



Endowments Quarterly

A Look at Asset Allocation and Total Returns
for US Endowments and Foundations

Fourth Quarter 2015

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The Cambridge Associates US endowment and foundation universe¹ includes colleges and universities, cultural and environmental institutions, health care institutions, independent schools, and other endowed nonprofit institutions as well as foundations. This report provides asset allocation and return analyses for 432 endowments and foundations that participated in our quarterly survey. The average market value of participating long-term investment portfolios was \$1.1 billion. The median value was \$229.8 million.

Examining Returns

The average return of the US endowment and foundation universe was 1.8% for the quarter ended December 31, 2015. Trailing one-year returns averaged -1.8%. Returns are reported on a net of fees basis for 99% of the US endowment and foundation universe.

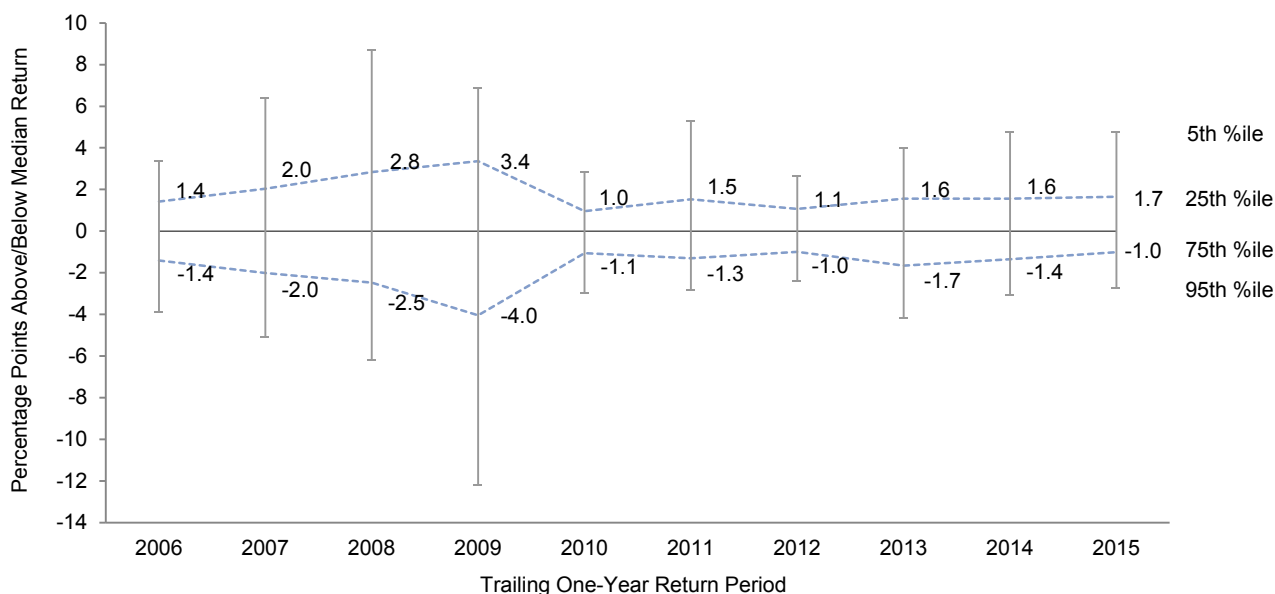
Per the Consumer Price Index, the rate of inflation was -0.6% for fourth quarter 2015 and just 0.7% for the trailing one-year period. Adjusting nominal returns to reflect inflation, the average real return for US endowments and foundations rises to 2.4% for the fourth quarter and falls to -2.5% for the trailing one-year period.

For a constant group of institutions that provided data over the last decade, the dispersion in overall returns for calendar year 2015 is similar to that which was observed over the last couple of years and well below the ranges reported from 2007 to 2009. The top quartile return for calendar year 2015 was 1.7 percentage points (ppts) higher than the median while the bottom quartile return was 1.0 ppt lower than the median.

¹ The universe includes one Canadian institution.

Dispersion of Trailing One-Year Returns Relative to the Median Return

Years Ended December 31 • Constant Universe of 378 Endowments and Foundations



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

Notes: The median return is scaled to zero for each period. The outer tick marks and dotted lines represent their respective percentiles' variance from the median.

