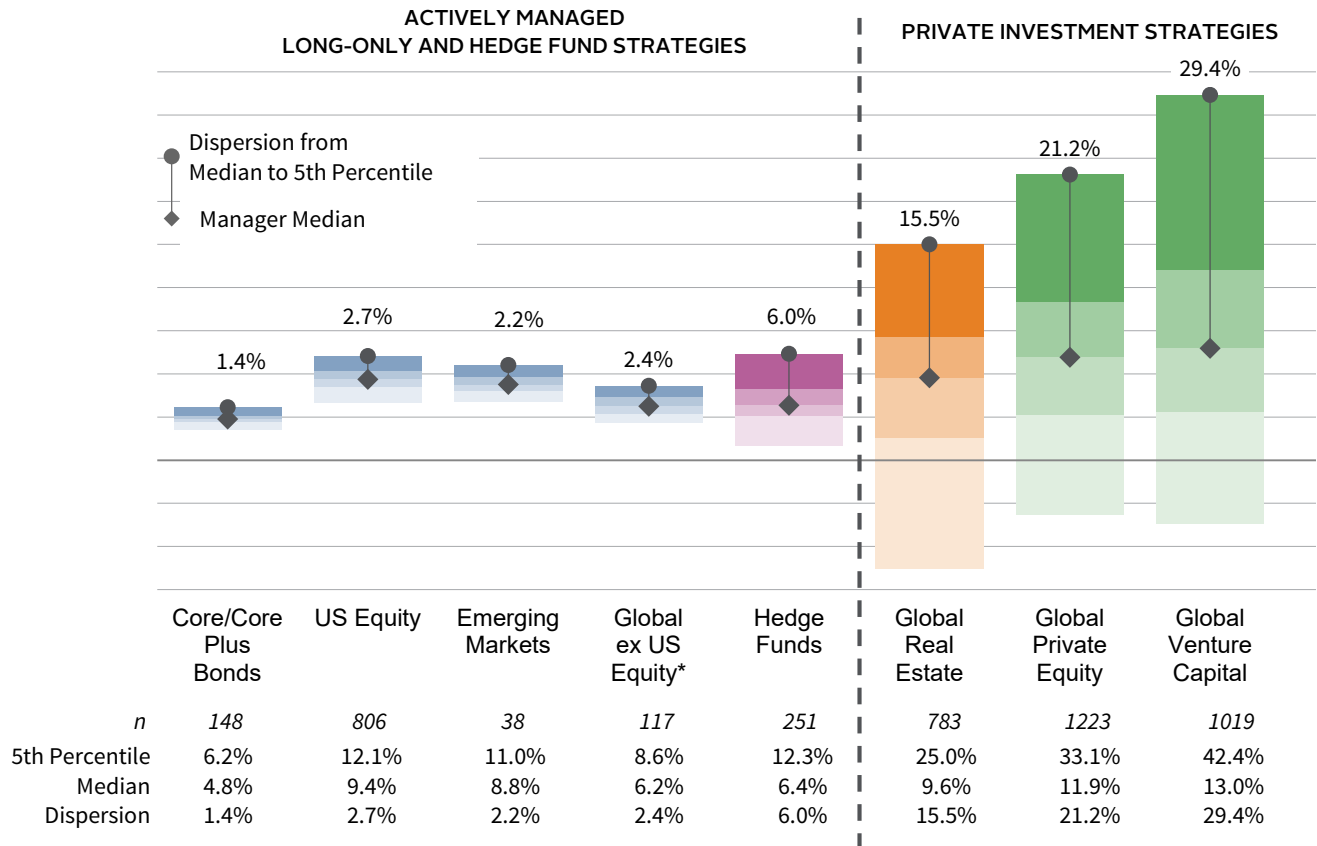
As of December 31, 2019 • Percent (%)



Notes: Includes data for 71 institutions that provided beginning year asset allocation for each of the last 10 years.

FIGURE 19 AVERAGE ANNUAL MANAGER RETURNS BY ASSET CLASS

January 1, 2005 – December 31, 2019 • Percent (%)



*Global ex US Equity category excludes managers whose strategy is focused primarily on emerging markets.

Source: Cambridge Associates LLC.

Notes: Returns for bond, equity, and hedge fund managers are average annual compound returns (AACRs) for the 15 years ended December 31, 2019, and only managers with performance available for the entire period are included. Returns for private investment managers are horizon internal rates of return (IRRs) calculated since inception to December 31, 2019. Time-weighted returns (AACRs) and money-weighted returns (IRRs) are not directly comparable. Cambridge Associates LLC's (CA) bond, equity, and hedge fund manager universe statistics are derived from CA's proprietary Investment Manager Database. Managers that do not report in US dollars, exclude cash reserves from reported total returns, or have less than \$50 million in product assets are excluded. Performance of bond and public equity managers is generally reported gross of investment management fees. Hedge fund managers generally report performance net of investment management fees and performance fees. CA derives its private benchmarks from the financial information contained in its proprietary database of private investment funds. The pooled returns represent the net end-to-end rates of return calculated on the aggregate of all cash flows and market values as reported to Cambridge Associates by the funds' general partners in their quarterly and annual audited financial reports. These returns are net of management fees, expenses, and performance fees that take the form of a carried interest. Vintage years include 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, and 2016.

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

Trailing 5- and 10-Yr • As of December 31, 2019

	Public Equity ¹	Global Equity ²	US Equity	DM ex US Equity	EM Equity	Bonds	Hedge Funds	Public Real Assets ³	Commodities and Natural Resources	Public Real Estate
Trailing 5-Yr										
5th Percentile	10.0	14.1	12.7	8.3	8.1	4.3	4.8	3.8	2.7	8.7
25th Percentile	8.8	9.9	11.5	7.2	5.9	3.0	3.8	0.2	-0.6	7.2
Median	8.4	8.6	11.0	6.6	5.3	2.7	2.8	-1.0	-2.6	6.3
75th Percentile	7.8	6.8	10.2	5.9	4.5	2.1	2.0	-3.3	-4.6	5.5
95th Percentile	7.2	4.4	8.4	5.3	3.4	1.4	0.4	-6.9	-7.1	4.3
Mean	8.4	8.6	10.8	6.7	5.3	2.7	2.9	-1.3	-2.3	6.4
<i>n</i>	85	40	78	74	71	81	78	53	46	11
Median by Asset Size										
Less than \$100M	8.1	7.0	10.4	6.2	5.1	3.0	2.4	-2.1	-2.7	7.2
<i>n</i>	19	10	19	17	16	21	17	14	12	1
\$100M – \$300M	8.5	8.8	11.3	6.7	5.3	2.4	2.4	-0.7	-2.7	6.2
<i>n</i>	32	17	31	30	29	30	30	20	19	5
\$300M – \$1B	8.1	9.2	11.3	6.4	5.3	2.4	2.7	-0.6	-2.3	7.0
<i>n</i>	15	6	16	15	14	15	14	12	10	4
More than \$1B	8.5	8.8	10.4	7.4	5.7	2.7	3.7	-1.6	-2.7	4.4
<i>n</i>	19	7	12	12	12	15	17	7	5	1
Trailing 10-Yr										
5th Percentile	11.2	12.5	14.9	8.3	7.8	5.3	6.0	4.4	2.6	12.5
25th Percentile	10.1	11.9	13.9	7.4	5.5	4.2	5.4	1.8	0.8	12.1
Median	9.3	10.6	13.0	6.6	4.1	3.6	4.5	0.3	-1.1	10.6
75th Percentile	8.8	9.9	12.3	6.0	3.3	3.1	3.9	-2.1	-2.4	9.0
95th Percentile	8.1	9.4	11.0	5.2	2.3	2.1	2.9	-3.2	-4.8	8.6
Mean	9.4	10.8	13.1	6.7	4.6	3.7	4.5	0.3	-1.0	10.6
<i>n</i>	79	14	73	67	59	76	71	43	37	4
Median by Asset Size										
Less than \$100M	8.7	10.1	12.6	6.1	3.5	3.6	4.5	0.0	0.3	NA
<i>n</i>	17	3	16	15	11	17	15	10	9	0
\$100M–\$300M	9.2	11.4	13.2	6.5	4.1	3.7	4.1	0.6	-0.9	12.0
<i>n</i>	30	4	29	27	23	29	27	16	14	1
\$300M–\$1B	9.9	11.8	13.7	6.6	4.8	3.4	4.4	-0.9	-2.2	9.2
<i>n</i>	15	2	16	13	13	15	14	10	9	3
More than \$1B	9.8	10.1	13.4	7.6	4.4	3.4	5.3	0.9	0.5	NA
<i>n</i>	17	5	12	12	12	15	15	7	5	0

Source: Foundation data as reported to Cambridge Associates LLC.

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

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

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

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

Trailing 5- and 10-Yr • As of December 31, 2019

	Total Private Equity ¹	Non-Venture Private Equity ²	Venture Capital	Total Private Real Assets ³	Private Real Estate	Private Natural Resources
Trailing 5-Yr						
5th Percentile	20.2	19.4	19.8	12.2	15.4	9.8
25th Percentile	14.8	14.1	15.7	7.4	11.9	1.6
Median	12.4	11.5	12.8	2.5	9.4	-0.3
75th Percentile	9.8	8.8	6.9	0.1	6.5	-4.0
95th Percentile	6.8	6.3	-8.7	-3.0	0.0	-8.4
Mean	12.3	11.6	10.4	3.7	11.1	-0.3
<i>n</i>	69	64	51	54	50	53
Median by Asset Size						
Less than \$100M	11.5	9.7	12.6	5.8	10.0	-0.7
<i>n</i>	10	9	6	8	5	7
\$100M-\$300M	11.3	11.4	12.0	1.7	7.3	0.1
<i>n</i>	26	25	19	23	16	19
\$300M-\$1B	12.5	12.2	14.0	3.5	11.4	0.3
<i>n</i>	18	16	14	14	14	12
More than \$1B	13.3	11.8	13.5	4.0	9.8	-3.7
<i>n</i>	15	14	12	9	15	15
Trailing 10-Yr						
5th Percentile	17.7	17.8	21.4	12.1	15.0	11.2
25th Percentile	14.8	14.3	17.1	8.2	11.8	5.6
Median	13.0	12.2	14.5	5.8	9.3	3.5
75th Percentile	11.5	10.8	10.8	4.4	7.0	1.3
95th Percentile	8.0	7.1	-5.8	0.1	0.6	-0.8
Mean	13.0	12.4	12.9	6.3	9.2	3.9
<i>n</i>	60	57	48	45	45	46
Median by Asset Size						
Less than \$100M	12.5	12.4	12.0	3.3	6.6	3.9
<i>n</i>	8	7	6	6	4	5
\$100M-\$300M	12.7	12.1	14.5	5.9	7.0	4.6
<i>n</i>	22	21	17	17	13	15
\$300M-\$1B	13.8	11.6	17.1	5.9	9.3	1.9
<i>n</i>	15	15	13	13	13	11
More than \$1B	13.8	13.1	15.1	6.5	10.6	2.2
<i>n</i>	15	14	12	9	15	15

Source: Foundation data as reported to Cambridge Associates LLC.

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

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

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

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

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

Risk-adjusted performance comparisons can be complicated when portfolios have significant allocations to private investments. The frequency and timing of private investment valuations can lead to a lower 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 foundations out into subcategories in Figure 22 based on their allocations to private investments.

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

FIGURE 22 STANDARD DEVIATION AND SHARPE RATIO

Periods Ended December 31, 2019



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

Notes: Includes only institutions that provided underlying quarterly returns and asset allocation for the five- or ten-year period. Each institution's private investment allocation represents the mean for the June 30 intervals within each respective time period. The benchmark is composed of 70% MSCI ACWI Index/30% Bloomberg Barclays Aggregate Bond Index.

Investment Policy

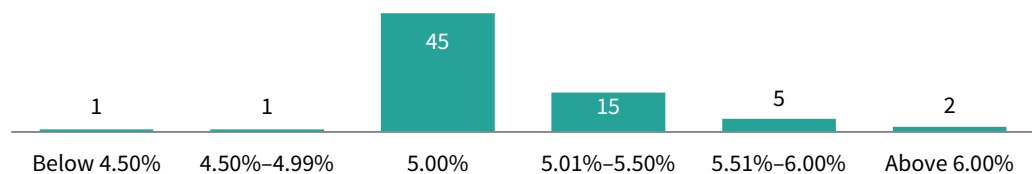
An investment policy provides guidelines for trustees, investment committee members, investment staff, advisors, and other relevant parties that are involved in the foundation's investment management and governance processes. The investment policy statement (IPS) is the formal document that outlines 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 foundation investment policies and the following section summarizes these responses.

RETURN OBJECTIVE

The vast majority of foundations in this study are private non-operating foundations and are required by law to distribute approximately 5% of their assets on an annual basis. To comply with this requirement and maintain purchasing power over time, a foundation must achieve a real return that offsets this 5% spending rate. The majority of foundations that provided a long-term real return objective (45 of 69) aim to earn 5% (Figure 23). Another 22 foundations have a real return objective about 5%. Of the two foundations that reported a return objective below 5%, one was a community foundation and one was a private operating foundation.

FIGURE 23 REAL TOTAL PORTFOLIO RETURN OBJECTIVES

Calendar Year 2019



Source: Foundation data as reported to Cambridge Associates LLC.

Note: Chart includes data for 69 institutions that provided a real total portfolio return objective.

ASSET ALLOCATION POLICY

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

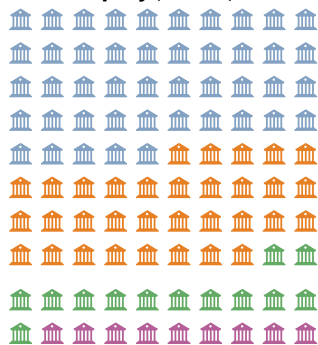
There are differences in the policy frameworks reported among respondents, with some foundations using more detailed categories than others. This is most evident in equity categories, where there are contrasting approaches to the inclusion of geographic regions and private investments into the policy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





A broad approach was reported by nearly half of respondents for public equities, with 45% of respondents reporting a single category that captures their entire public equity allocation (Figure 24). The next most common approach (33%) was to assign separate targets based on geographic regions to US, global ex US developed, and emerging markets categories. Another 13% of foundations use these three geographic categories as well as a dedicated global category. The remaining 9% of foundations use some other combination of geographic regions to represent public equities in their asset allocation policy. Examples of these other combinations include grouping US and global ex US developed equities together in a global developed category, or using a single global ex US category without breaking out emerging markets allocations.

Approximately 60% of foundations 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 28% of respondents use a private investments category which combines PE/VC together with other private strategies. The remaining 12% respondents use a single equity category to capture public equity and PE/VC together in their target asset allocation framework.