Trailing One-Year Results

Asset allocation is a key contributor to the total return that a portfolio earns. Exhibit 8 explores this relationship and illustrates how general asset allocation structures vary across the four performance quartiles of the overall participant group. In this exhibit, each institution'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 of the institutions within each quartile.

The chart of index returns in Exhibit 8 provides the context of the market environment for the period. In general, institutions in the top quartile had the highest allocations to the asset classes that posted the best index returns. Divergence in asset allocation between the top and bottom performers was largest within private equity and venture capital.

Private Equity and Venture Capital. The extent of diversification across equities was a key distinction between top and bottom performers for 2015. Endowments and foundations that posted a trailing one-year return in the top quartile had the highest average PE/VC allocation (14.1%). In contrast, the average PE/VC allocation for those in the bottom-performing quartile was 2.4%. The degree of divergence is especially meaningful given the recent strong returns in private equity markets, particularly for venture capital.

Global Equities. Indexes for global public equities underperformed relative to private equity markets in 2015. Endowments and foundations in the top performance quartile had the lowest average allocation to US equities (18.0%) and global ex US developed equities (12.1%), while those in the bottom performance quartile reported the highest average allocations (24.7%

and 17.9%, respectively). Despite poor performance in emerging markets equities, the range of allocations between top performers (6.5%) and bottom performers (7.8%) was considerably narrower than that of developed equities.

Real Assets. Real estate significantly outperformed commodities and natural resources–related investments, which were the lowest performing of all the asset class benchmarks. With private strategies outperforming public strategies, endowments and foundations in the top performance quartile had the highest average allocation to private real assets (8.4%). In contrast, those in the bottom performance quartile had the highest average allocation to public real assets (7.0%).

Bonds. Bonds had a minimal impact on overall returns, with the Barclays Government/Credit Bond Index returning just 0.1% in 2015. However, endowments and foundations with higher allocations to the outperforming private investment asset classes also tend to have lower bond allocations. Institutions in the top performance quartile reported the lowest average allocations to bonds (7.6%), while those in the bottom performance quartile reported the highest average allocation (13.8%).

A Note on Performance Reporting

Methodologies. Private investment index returns in Exhibit 8 are shown on a lagged and partial basis to reflect the varying methodologies that clients use for their one-year and one-quarter return calculations. Most participants with private investment allocations reported fourth quarter 2015 private investment returns on a flat (0%) basis. This method of reporting is consistent with the partial index returns, which include only three quarters of private returns for the trailing one-year period. As December 31 valuations become available, fourth quarter returns will be restated to reflect

actual private performance. The lagged basis (i.e., third quarter 2015 private return used in the fourth quarter 2015 total portfolio return) was the second most frequently used methodology for institutions with private investment allocations. For these investors, four quarters of private performance were included in the trailing one-year return.

The key difference between these two methodologies is the extra quarter of private investment performance that is incorporated into the lagged basis methodology. For the trailing one-year return, that extra quarter was fourth quarter 2014, which shows mixed performance across private markets. The Cambridge Associates Venture Capital Index posted an exceptional return for fourth quarter 2014 (10.1%), while the Cambridge Associates Natural Resources Index was down double-digits. The impact of using the lagged basis methodology relative to the partial basis methodology will depend on each institution's allocation to the various private strategies as well its investment return within these strategies.

Cambridge Associates Private Investment Index Returns

	One Quarter End-to-End Pooled Return (%)				
	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015
US Private Equity	0.9	2.7	3.9	-1.4	NA
US Venture Capital	10.1	4.4	6.9	-0.4	NA
Real Estate	4.7	1.6	4.2	2.0	NA
Natural Resources	-11.4	-2.7	-0.5	-8.2	NA

Lagged Basis Partial Basis

Source: Cambridge Associates LLC.

Note: NA indicates data were not available.

Risk-Adjusted Performance. Investors spend much time and effort analyzing the returns of their portfolios. Measuring risk is just as important, however, as investors should only take risks for which they are compensated and should recognize whether any incremental return they have earned is simply the result of their having taken more risk.

Risk-adjusted performance, as measured by the Sharpe ratio,² averaged 0.74 for the trailing five-year period, ranging from 0.39 to 1.39 after removing outliers that make up the top and bottom 5% of the universe. Relative to a pair of simple 70/30 portfolio benchmarks,³ the average Sharpe ratio of respondents exceeded the portfolio containing a global benchmark for the equity component (0.68), but was lower than the portfolio containing a US benchmark for the equity component (1.08).

Trailing Ten-Year Results

As noted earlier, asset allocation is a factor in the variation in returns reported across the participant group. While the analysis of asset allocation structures on a one-year basis is informative, this short-term analysis can lead to different results from one period to the next as market conditions shift. To investigate the impact of asset allocation policies on long-term investment performance, an analysis of data over an extended period is most suitable. Exhibit 9 breaks the participant group down into four quartiles based on the trailing ten-year

²The Sharpe ratio is the most common approach to measuring risk-adjusted performance. It 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.

³The global equity benchmark is the MSCI All Country World Index and the US equity benchmark is the Russell 3000® Index. Bonds are represented by the Barclays Government/Credit Bond Index.

investment return. Each institution's asset allocation was averaged across the 11 December 31 periods that fell from 2005 to 2015. The four quartiles in the heat map table represent the average of the institutions within each quartile.

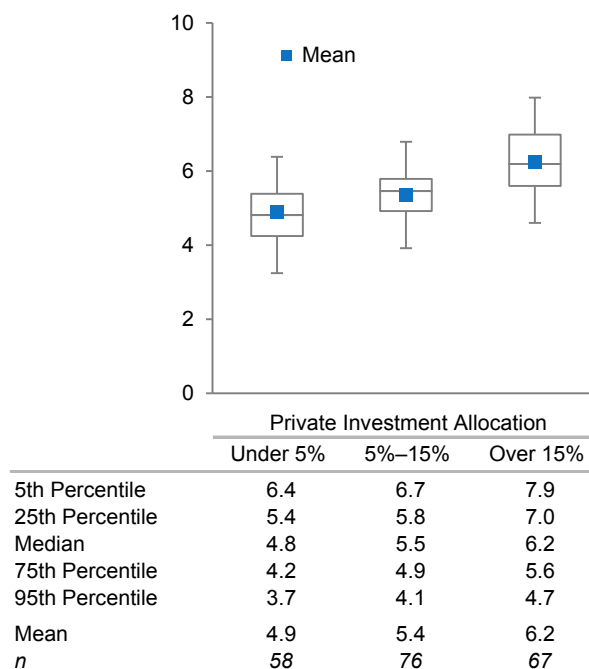
Our historical asset allocation data show that the portfolios that were most diversified over the last decade generally performed the best. Among the asset class benchmarks, most private investment strategies outperformed their public market counterparts over the past ten years. Accordingly, the top quartile of performers over the ten-year period reported the highest average allocation to illiquid private investments, while the bottom quartile reported the lowest average allocation to these strategies. In contrast, top performers had the lowest average allocation to long-only developed equities and bonds, while bottom performers had the highest average allocation. Institutions that place significant emphasis on peer performance statistics should note the distinction in average asset allocation policies between top and bottom performers, particularly among private investments.

The figure at right breaks participants into three subgroups based on each institution's trailing ten-year average allocation to private investments. The median ten-year return for portfolios with an allocation of over 15% to private investments was 6.2%, nearly 140 bps higher than the median return reported by portfolios with little to no private investment allocation. The distribution of returns for the three subgroups show a wide range of results, a disclaimer that portfolios with high allocations to private investments can underperform the overall peer group, while those with low private investment allocations can outperform. However, these ten-year analyses show that allocations to private investments generally are

a key factor in a portfolio's relative performance within the overall participant group over the long term. Institutions that benchmark peer performance should consider the subgroup median that aligns with their own private investment allocation as an alternative or complement to the peer medians that they already use.