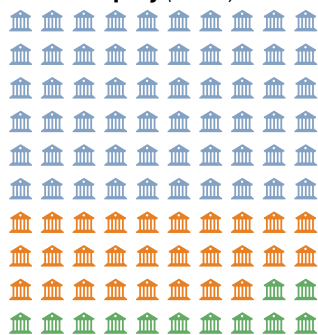
FIGURE 24 CATEGORIES USED FOR EQUITIES IN ASSET ALLOCATION POLICY
Calendar Year 2019




Public Equity (*n* = 105)



-  **45%** capture all public equity under a single target
-  **33%** use separate targets for US, global ex US developed, and emerging markets equities
-  **13%** use separate targets for US, global ex US developed, and emerging markets equities as well as a dedicated global category
-  **9%** use some other combination of geographic categories

Private Equity (*n* = 92)



-  **60%** have a dedicated target to PE/VC
-  **28%** have a target to a broad private investment category, which can include PE/VC along with other private strategies
-  **12%** include PE/VC along with public equities in a single category

Source: Foundation data as reported to Cambridge Associates LLC.

Note: For private equity, 2% of respondents use some other approach to capture PE/VC in their asset allocation policy.

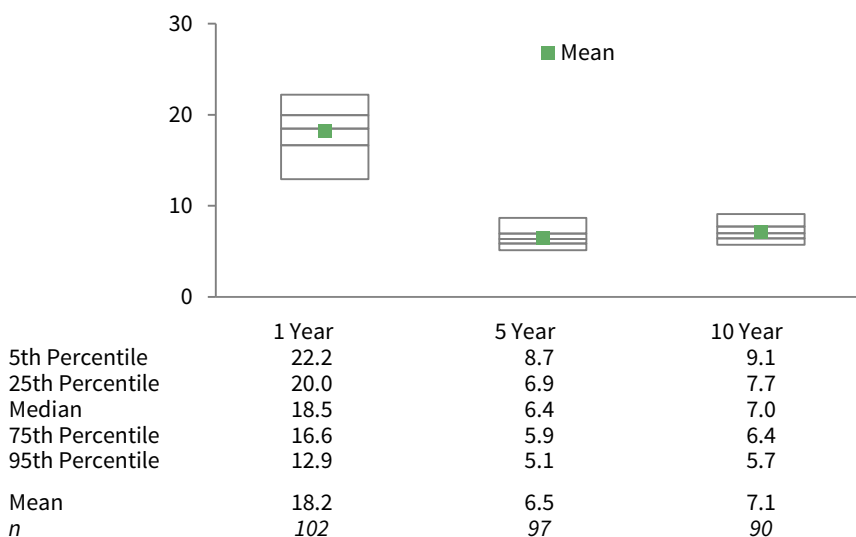
POLICY PORTFOLIO BENCHMARKS

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 a foundation’s return to its policy portfolio benchmark is the best measure to evaluate whether the portfolio is being successfully implemented according to its asset allocation policy. The policy benchmark is typically a blend of indexes that represent the desired portfolio risk exposures without any expression of more active alternatives.⁵ Measuring performance relative to the policy benchmark captures the impact not only of manager selection decisions, but also 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 a foundation’s investment performance. Despite the 5% payout requirement that most respondents must abide by, differing objectives on how much to spend, as well as other factors can lead to different asset allocation policies among foundations. The difference in asset allocation structures among foundations can translate to different performance objectives and results as defined by the policy portfolio benchmark return. Figure 25 shows the range of policy benchmark returns among the respondent group for select trailing periods. For 2019, the difference in policy benchmark returns from the 5th percentile to the 95th percentile was a whopping 930 bps. The range between the same percentiles was 360 and 340 bps for the trailing five- and ten-year periods, respectively.

FIGURE 25 DISPERSION IN POLICY PORTFOLIO BENCHMARK RETURNS

Periods as of December 31, 2019 • Percent (%)



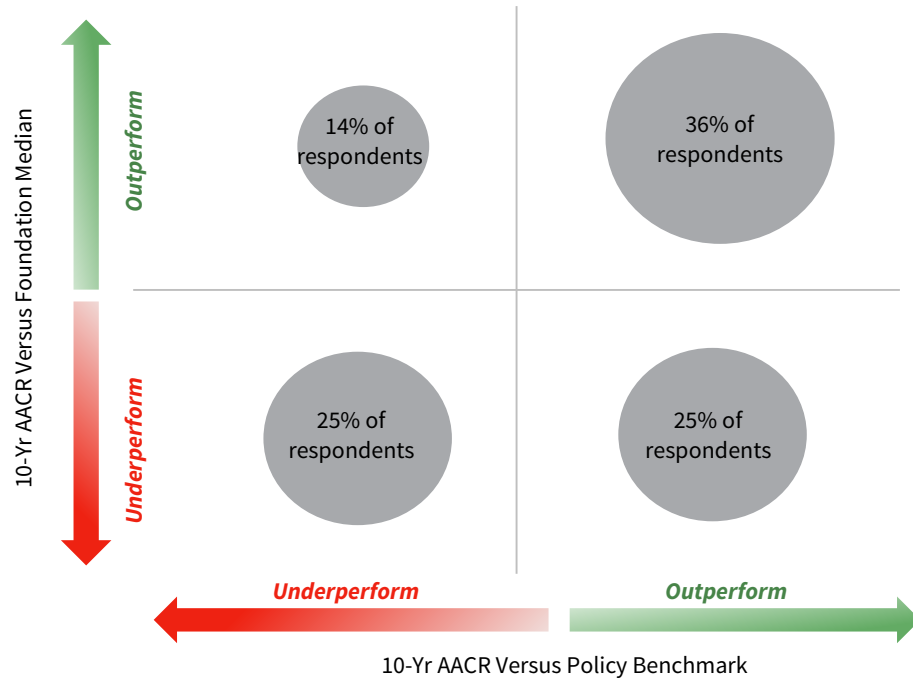
Source: Foundation data as reported to Cambridge Associates LLC.

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

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

FIGURE 26 EVALUATING INVESTMENT PERFORMANCE: 10-YR RETURN VERSUS POLICY BENCHMARK AND FOUNDATION MEDIAN RETURN

As of December 31, 2019 • n = 88



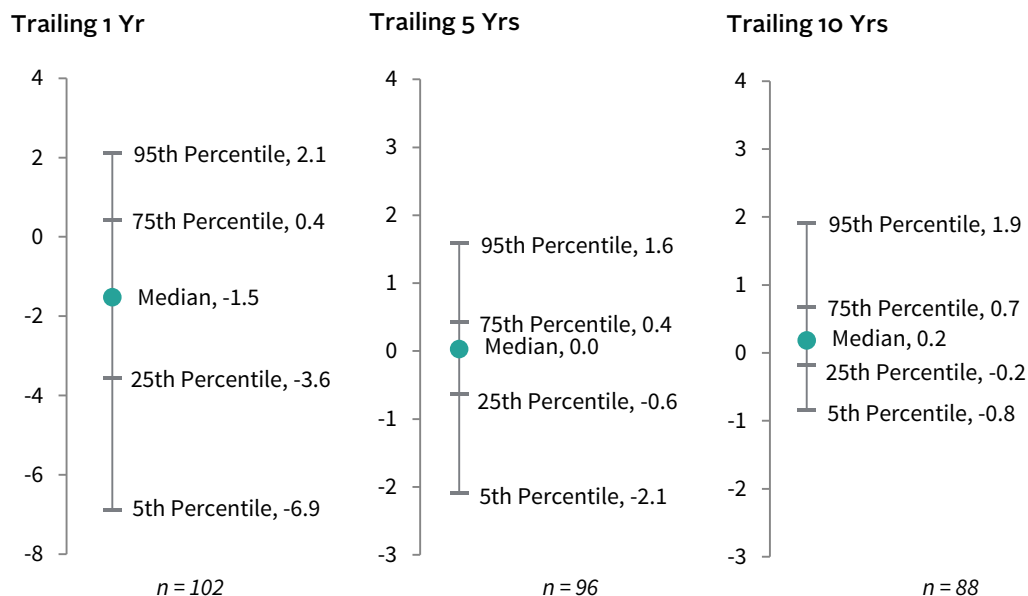
Source: Foundation data as reported to Cambridge Associates LLC.

A majority (61%) 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 0.2 ppts (Figure 27). The median spread was -1.5 ppts for fiscal year 2019, which means a majority of the peer group underperformed their policy benchmark over this most recent annual period. The range of out/underperformance versus the policy benchmark was wider for 2019 compared to the trailing five-and ten-year periods.

POLICY PORTFOLIO BENCHMARK COMPONENTS. Nearly 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 foundations 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 27 RANGE OF OUT/UNDERPERFORMANCE OF TOTAL RETURN VERSUS POLICY PORTFOLIO BENCHMARK

As of December 31, 2019 • Percentage Points



Source: Foundation 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 varying levels of granularity, approaches to benchmarking vary among institutions. One area where this is noticeable is in the benchmarking of public equities, where slightly less than half (46%) of foundations 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 28).

Among the foundations that use more granular public equity indexes based on geographic orientation, the Russell 3000® Index was cited by 61% for US equity. For global ex US equities, 73% of respondents used a blend of the MSCI EAFE and MSCI Emerging Markets indexes. This approach is appropriate for foundations 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.

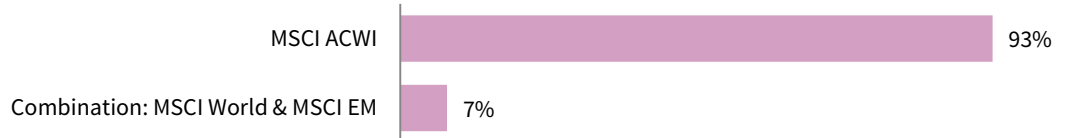
The use of a public index(es) is the most common practice for benchmarking private equity in the policy portfolio benchmark, as 48% of respondents use the actual public index return. Another 13% add a prespecified percentage or premium to the public index return. The Cambridge Associates private indexes were cited by 26% of respondents, while 13% of foundations used some other benchmark that was not previously mentioned. Included in this other group are foundations 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 foundations with immature private investment programs that are deep in the J-curve effect.⁶

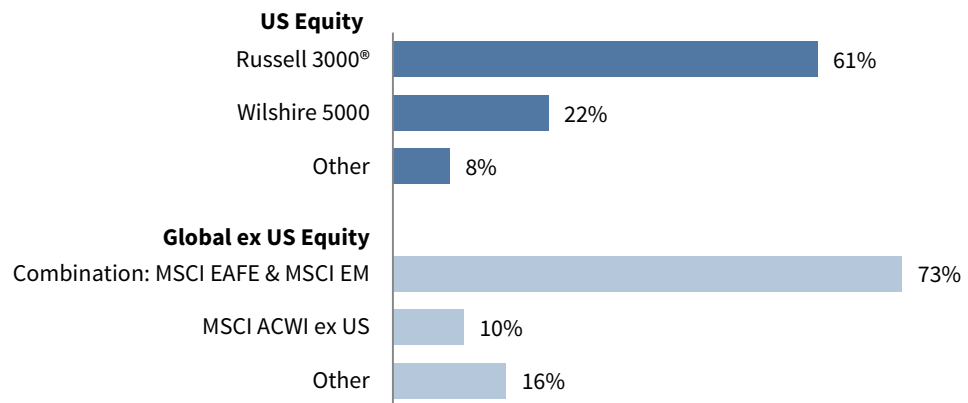
FIGURE 28 FREQUENTLY USED COMPONENTS OF POLICY PORTFOLIO BENCHMARKS: PUBLIC AND PRIVATE EQUITY

Percentage of Institutions (%) • As of December 31, 2019

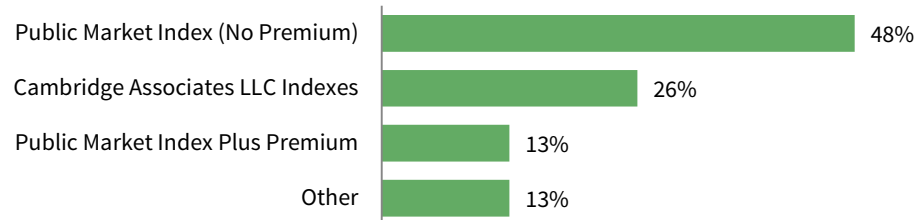
Institutions That Use a Global Index for All or Most of the Public Equity Allocation (n = 41)



Institutions That Use Separate Geographic Indexes for the Public Equity Allocation (n = 49)



Private Equity Indexes (n = 77)



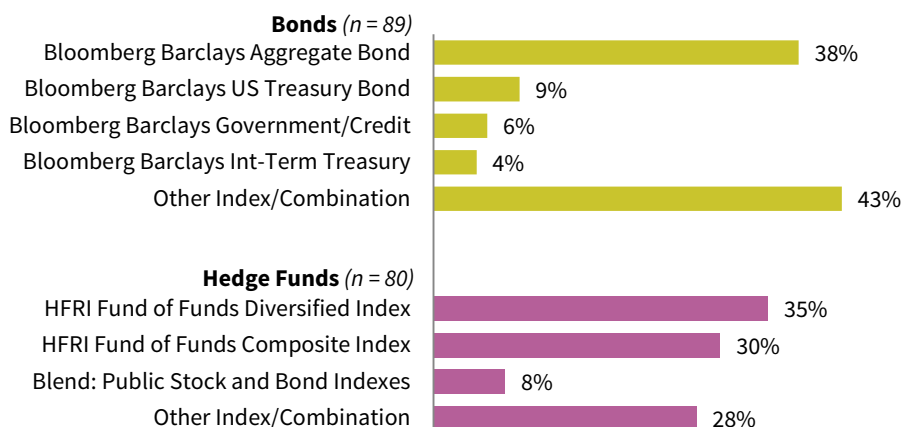
Source: Foundation data as reported to Cambridge Associates LLC.

The use of solely the Bloomberg Barclays Aggregate Bond Index was the most common benchmarking approach for bonds and was reported by 38% of foundations (Figure 29). However, many respondents use unique index combinations to better reflect their underlying bond exposure. Often in practice, benchmarks depend on whether allocations are made domestically or globally, as well as the type of issuer (sovereign versus corporate or both). Some foundations 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 Diversified Index being the most common. For real assets, benchmark combinations are unique across most participants due to the wide variety of strategies employed under this category.

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

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

Percentage of Institutions (%) • As of December 31, 2019



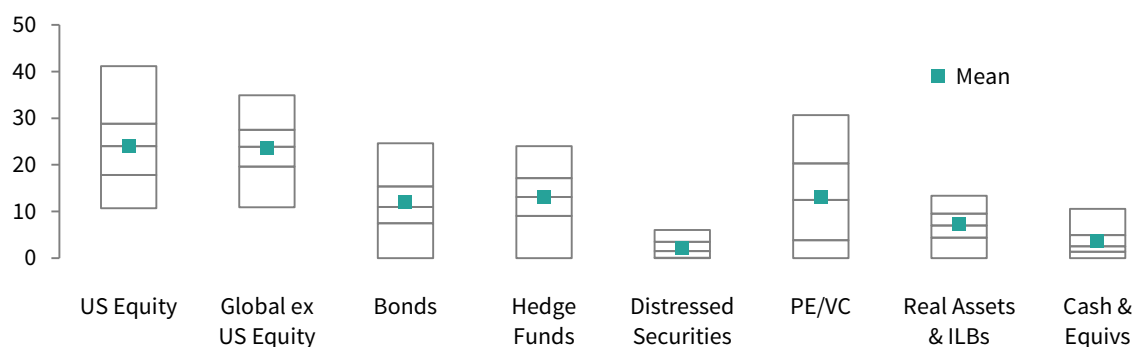
Source: Foundation data as reported to Cambridge Associates LLC.

Portfolio Asset Allocation

Nearly half (47.7%) of the average long-term investment portfolio (LTIP) consisted of public equities at December 31, 2019. On average, the allocation to US equities (24.1%) was slightly higher than global ex US equities (23.6%). Portfolios had significant exposure to alternative assets, with 13.2% allocated to private equity and venture capital and 13.1% allocated to hedge funds, on average. Another 2.3% was allocated, on average, to distressed securities, which are invested through either a hedge fund or private equity-type investment vehicle. Real assets, which consist of a diversified group of public and private assets, made up 7.3% of portfolios, on average. Average allocations to bonds and cash were 12.1% and 3.8%, respectively (Figure 30).

FIGURE 30 ASSET ALLOCATION DISTRIBUTION BY ASSET CLASS

As of December 31, 2019 • Percent (%) • n = 115



Source: Foundation data as reported to Cambridge Associates LLC.

As Figure 31 shows, allocations to some of these broad asset classes vary considerably. A key factor in the variation of asset allocations continues to be the total value of assets under management. Portfolios with asset sizes less than \$100 million continue to maintain higher allocations to public equities and bonds, while those with assets greater than \$1 billion have the highest allocations to private investments. Also displayed in Figure 31 is a more granular view of allocations within each broad asset class.

FIGURE 31 MEAN ASSET ALLOCATION BY ASSET SIZE

As of December 31, 2019 • Percent (%)

	Asset Size				
	All Foundations	Less than \$100M	\$100M – \$300M	\$300M – \$1B	More than \$1B
	(n = 115)	(n = 26)	(n = 34)	(n = 24)	(n = 31)
US Equity	24.1	28.0	27.0	23.6	18.1
Global ex US Equity	23.6	27.4	24.4	22.2	20.6
Developed Markets	16.1	20.7	16.8	14.8	12.4
Emerging Markets	7.5	6.7	7.6	7.4	8.2
Bonds	12.1	16.8	12.2	13.0	7.5
US Bonds	11.2	15.4	11.4	12.4	6.5
Global ex US Bonds (DM)	0.2	0.2	0.4	0.1	0.2
Global ex US Bonds (EM)	0.2	0.3	0.2	0.1	0.2
High-Yield Bonds	0.5	0.9	0.1	0.4	0.5
Hedge Funds	13.1	10.8	13.6	12.0	15.5
Long/Short Hedge Funds	4.7	4.4	3.8	4.2	6.2
Absolute Return (ex Distressed)	8.5	6.3	9.8	7.8	9.3
Distressed Securities	2.3	0.9	2.5	2.5	2.9
Hedge Fund Structure	1.0	0.4	0.9	1.3	1.3
Private Equity Structure	1.3	0.5	1.6	1.2	1.6
PE/VC	13.2	6.1	10.2	15.6	20.5
Non-Venture Private Equity	4.8	1.4	3.4	4.9	9.0
Venture Capital	6.6	2.5	3.6	9.6	10.9
Other Private Investments	1.8	2.2	3.3	1.1	0.5
Real Assets & Infl-Linked Bonds	7.3	6.0	6.1	7.6	9.6
Private Real Estate	2.2	0.9	1.1	1.8	4.9
Public Real Estate	0.3	0.3	0.3	0.4	0.3
Commodities	0.6	1.0	0.4	0.4	0.6
Public Energy/Nat Resources	1.6	2.6	1.8	1.6	0.4
Private O&G/Nat Resources	2.1	0.6	2.0	2.8	3.1
Timber	0.1	0.1	0.1	0.1	0.1
Infl-Linked Bonds	0.4	0.6	0.4	0.6	0.2
Cash & Equivalents	3.8	3.2	3.9	2.9	4.8
Other	0.5	0.8	0.3	0.6	0.5

Source: Foundation data as reported to Cambridge Associates LLC.

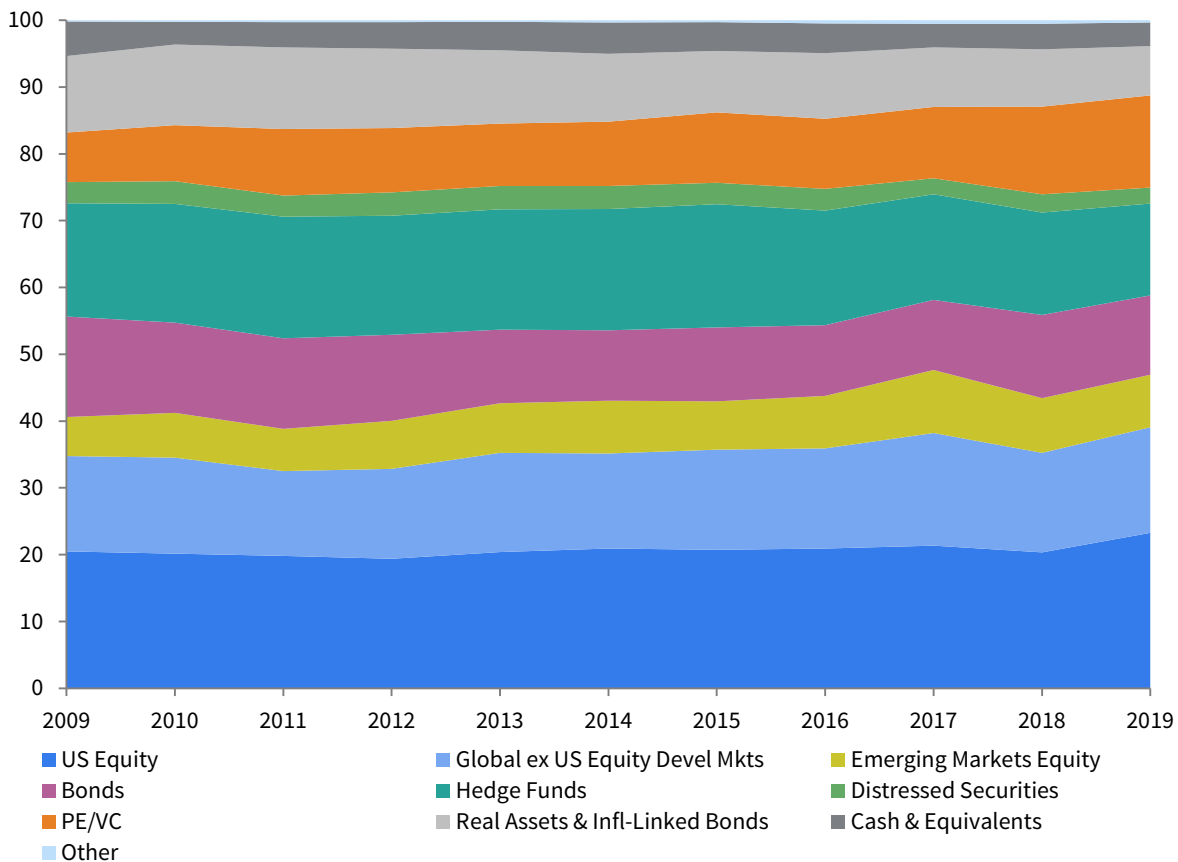
HISTORICAL ASSET ALLOCATION

Institutional investors that have adopted the endowment model of investing have seen significant shifts in their asset allocation policies over the last few decades. Exposure to bonds has decreased, while the larger equity allocation has become more diversified. The largest endowments pioneered this transition in the 1980s, with the trend spreading among other institutions in the 1990s and then accelerating throughout much of the first decade of the new millennium. By the time that the 2008–09 GFC occurred, most foundations in this study had already built highly diversified portfolios.

Figure 32 shows the trend in average asset allocations for the group of foundations that have participated in the study in each of the last ten years. The largest increase in average allocations over the last decade was to PE/VC (6.4 ppts), while the largest decrease was to real assets (-4.0 ppts). Bonds and hedge funds also saw declines in average allocations, with each category 3.2 ppts lower in 2019 compared to 2009. Average annual allocations to US equities were within a relatively narrow range for the first nine years of the decade but then spiked up by 3.0 ppts over this past year. The total allocation to global ex US equities increased by an average of 3.6 ppts over the decade.

FIGURE 32 HISTORICAL MEAN ASSET ALLOCATION TRENDS

Years Ended December 31, 2019 • Percent (%)



	Constant Universe										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
US Equity	20.5	20.2	19.8	19.4	20.4	20.9	20.8	20.9	21.4	20.3	23.3
Global ex US Equity Devel Mkts	14.3	14.4	12.7	13.5	14.8	14.2	15.0	15.0	16.8	14.9	15.8
Emerging Markets Equity	5.8	6.7	6.3	7.2	7.4	7.9	7.2	7.9	9.4	8.2	7.9
Bonds	15.1	13.5	13.6	12.9	11.0	10.5	11.0	10.6	10.5	12.4	11.9
Hedge Funds	17.0	17.7	18.2	17.8	18.0	18.1	18.5	17.1	15.8	15.4	13.7
Distressed Securities	3.2	3.4	3.2	3.5	3.5	3.5	3.2	3.3	2.4	2.7	2.4
PE/VC	7.4	8.4	9.9	9.6	9.4	9.6	10.5	10.5	10.7	13.1	13.8
Real Assets & Infl-Linked Bonds	11.4	12.0	12.2	11.9	11.0	10.1	9.2	9.8	8.9	8.6	7.4
Cash & Equivalents	5.2	3.4	3.8	4.0	4.3	4.7	4.3	4.4	3.5	3.8	3.5
Other	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.5	0.5	0.3

Source: Foundation data as reported to Cambridge Associates LLC.

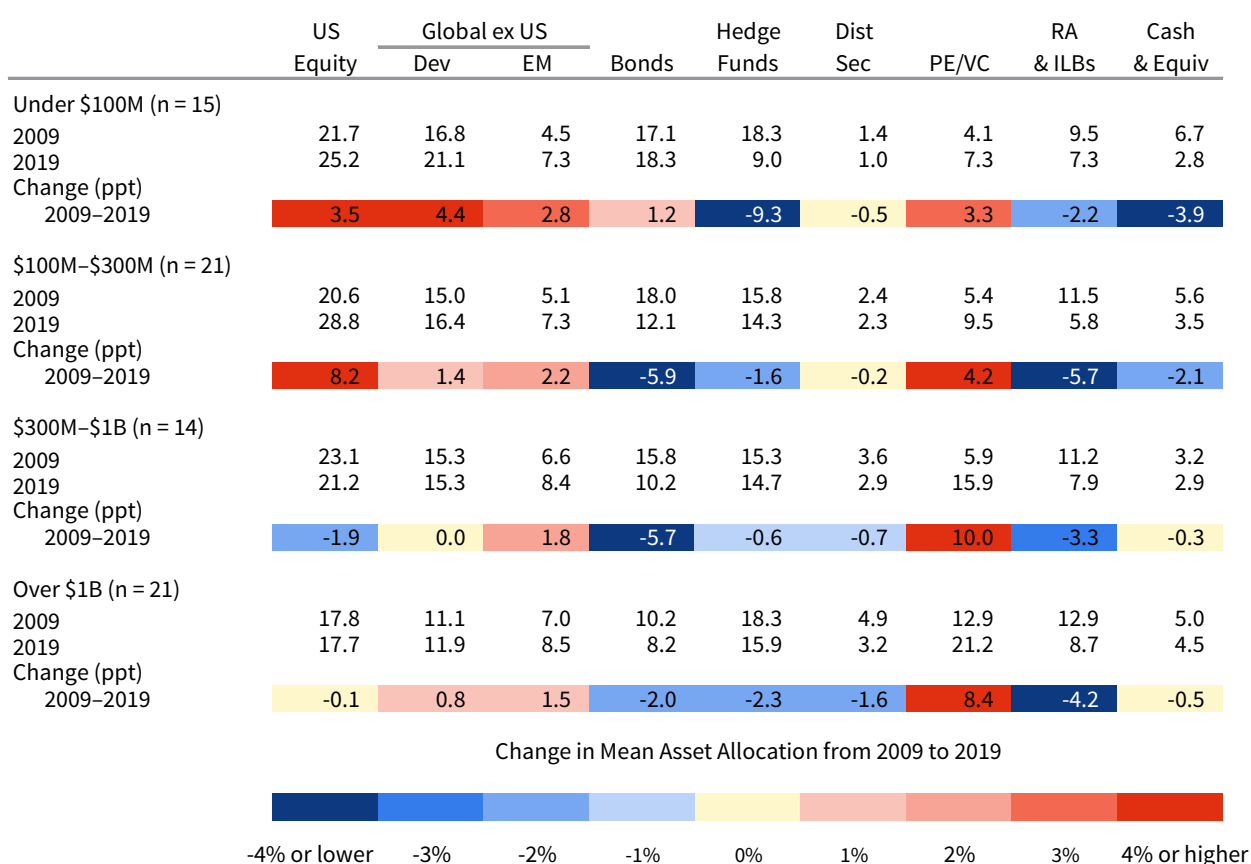
Note: Analysis is based on a constant universe that includes 71 institutions that provided asset allocation data for each year from 2009 to 2019.

Foundations of various asset sizes mostly followed the same overall trends (Figure 33). Each asset size group saw increases to PE/VC, with foundations between \$300 million and \$1 billion reporting the highest average increase (10.0 ppts). Among real assets, foundations between \$100 million and \$300 million reported the largest decrease (-5.7 ppts). All asset size groups reported a decrease to hedge funds, but it was the smallest foundations that stood out by the magnitude of the average change (-9.3 ppts).

The average experiences among the asset size groups were more mixed in US equities. Foundations less than \$300 million reported significant increases to US equities, on average, while larger foundations reported small decreases. For bonds, foundations less than \$100 million reported a small increase (1.2 ppts) while the other asset groups reported decreases.

FIGURE 33 TRENDS IN ASSET ALLOCATION BY ASSET SIZE

Means as of December 31 • Percent (%)



Source: Foundation data as reported to Cambridge Associates LLC.

Note: Asset sizes are based on December 31, 2019, data.

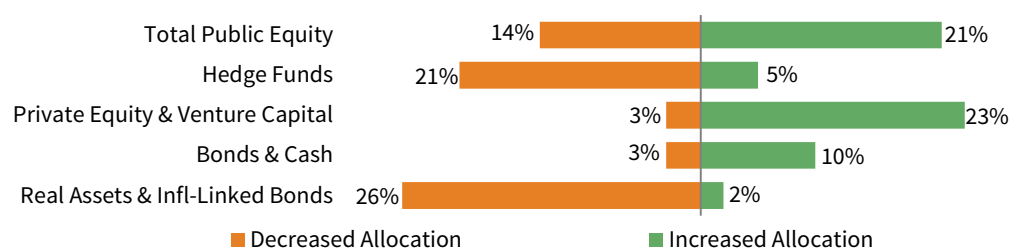
TARGET ASSET ALLOCATION

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

The trend in target asset allocations for 2019 was very similar those that have been reported in recent years. As shown in Figure 34, 23% of respondents raised their target allocation to private equity and venture capital in 2019, while just 3% lowered their target. The trend was the opposite for hedge funds, where there were more foundations that lowered their target (21%) compared to those that reported an increase (5%). The most notable changes were in real assets, where 26% of foundations lowered their target and just 2% increased their target. For both total public equities and bonds & cash, there were more foundations reporting an increase compared to the number reporting a decrease.

FIGURE 34 CHANGES IN TARGET ASSET ALLOCATION

December 31, 2018 – December 31, 2019 • Percentage of Institutions Increasing or Decreasing Targets (%)



Source: Foundation data as reported to Cambridge Associates LLC.

Notes: Total public equity excludes institutions that combine public equity together with PE/VC in a single equity category. Private Equity & Venture Capital includes institutions that include PE/VC together with private real assets in a single private investments category.

PRIVATE INVESTMENTS AND UNCALLED CAPITAL COMMITMENTS

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

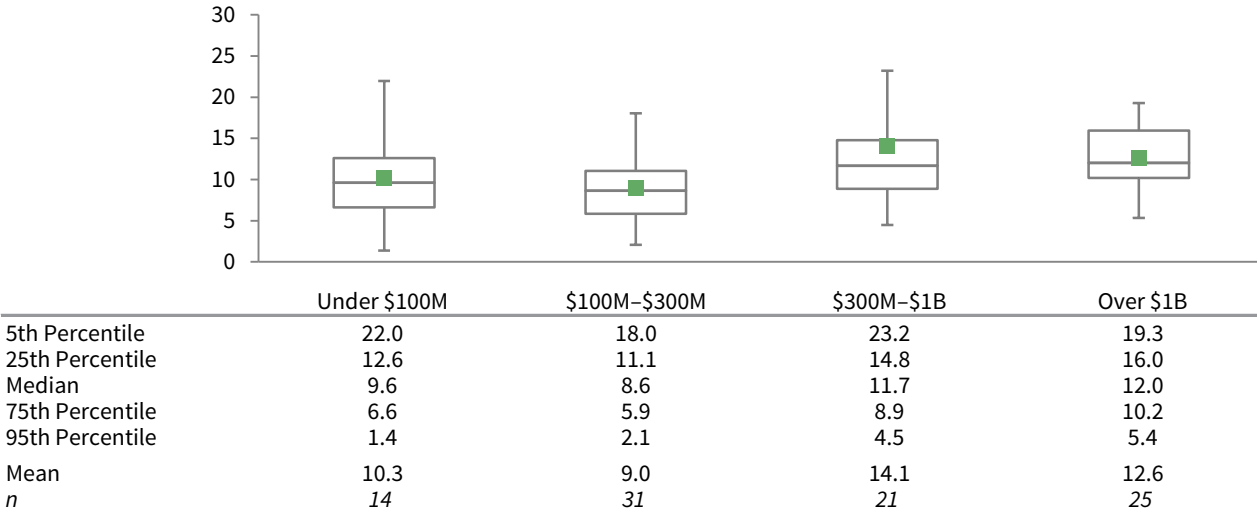
Participating foundations have been allocating an increasingly significant portion of their portfolios to private investments. The average asset allocation to private investments for all participants was 18.9% as of December 31, 2019, which was approximately 7 ppts higher than the average from ten years prior.

The ratio of uncalled capital commitments as a percentage of the total LTIP is shown in Figure 35. The median ratio tends to increase along with portfolio size. Foundations between \$100 million and \$300 million reported the lowest median ratio (9.6%) for 2019, while those more than \$1 billion reported a ratio of 12.0%. 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 foundations greater than \$1 billion, uncalled capital commitments represented an average of 24.2% of their total liquid assets. In contrast, the ratio was 11.6% for foundations between \$100 million and \$300 million.

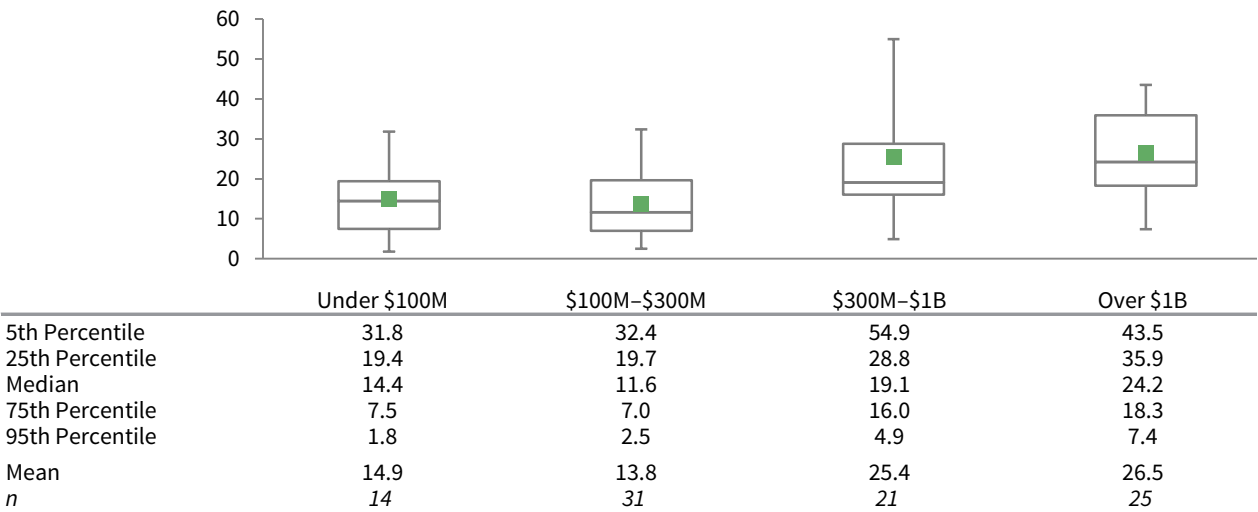
FIGURE 35 UNCALLED CAPITAL COMMITTED TO PRIVATE INVESTMENT FUNDS

As of December 31, 2019 • Percent (%)

Uncalled Capital Commitments as a Percentage of the Total LTIP



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



Source: Foundation data as reported to Cambridge Associates LLC.

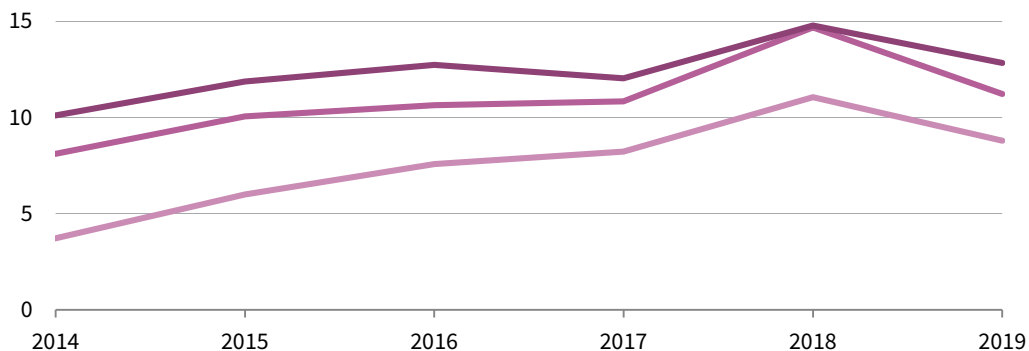
Notes: Uncalled capital is the amount committed, but not yet paid in, to private investment funds. Liquid assets consist of all LTIP assets excluding hedge funds and private investments.

Figure 36 shows the trend over the last five years for these two ratios. The median ratios trended higher for most of the historical period, but then decreased considerably over the past year. This year-over-year decline is the result of uncalled capital commitments growing at less than half the rate of the value of the LTIP and its liquid assets. Among the foundations in this analysis, the average amount of uncalled capital commitments increased by just 5% over the last year. For the same period, the average change in the market value of the LTIP and the portfolio's liquid assets was 10% and 12%, respectively.

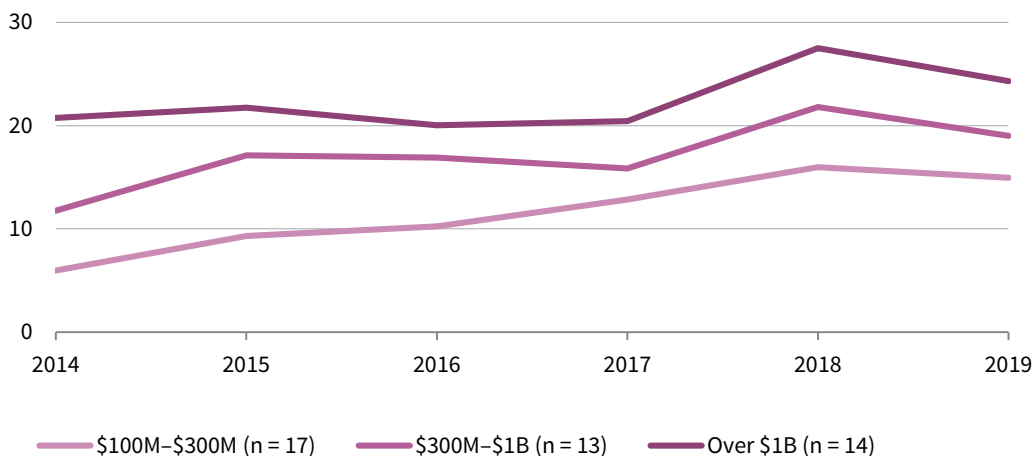
FIGURE 36 TREND IN UNCALLED CAPITAL COMMITMENTS TO PRIVATE INVESTMENT FUNDS

Years Ended December 31 • Percent (%)

Median Uncalled Capital Commitments as a Percentage of the LTIP



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



Source: Foundation data as reported to Cambridge Associates LLC.

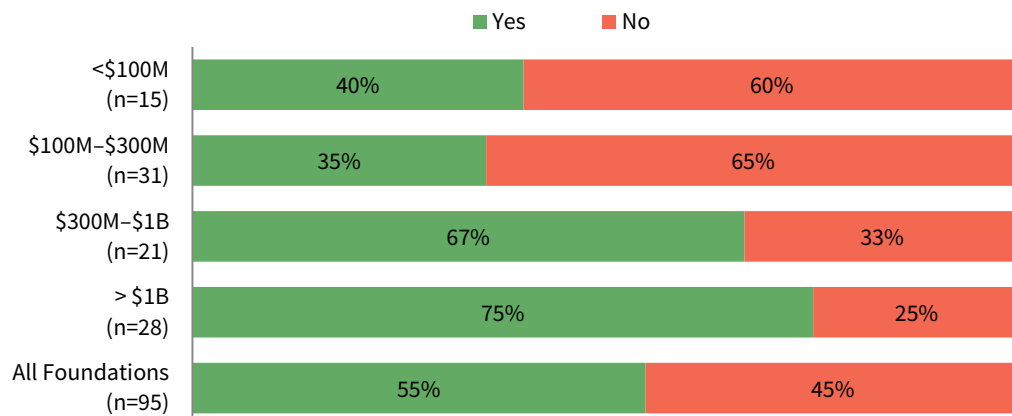
Notes: The Under \$100 Million subgroup is excluded because not enough foundations of that asset size provided trend data. Uncalled capital is the amount committed, but not yet paid in, to private investment funds. Liquid assets consist of all LTIP assets excluding hedge funds and private investments.

Slightly more than half of foundations (55%) reported that their private investment programs were cash flow positive in 2019 (Figure 37). Foundations greater than \$300 million were more likely to report cash flow positive programs, while those under that asset size threshold were more likely to report that they were cash flow negative. This is likely because most smaller foundations have been in the process of building out private investment allocations, resulting in a phase where paid-in capital was higher than fund distributions. In contrast, most larger foundations tend to have more established programs and are more likely to have fund distributions that are greater than the new capital calls flowing back in.

FIGURE 37 PRIVATE INVESTMENT PROGRAM CASH FLOW

Calendar Year 2019 • n = 95

Was Your Private Investment Program Cash Flow Positive in 2019?



Source: Foundation data as reported to Cambridge Associates LLC.

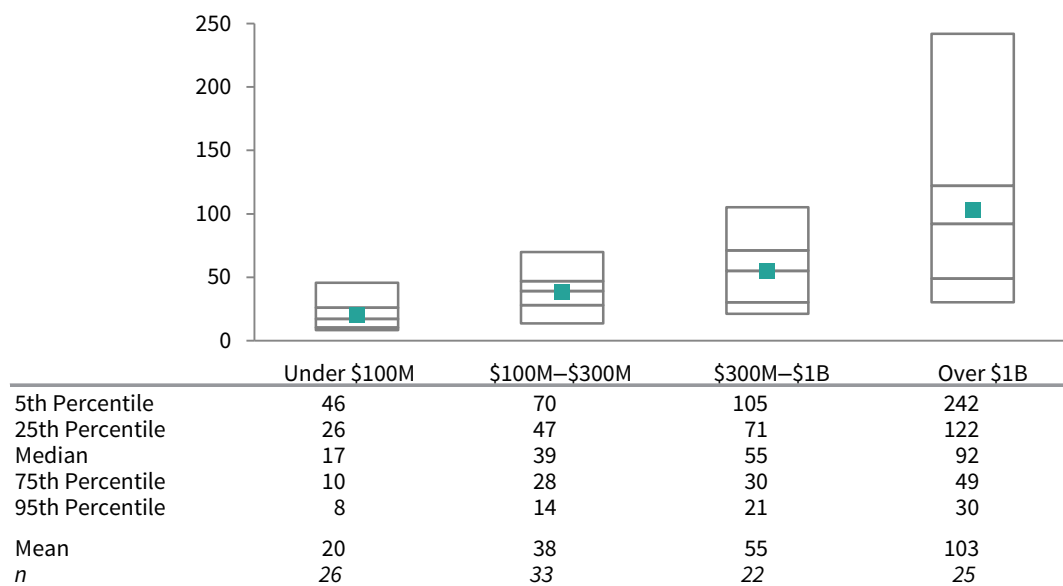
Note: Private investment fund programs were considered cash flow positive if fund distributions were higher than paid in capital calls in 2019.

Investment Manager Structures

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, foundations with assets greater than \$1 billion employed 103 external investment managers in 2019 (Figure 38). At the opposite end of the asset size spectrum, foundations with assets less than \$100 million averaged just 20 managers.

FIGURE 38 NUMBER OF EXTERNAL MANAGERS

As of December 31, 2019

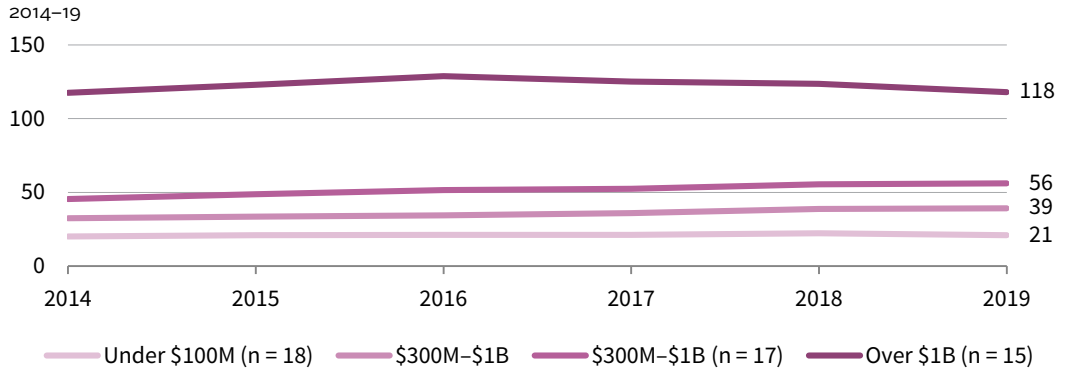


Source: Foundation data as reported to Cambridge Associates LLC.

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

The average number of managers has continued to trend higher over the last five years for foundations between \$100 million and \$1 billion (Figure 39). However, the trend for foundations over \$1 billion has trended down recently, falling in three successive years since a peak in 2016. The average number of managers has changed little for foundations under \$100 million over this period.

FIGURE 39 TREND IN AVERAGE NUMBER OF EXTERNAL MANAGERS



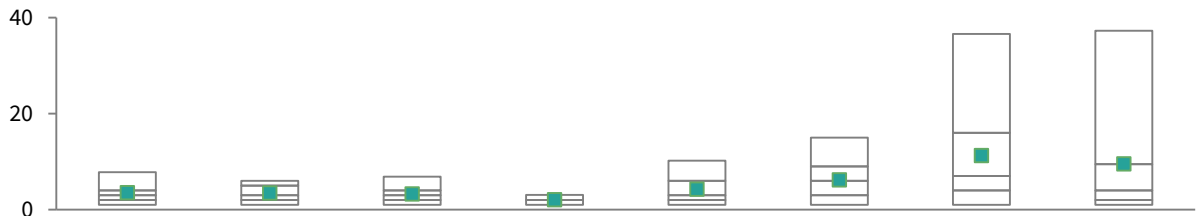
Source: Foundation data as reported to Cambridge Associates LLC.

Note: Analysis includes foundations that reported their manager counts for each of the last six years.

Even within the broad asset size groups, the range of managers employed can be wide. Among the smallest foundations, the number of managers employed at the 25th percentile (26) is more than double the number used at the 75th percentile (10). For portfolios over \$1 billion, 242 managers are employed at the 5th percentile compared to just 30 at the 95th percentile. Much of the variation can be attributed to the management of alternative asset classes. As Figure 40 shows, the dispersion in the number of alternative asset managers employed, particularly within private investments, is much wider than that of the more traditional equity and bond asset classes. Further detail on these and other asset classes are provided for the four broad asset size groups in Figure 41.

FIGURE 40 DISPERSION IN NUMBER OF MANAGERS FOR SELECTED ASSET CLASSES

As of December 31, 2019



	US Equity	DM ex US Equity	Emerging Markets Equity	US Bonds	Long/Short Hedge Funds	Ab Return Hedge Funds	PE	VC
5th Percentile	8	6	7	3	10	15	37	37
25th Percentile	4	5	4	2	6	9	16	10
Median	3	3	3	2	3	6	7	4
75th Percentile	2	2	2	1	2	3	4	2
95th Percentile	1	1	1	1	1	1	1	1
Mean	4	3	3	2	4	6	11	10
n	105	104	103	99	77	94	85	86

Source: Foundation data as reported to Cambridge Associates LLC.

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

FIGURE 41 EXTERNAL MANAGERS BY STRATEGY

As of December 31, 2019

Strategy	Under \$100M		\$100M – \$300M		\$300M – \$1B		Over \$1B	
	Average Number of Managers	<i>n</i>	Average Number of Managers	<i>n</i>	Average Number of Managers	<i>n</i>	Average Number of Managers	<i>n</i>
Traditional Equity								
Global Equity	2	20	3	26	3	16	3	16
US Equity	2	26	3	33	4	22	5	24
Developed ex US Equity	3	24	3	33	3	21	5	26
Emerging Markets Equity	2	23	3	33	3	21	5	26
Traditional Bonds								
Global Bonds	1	5	1	10	1	3	2	3
US Bonds	2	25	2	32	2	22	2	20
Developed ex US Bonds	–	0	–	0	1	1	1	1
Emerging Markets Bonds	–	0	–	0	–	0	1	1
High-Yield Bonds	1	3	1	2	1	3	5	3
Hedge Funds								
Long/Short Hedge Funds	2	14	4	23	5	17	6	23
Absolute Return (ex Distressed)	2	19	6	31	7	21	9	23
Distressed Securities								
Distressed (HF Structure)	1	4	1	13	2	13	2	17
Distressed (PE Structure)	2	10	3	25	4	19	8	17
Private Investments								
Non-Venture Private Equity	5	10	5	29	10	20	21	26
Venture Capital	3	13	3	29	9	20	21	24
Other Private Investments	3	11	3	27	2	16	3	11
Real Assets & ILBs								
Private Real Estate	3	7	2	23	5	19	12	24
Public Real Estate	1	2	1	6	1	5	1	4
Commodities	1	5	1	3	1	5	3	3
Inflation-Linked Bonds (TIPS)	1	2	1	4	1	5	1	2
Private Oil & Gas/Nat Res	3	7	3	25	5	19	11	20
Timber	3	1	2	2	2	5	2	7
Public Energy/Nat Res	1	12	2	19	2	12	1	4
Multi-Strategy Funds	1	3	1	6	1	4	–	0
Cash	1	21	2	26	2	15	1	18
Tactical Asset Allocation	1	4	1	2	–	0	1	1
Other	1	2	1	4	1	3	17	2

Source: Foundation data as reported to Cambridge Associates LLC.

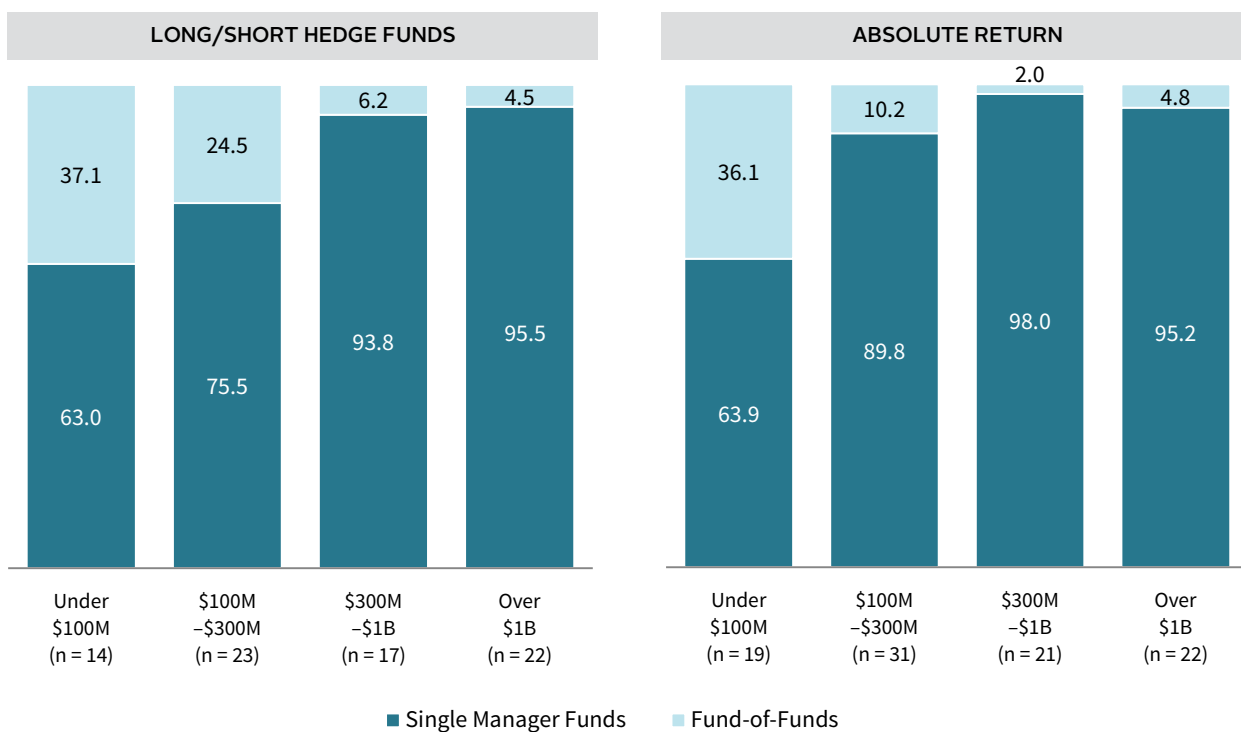
Notes: *n* indicates the number of foundations that are included in the average number of managers. Only those foundations with an allocation to the specific asset class are included in each category. As a result, the sum of the individual asset classes will not equal the true total average of managers.

ASSET CLASS IMPLEMENTATION

HEDGE FUNDS. There are two primary types of investment vehicles that endowments use when implementing their hedge funds allocations. A single manager fund is a type of investment vehicle where the investment manager makes the decisions for the securities and assets held within the fund. In contrast, a fund-of-funds is a type of strategy where the investment manager invests in a collection of other investment funds. Figure 42 shows the average breakdown of hedge funds allocations across the two implementation categories. While single manager funds make up the majority of hedge fund allocations for all asset size groups, foundations less than \$100 million have the highest exposure to fund-of-funds managers. On average, these smallest foundations use fund-of-funds for 37% and 36% of their long/short hedge funds and absolute return allocations, respectively.

FIGURE 42 PORTFOLIO IMPLEMENTATION: HEDGE FUNDS

As of December 31, 2019 • Equal-Weighted Means (%)



Source: Foundation data as reported to Cambridge Associates LLC.

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

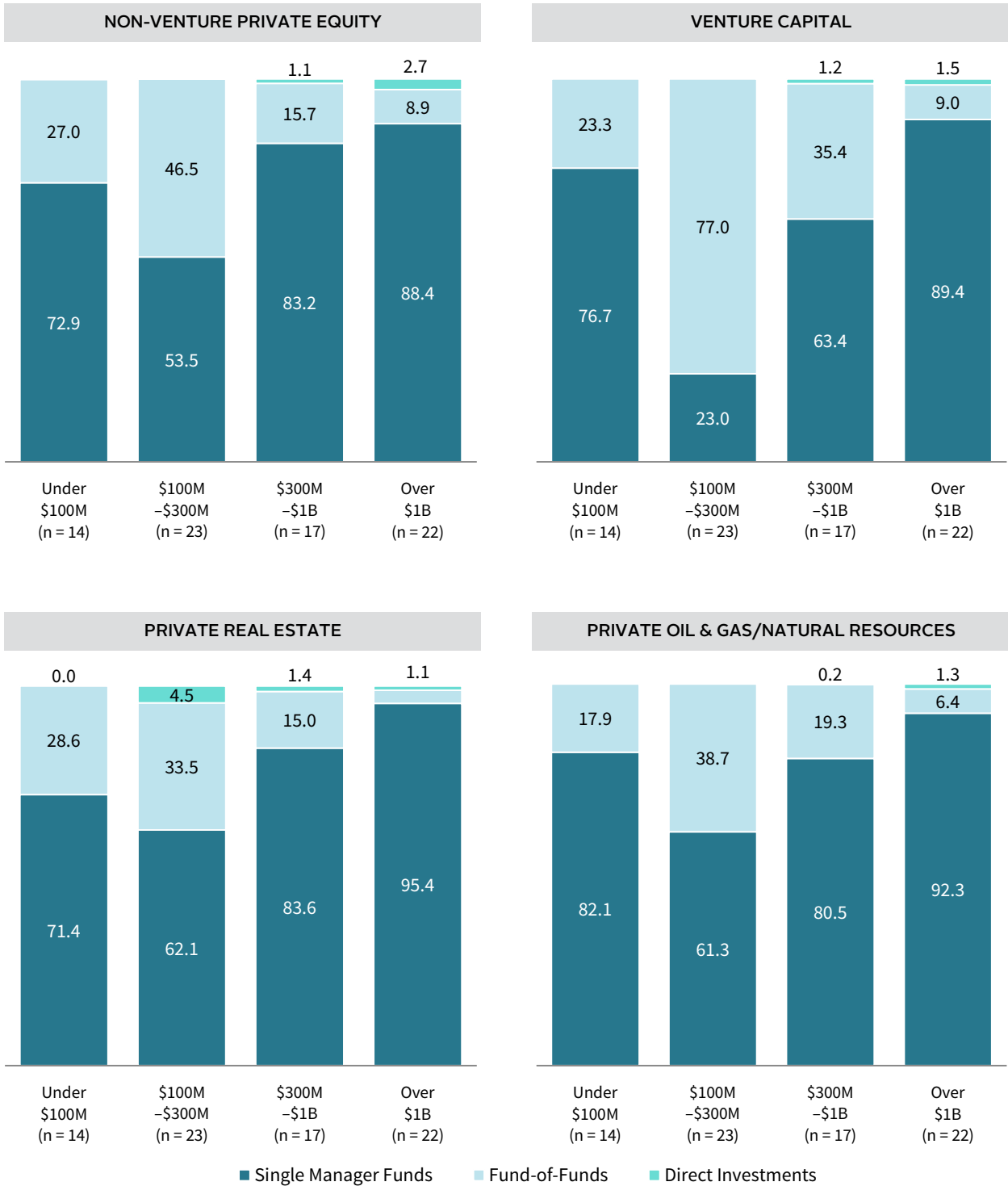
PRIVATE INVESTMENTS. Single manager funds and fund-of-funds are also common investment vehicles used to implement private investment allocations. In addition, some foundations use direct investments to implement some of their private investment allocations. Direct investments can take the form of co-investments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

Compared to hedge funds, implementation practices are more varied across private investment asset classes. The average breakdown of allocations by implementation category shows how experiences differ by asset size. Once again, the largest foundations primarily use single manager funds while the use of fund-of-funds are more common among foundations less than \$1 billion (Figure 43). Interestingly, foundations less than \$100 million in this study are less reliant on fund-of-funds for their private investment allocations compared to those with assets between \$100 million and \$300 million.

PUBLIC EQUITIES AND BONDS. For traditional bonds and equities, foundations primarily use external managers to implement their allocations. These assets are invested either through active or passively managed investment vehicles. Some foundations also manage assets internally or use derivatives to achieve desired exposures. The use of these implementation methods is most common among foundations greater than \$300 million.

FIGURE 43 PORTFOLIO IMPLEMENTATION: PRIVATE INVESTMENTS

As of December 31, 2019 • Equal-Weighted Means (%)



Source: Foundation data as reported to Cambridge Associates LLC.

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

When considering the average breakdown of public 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. The use of active investment managers is used for a lower proportion of the average allocation for bonds when compared to the public equity categories. Between 32% and 42% of the average US bond allocation is implemented passively for each of the asset size groups below \$1 billion. For foundations less than \$1 billion, a little over 20% of the average US bond allocation is implemented passively while 18% is managed internally or via derivatives.

FIGURE 44 PORTFOLIO IMPLEMENTATION: TRADITIONAL EQUITIES AND BONDS

As of December 31, 2019 • Equal-Weighted Means (%)



Source: Foundation data as reported to Cambridge Associates LLC.

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

Payout From the Long-Term Investment Portfolio

SPENDING REQUIREMENTS

While all foundations are charitable organizations, specific characteristics and objectives help to distinguish foundations into three broad classification types. Private foundations, which generally receive funding from a single donor, are defined by the IRS as one of two types: operating or non-operating. Though both must meet an annual spending requirement, each is subject to different conditions that determine the minimum spending amount.

PRIVATE NON-OPERATING FOUNDATIONS. Private non-operating foundations, which make up the majority of participants in this study, are required to make qualifying distributions that amount to approximately 5% of their asset value every year. They function primarily as grant-making organizations, providing funding and support to other charitable organizations.

PRIVATE OPERATING FOUNDATIONS. In contrast, private operating foundations are established not with the intention to fund grants to outside organizations, but to provide funding and support to the foundation's own programs and activities. Bound by an annual spending requirement, private operating foundations are subject to specific guidelines that determine their minimum amount.

COMMUNITY FOUNDATIONS. Community foundations are a type of public charity, deriving funds from many donors rather than a single source. They mainly function as grant-making organizations, funding charitable support in the immediate region or locality where they are located. Community foundations are not subject to a minimum spending requirement.

PAYOUT RATES

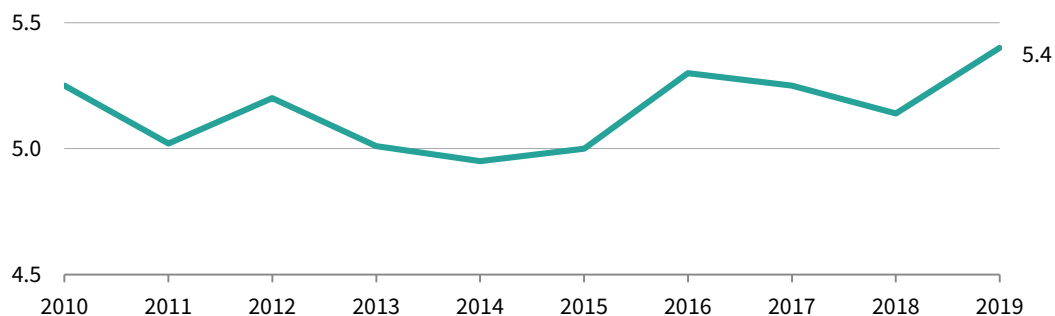
Annual spending distributions are withdrawn from investment assets to fund grants, direct charitable programs, program-related investments, and administrative expenses related to charitable purposes. The payout rate in this study is calculated as the total spending from the LTIP for the year as a percentage of the portfolio's beginning year market value.

For the 53 private non-operating foundations that provided data in 2019, the median payout rate was 5.4%. When looking at a constant universe of 23 foundations that provided data from 2010 to 2019, the median payout for 2019 was the highest rate reported over the last ten years (Figure 45).

COMPONENTS OF PAYOUT. Figure 46 takes a detailed look at the different components that comprise the annual payout distribution for private non-operating foundations. Grants are the single largest component of annual payout, making up an average of 78%. Administrative expenses were the next largest component, representing about 15% of total payout.

FIGURE 45 MEDIAN ANNUAL PAYOUT RATE

2010-19 • Percent (%)

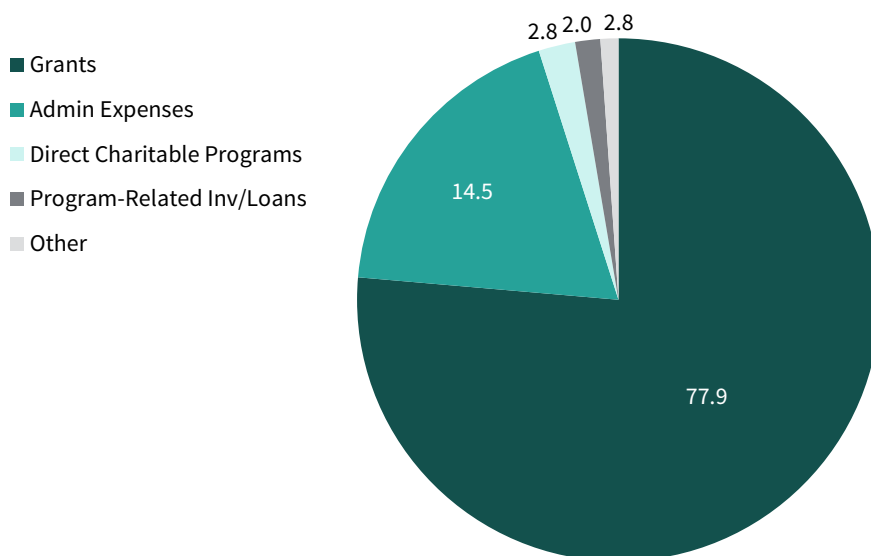


Source: Foundation data as reported to Cambridge Associates LLC.

Note: Data represent the average of 23 private non-operating foundations that provided payout rates for each year from 2010 to 2019.

FIGURE 46 COMPONENTS OF PAYOUT DISTRIBUTION

Calendar Year 2019 • Percent (%) of Total Payout



Source: Foundation data as reported to Cambridge Associates LLC.

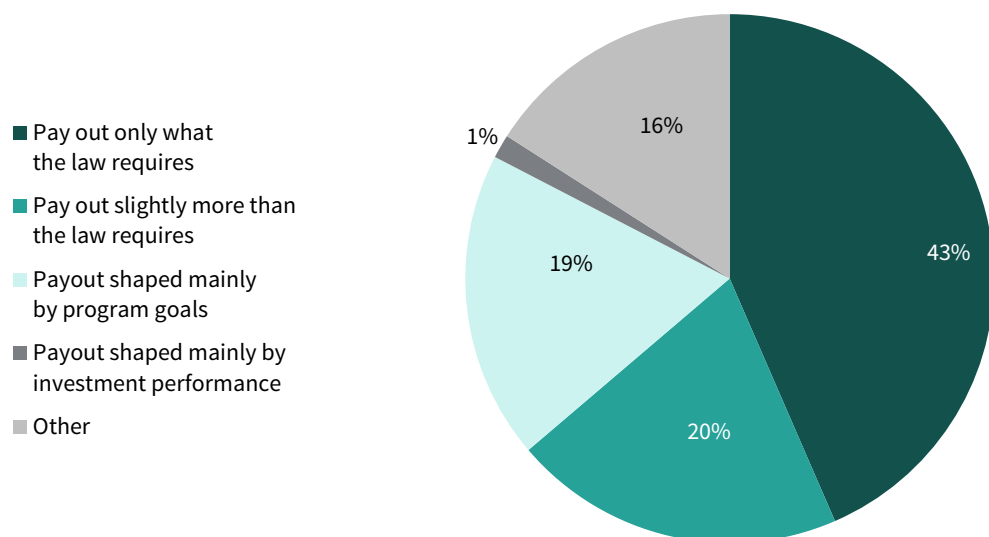
Note: Analysis included data for 45 private non-operating foundations.

PAYOUT OBJECTIVES

Of the 69 private non-operating foundations that provided information about their payout objective, 43% indicated that their objective is to pay out a maximum of the legal requirement. An additional 20% reported an objective of paying out slightly more than the legal requirement, 19% had an objective shaped mainly by program goals, 1% had a payout objective shaped mainly by investment performance, and 16% reported their objective was something other or a combination of the aforementioned objectives (Figure 47).

FIGURE 47 PAYOUT POLICY OBJECTIVES FOR PRIVATE NON-OPERATING FOUNDATIONS

Calendar Year 2019 • n = 69



Source: Foundation data as reported to Cambridge Associates LLC.

SMOOTHING RULE. In an effort to avoid fluctuations in their annual spending budget, some foundations will employ a smoothing rule, usually spending a targeted percentage of a moving-average of market values. This helps to bring a level of stability to annual spending distributions, allowing foundations to better forecast future expenditures without the risk of compromising the long-term viability of the portfolio. Foundations have some flexibility in managing the annual distributions required by the IRS. In years where qualified distributions are less than 5%, foundations have one year to spend any undistributed amounts. In addition, carryover credits are created by having qualified distributions for a taxable year that exceed the required spending amount. These credits can be applied to spending requirements in any of the next five years from when they are created.

Of the 69 private non-operating foundations that provided information on their payout objectives, just 24 indicated that they use of a market value-based smoothing rule to help contain year-to-year spending. A target spending rate of 5.0% was used by 64% of these foundations, while the remaining foundations reported a target rate above 5.0%. Smoothing periods ranged from three to five years.

Investment Office Staffing and Governance

In this section, we provide a snapshot of foundation management in 2019 and highlight relevant trends over the past year. Fifty-four foundations responded to this section of our survey including 10 foundations with assets greater than \$3 billion, 11 that fall between \$1 billion and \$3 billion, 5 that fall between \$500 million and \$1 billion, and 28 less than \$500 million. Some foundations chose not to respond to every question within this section or the question was not applicable to them. The universe size for each analysis is noted in the subsequent figures.

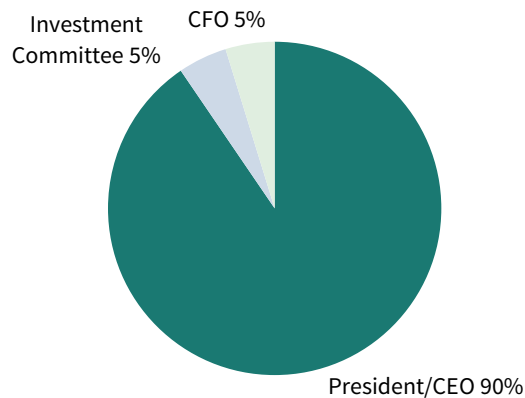
INVESTMENT OFFICE STAFFING AND OUTSIDE RESOURCES

The primary mission of an investment office is to assume day-to-day responsibility for the foundation's 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 foundations, 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 foundations. Nearly all (81%) of the respondents with assets greater than \$1 billion have a full-time CIO, while 20% of respondents with assets between \$500 million and \$1 billion indicated they had a CIO in place. The percentage is drastically lower for foundations less than \$500 million, where only 11% of respondents have a CIO. Where there is a CIO, it is most common for the position to report directly to the CEO or President of the foundation (Figure 48).

FIGURE 48 CHIEF INVESTMENT OFFICER REPORTING LINES

Calendar Year 2019 • n = 21



Source: Foundation data as reported to Cambridge Associates LLC.

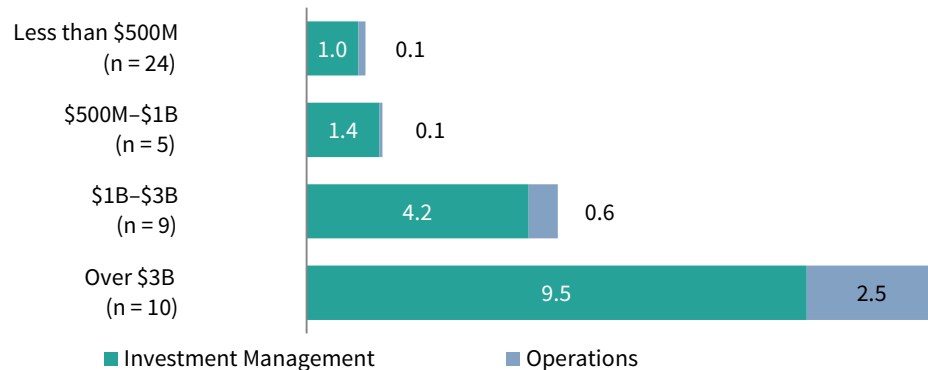
Foundations with smaller asset sizes rely more heavily on outside advisors or a chief financial officer to oversee investment assets. In these cases, the chief financial officer might work closely with external investment advisors to develop an investment strategy and monitor investment managers. It is also becoming more common place for foundations of this size to outsource some or the entire portfolio to an OCIO.

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, accounting, performance measurement, and in some cases conducting operational due diligence on investment managers.

Our survey shows 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, foundations that oversee more than \$3 billion in assets employ a total of 12.0 full-time equivalents (FTEs) split between investment management and operations, while foundations with assets between \$1 and \$3 billion are at 4.8 staff (Figure 49). Foundations with less than \$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 49 AVERAGE STAFFING LEVELS

Calendar Year 2019 • Number of FTEs



Source: Foundation data as reported to Cambridge Associates LLC.

Personnel consisted of a mixture of senior-, mid-, and junior-level positions. Senior investment professionals typically carry the title of Investment Director or Managing Director and have more than ten years of professional experience. Mid-level professionals can hold the titles of Investment Officer or Associate and bring five to ten years of experience. Junior-level positions are usually recent graduates or those with a few years of experience. Junior positions usually carry the title of Investment Analyst or Associate. Figure 50 provides the average FTEs by asset size and position levels for investment management and operations positions.

FIGURE 50 AVERAGE INVESTMENT STAFF BY FUNCTION

Calendar Year 2019 • Number of FTEs

	Investment Management			Investment Operations		
	Senior	Mid	Junior	Senior	Mid	Junior
Over \$3B	3.9	2.3	3.8	0.9	1.3	1.7
<i>n</i>	10	3	10	4	7	7
\$1B–\$3B	1.5	1.8	1.3	0.6	0.7	1.0
<i>n</i>	8	4	7	2	4	1
\$500M–\$1B	1.0	NA	1.0	NA	0.3	NA
<i>n</i>	1	0	2	0	1	0
Under \$500M	2.3	0.1	1.1	0.6	0.5	0.5
<i>n</i>	3	1	3	2	1	3

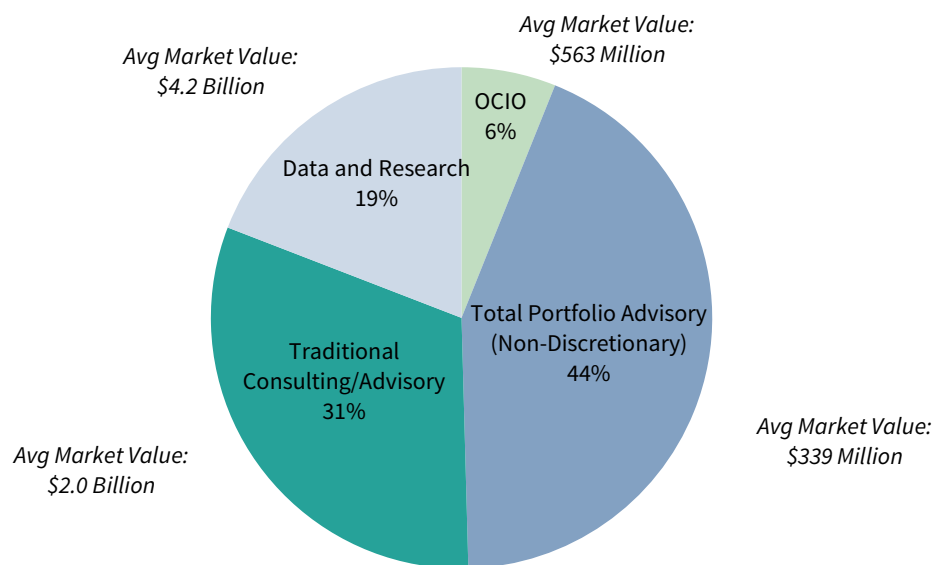
Source: Foundation data as reported to Cambridge Associates LLC.

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. Foundations 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 51 broadly illustrates how the 115 participants in this study work with outside advisors or consultants. Foundations, with assets under \$1 billion rely more heavily on external advisors to manage or help manage their investment portfolios, while larger foundations will seek outside support in the form of research, data, or asset class specialization.

FIGURE 51 USE OF EXTERNAL ADVISORS AND CONSULTANTS

Calendar Year 2019 • n = 115



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

Six percent of study participants use Cambridge Associates for discretionary portfolio management services. Also known as OCIO, this management model allows a foundation 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.

Of foundations in our study, 44% use advisors for non-discretionary portfolio management services for the total foundation. These foundations 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 a foundation's staff.

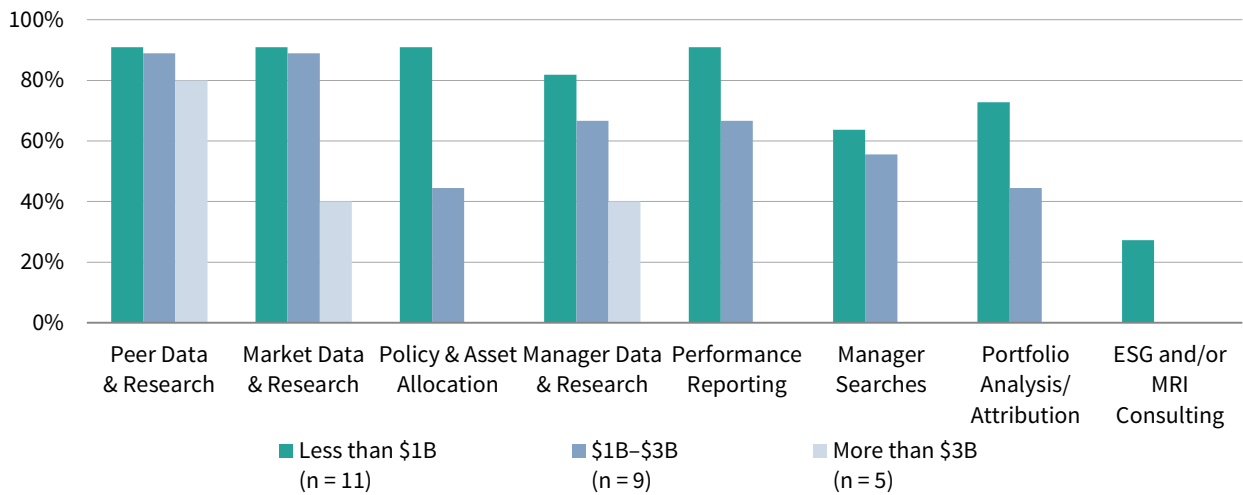
Nineteen percent of participants use outside support for research, manager, peer, and benchmarking data. These foundations tend to be larger and have built their own internal investment teams to manage their portfolios. The average market value of foundations using consultants in this fashion is \$4.2 billion.

The remaining 31% 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 52 examines the range of services other than portfolio management that are most commonly used by foundations of different sizes. Based on survey responses, smaller foundations rely more heavily on external advisors for policy and asset allocation, performance reporting, and manager searches than the largest foundations. Reliance on research and data was more consistent across all asset sizes.

FIGURE 52 USE OF EXTERNAL ADVISORS AND CONSULTANTS: TYPES OF SERVICES USED

Calendar Year 2019 • n = 25 • Percent of Institutions (%)



Source: Foundation 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, foundations 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.

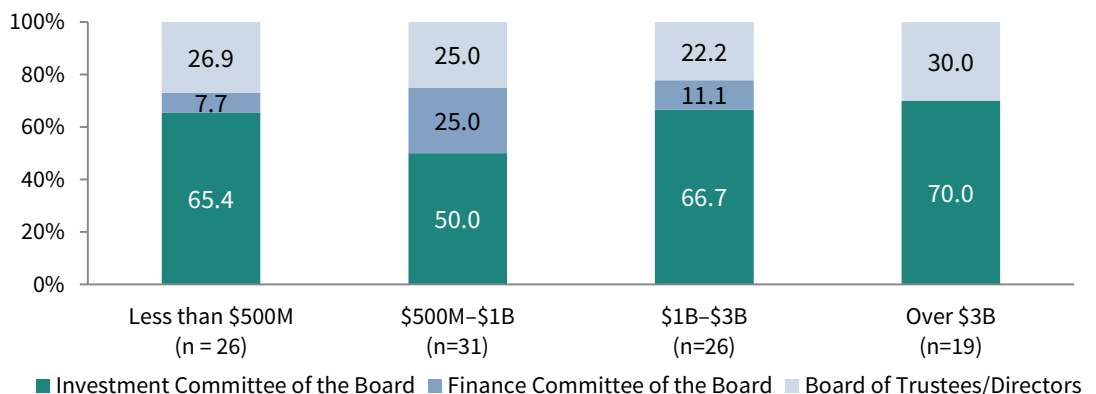
GOVERNING BODY/OVERSIGHT COMMITTEE. Regardless of the foundation's size, an investment committee of the board most often has oversight over the investment office and/or outside advisors who manage the portfolio. In much smaller numbers, other governing bodies cited by respondents were a finance committee of the board, and the board of trustees/directors.

DECISION-MAKING RESPONSIBILITY. To help quantify the dynamic between the governing body (hereafter referred to as simply investment committee) and those managing the foundation (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.

For foundations greater than \$1 billion, the majority of asset allocation policy is developed by committees acting on staff recommendations (Figure 54). Foundations less than \$500 million depend far more on the recommendations of outside advisors or investment committees driving policy autonomously. The investment committee's role in portfolio rebalancing diminishes as the foundation's size rises, with total staff discretion on rebalancing decisions most common for foundation more than \$500 million (Figure 55).

FIGURE 53 GOVERNING BODY OF OVERSIGHT COMMITTEE BY ORGANIZATION TYPE

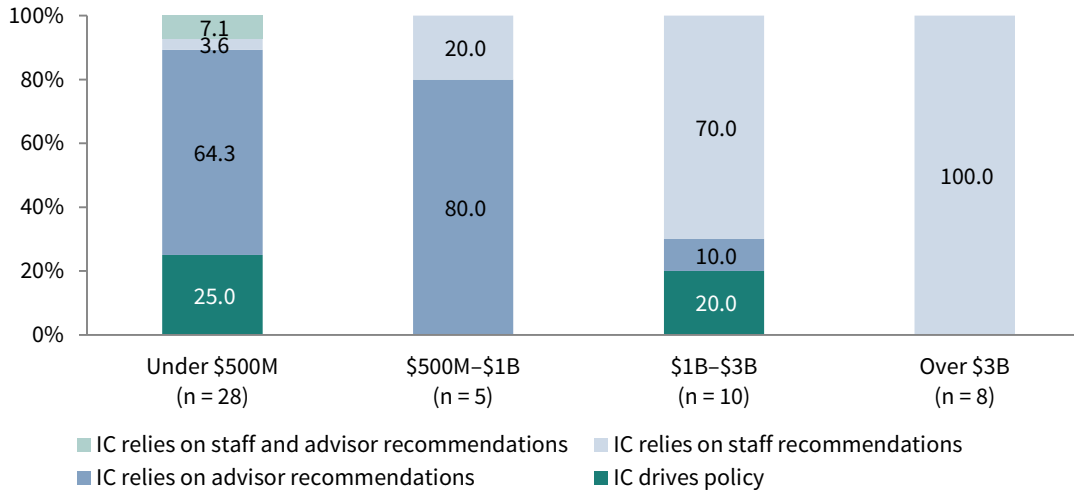
Calendar Year 2019 • Percent of Institutions (%)



Source: Foundation data as reported to Cambridge Associates LLC.

FIGURE 54 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: ASSET ALLOCATION POLICY DEVELOPMENT

Calendar Year 2019 • Percent of Institutions (%)

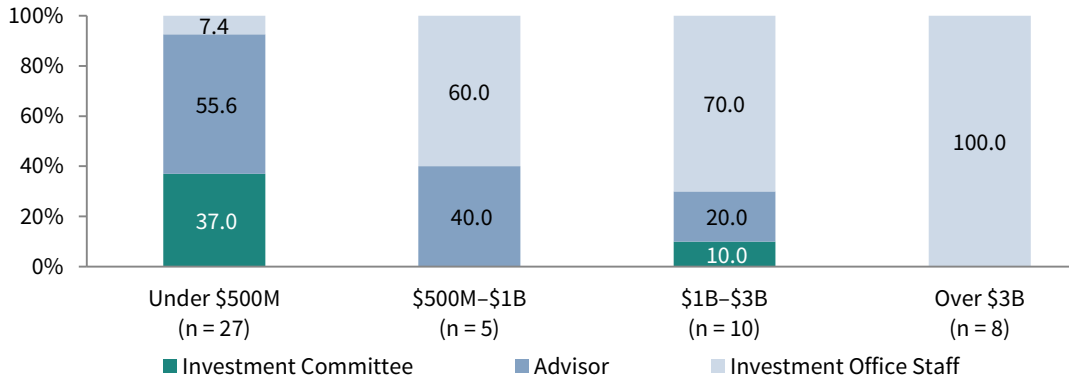


Source: Foundation data as reported to Cambridge Associates LLC.

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

FIGURE 55 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS: PORTFOLIO REBALANCING

Calendar Year 2019 • Percent of Institutions (%)



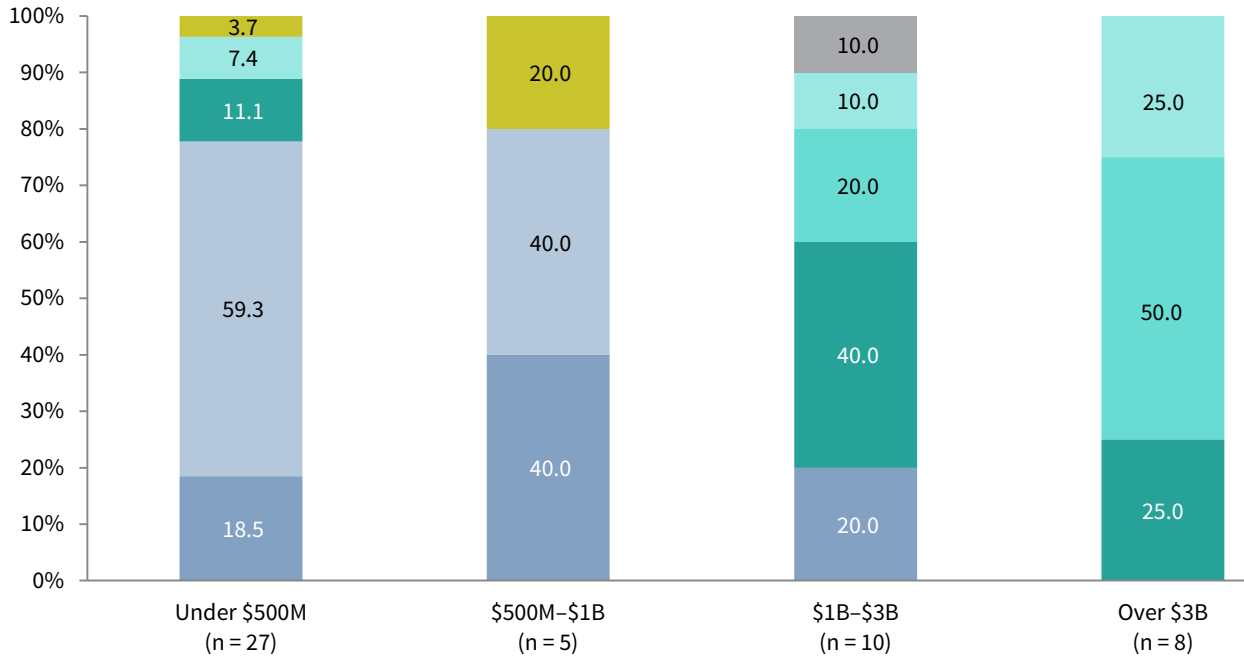
Source: Foundation data as reported to Cambridge Associates LLC.

The process of manager selection and termination also involves committees, advisors, and staff, but with different degrees of discretion (Figure 56). Advisors play a significant role in both selection and termination of investment managers at foundations less than \$1 billion. 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 at foundations between \$1 billion and \$3 billion and staff discretion (with and without guidelines) accounts for most of the decision-making at foundations greater than \$3 billion.

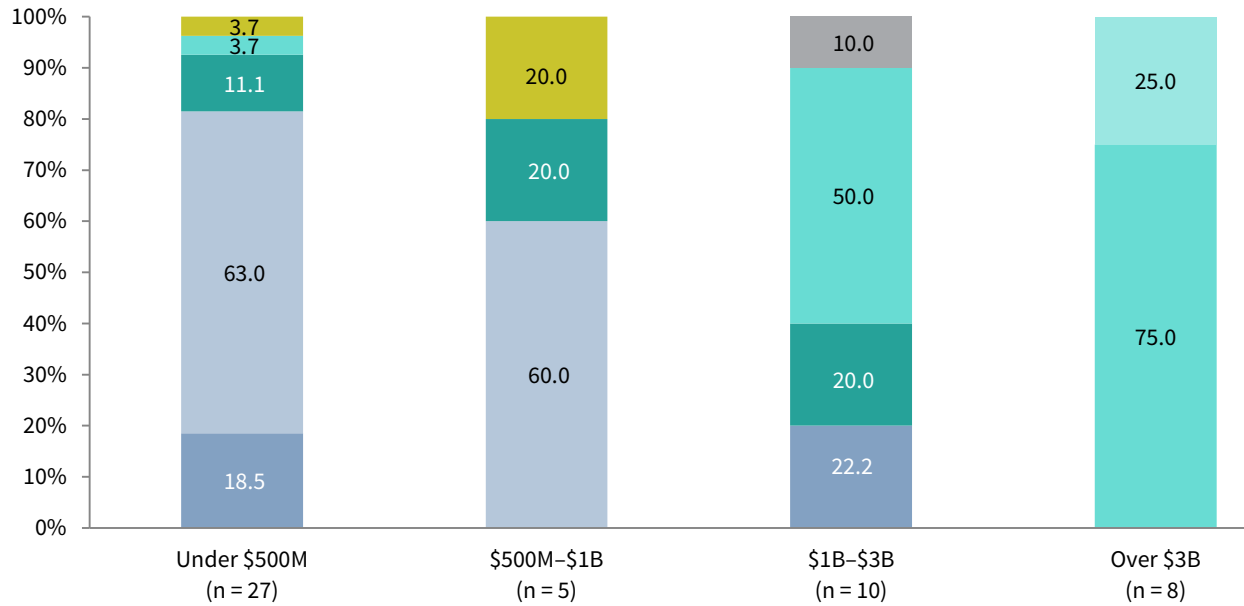
**FIGURE 56 DECISION-MAKING AND IMPLEMENTATION RESPONSIBILITY FOR KEY INVESTMENT FUNCTIONS:
MANAGER SELECTION AND TERMINATION**

Calendar Year 2019 • Percent of Institutions (%)

Manager Selection



Manager Termination



- IC interviews and approves / terminates
- Staff recommendation and IC approves
- Staff discretion with guidelines
- Other
- Advisor recommendation and IC approves
- Staff has full discretion
- OCIO has full discretion

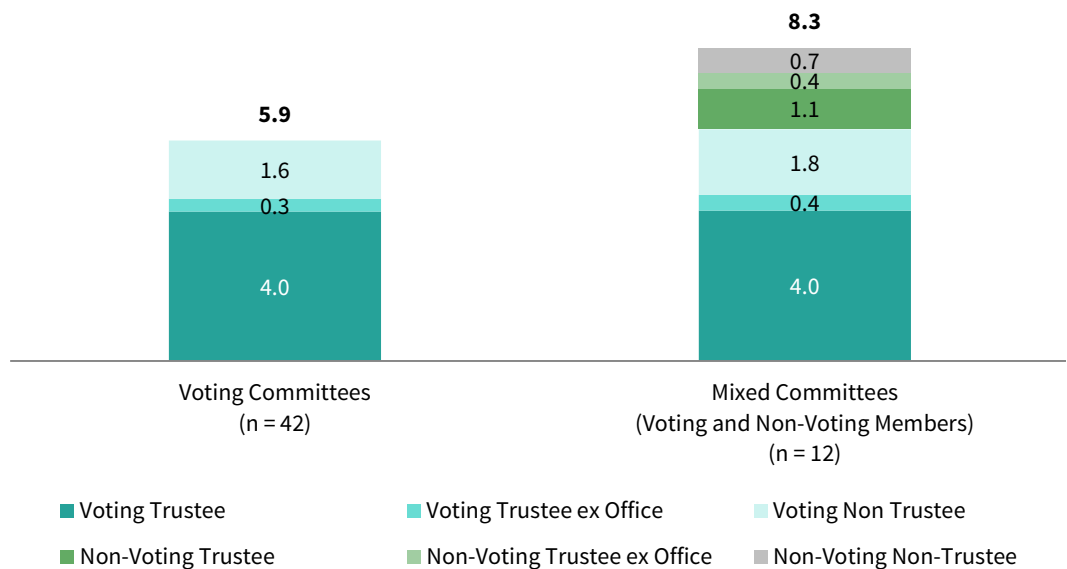
Source: Foundation data as reported to Cambridge Associates LLC.

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 most investment committees (42 of 54) are fully composed of voting members, while the 12 investment committees also include nonvoting member. While mandatory voting encourages accountability, there can be good reasons to include nonvoting members. Organizations should weigh the benefit of these advisory members against the prospects of an oversized committee.

The average size of voting committees is 5.9 members, which on average consist of 4.0 trustees, 1.6 non-trustees, and 0.3 ex officio members. Examples of ex officio committee members include the president of the foundation 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 8.3 people (Figure 57).

FIGURE 57 PROFILE OF INVESTMENT COMMITTEE MEMBERS
Calendar Year 2019



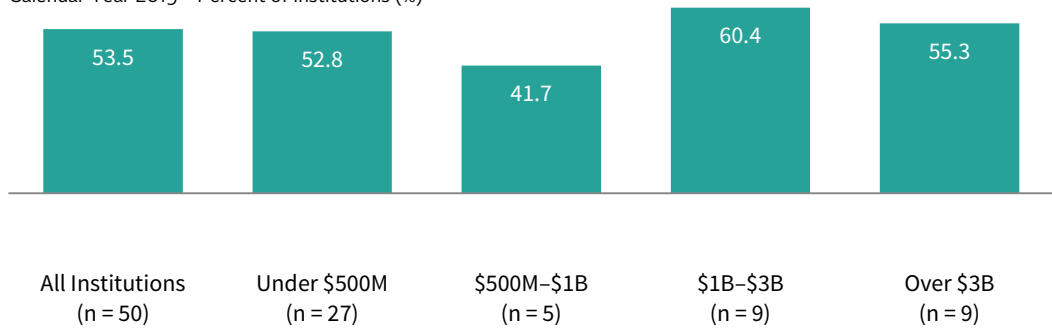
Source: Foundation data as reported to Cambridge Associates LLC.
Note: Investment Committee is shorthand for governing body.

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 53% of their committee members have investment experience. This composition does change slightly when viewed by asset size, with larger foundations having a higher percentage of members with investment experience (Figure 58).

FIGURE 58 PERCENT OF INVESTMENT COMMITTEE MEMBERS WHO ARE INVESTMENT PROFESSIONALS

Calendar Year 2019 • Percent of Institutions (%)



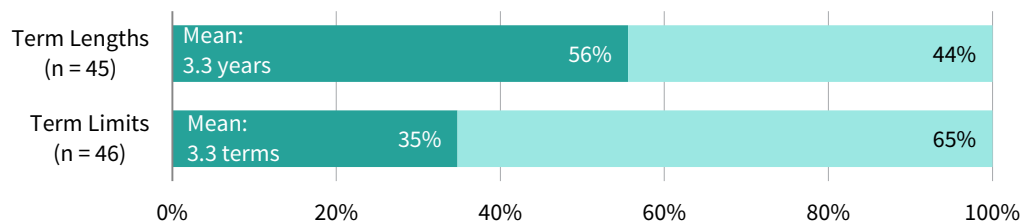
Source: Foundation data as reported to Cambridge Associates LLC.

COMMITTEE TERM LENGTH AND LIMITS. Setting guidelines for terms can help manage member turnover and mitigate committee stagnation. Responses regarding term length and limit policy indicated that term length guidelines are generally more common than term limits: for committee members, term lengths (an average of 3.3 years) were specified by 56% of foundations, while term limits (an average of 3.3 terms) were mandated by a smaller percentage of 35% of foundations (Figure 59). Term length and limit policies applied similarly to committee chairmanship. The lack of policies around term limits and lengths at some foundations could suggest that these foundations value the stability of a long-standing committee and view turnover as disruptive to long-term investment policy.

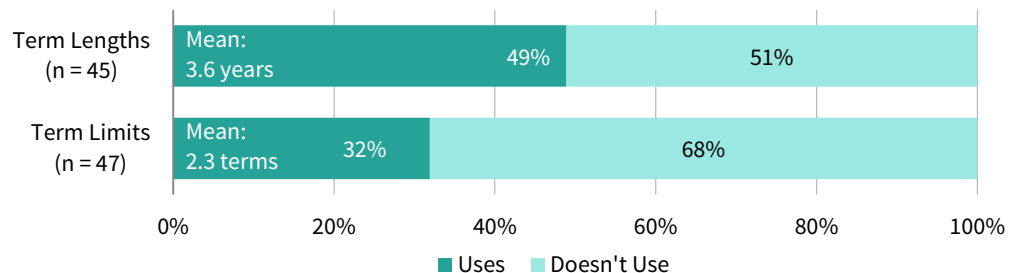
FIGURE 59 INVESTMENT COMMITTEE TERM LENGTHS AND LIMITS

As of December 31, 2019

Investment Committee Member



Investment Committee Chair



Source: Foundation data as reported to Cambridge Associates LLC.

INVESTMENT COMMITTEE MEETINGS. Our survey responses show that most foundations (65%) hold quarterly meetings. Other foundations cited meeting 2 or 3 times per year with ad hoc conference calls in between formal meetings. Regular attendance of investment committee members is critical to proper oversight. Participants indicated that average attendance was strong, at 93%.

REIMBURSEMENT AND CONFLICT OF INTEREST POLICY. 76% of respondents provide committee members with expense reimbursement, which generally includes travel-related and other out-of-pocket expenses. Just 2% of respondents offer their committee members some sort of compensation other than expense reimbursement. This compensation most often comes in the form of charitable gifts and honorariums.

Except for three respondents, all participants have a conflict of interest policy for investment committee members. These policies can require disclosure, recusal, or both disclosure and recusal. Policies may differ by asset class, with foundations requiring disclosure for long-only equity conflicts and recusal for private equity conflicts, for example. Most foundations (80%) also have a conflict of interest policy in place for investment staff. ■

Notes on the Data

PROFILE OF RESPONDENTS

This report includes data for 115 foundations. Most participants are private foundations, 102 of which are classified as non-operating foundations and three as operating foundations. The ten remaining participants are community foundations.

All participants provided data on their LTIP as of December 31, 2019. The LTIP size of participating foundations ranged from \$8.1 million to \$49.6 billion. The mean LTIP size was \$1.6 billion and the median was \$267.7 million. Throughout the report, the notation of n denotes the number of foundations included in each analysis.

CALCULATION OF THE SHARPE RATIO

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

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

Where:

- R_p is the arithmetic average of composite quarterly returns,
- R_f is the arithmetic average of T-bill (risk-free) quarterly returns, and
- S_p is the quarterly standard deviation of composite quarterly returns

BLENDED PORTFOLIO BENCHMARKS

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

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

PARTICIPANTS

Access Strategies Fund
Albany Foundation
The James B. and Lois R. Archer Charitable Foundation
Arkansas Community Foundation
Atherton Family Foundation
Baltimore Community Foundation
Marion and Henry Bloch Family Foundation
The Herb Block Foundation
Buena Vista Foundation
The California Endowment
James & Abigail Campbell Family Foundation
Carnegie Corporation of New York
The Annie E. Casey Foundation
The Clarence T.C. Ching Foundation
Community Funds, Inc.
Connecticut Health Foundation, Inc.
The Dana Foundation
Dogwood Health Trust
Gaylord and Dorothy Donnelley Foundation
Doris Duke Charitable Foundation
The Duke Endowment
Alfred I. duPont Testamentary Trust
The Enfranchisement Foundation
The Erie Community Foundation
Richard M. Fairbanks Foundation, Inc.
Sherman Fairchild Foundation
Fetzer Institute
Five Rings Family Foundation
The Flinn Foundation
The Ford Family Foundation
The Ford Foundation
France-Merrick Foundation
Franklin Southampton Charities
Bill and Melinda Gates Foundation Trust
The Gerber Foundation
GHR Foundation
Gidwitz Memorial Foundation
Eugene & Marilyn Glick Family Foundation
John T. Gorman Foundation
The Florence Gould Foundation
Grantham Fdn for the Protection of the Environment
William Caspar Graustein Memorial Fund
The Heinz Endowments
Clarence E. Heller Charitable Foundation
The F.B. Heron Foundation
The Highland Street Foundation
Conrad N. Hilton Foundation
The H & R Block Foundation
The Hyams Foundation
Inasmuch Foundation
InFaith Community Foundation
The Robert Wood Johnson Foundation
Johnson Scholarship Foundation
The Fletcher Jones Foundation
Kansas Health Foundation
Ewing Marion Kauffman Foundation
Anna-Maria and Stephen Kellen Foundation
W.K. Kellogg Foundation Trust
Kleberg Foundation
John S. and James L. Knight Foundation
The Kresge Foundation
Leaves of Grass Foundation
John and Catherine MacArthur Foundation
The Alexander M. and June L. Maisin Foundation
Mathile Family Foundation
The Marshall L. and Perrine D. McCune Charitable Fdn
McGregor Fund
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