Range of Ten-Year Returns by Private Investment Allocation

As of December 31, 2015 • Percent (%)

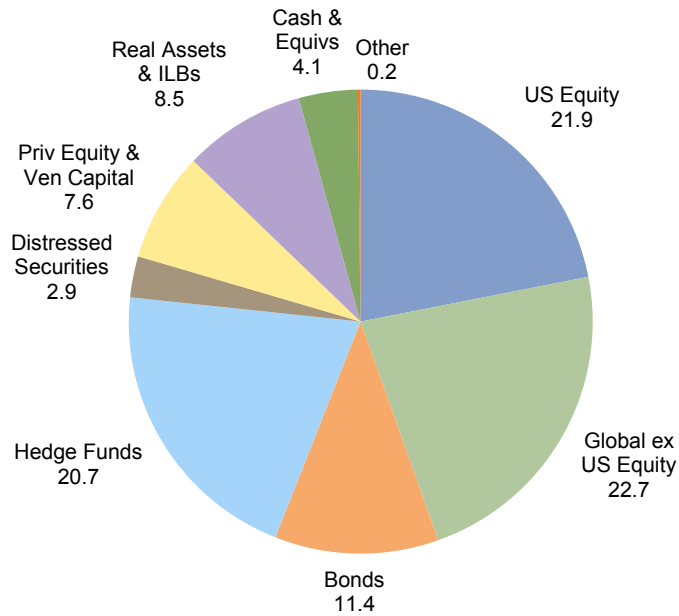


Source: Endowment and foundation data as reported to Cambridge Associates LLC.

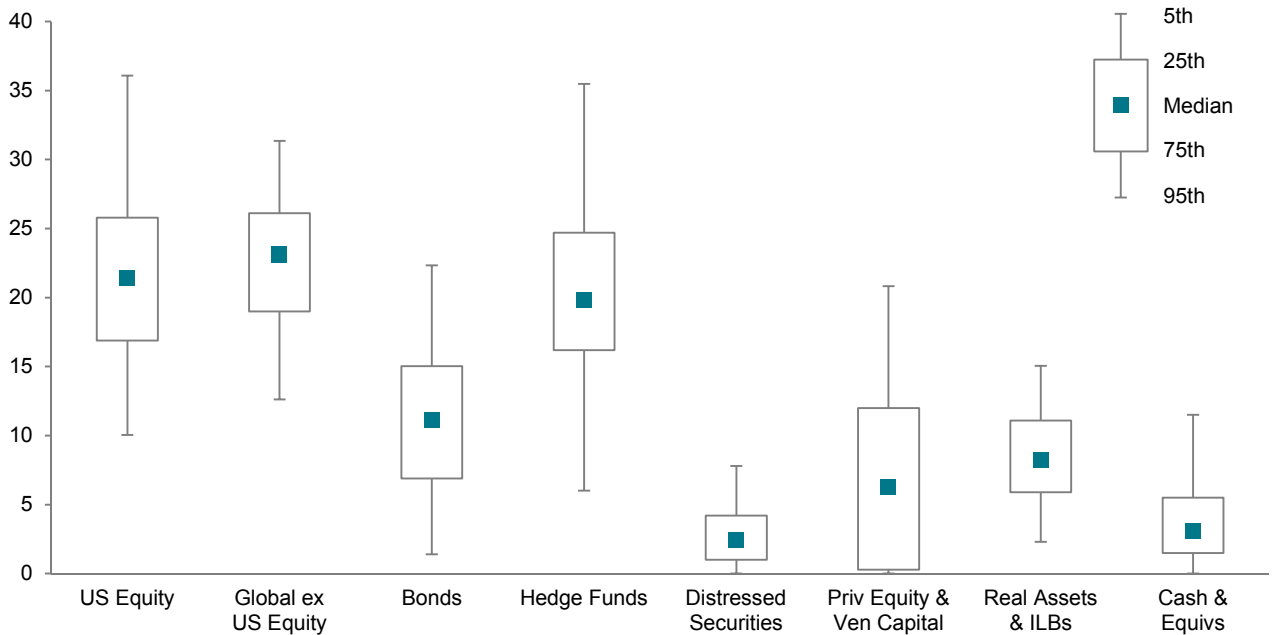
Notes: Each institution's private investment allocation represents the mean for the 11 December 31 periods from 2005 to 2015. Returns are annualized.

Exhibit 1
Asset Allocation Snapshot: US Endowments and Foundations
 As of December 31, 2015 • Percent (%)

Mean Asset Allocation (n = 432)

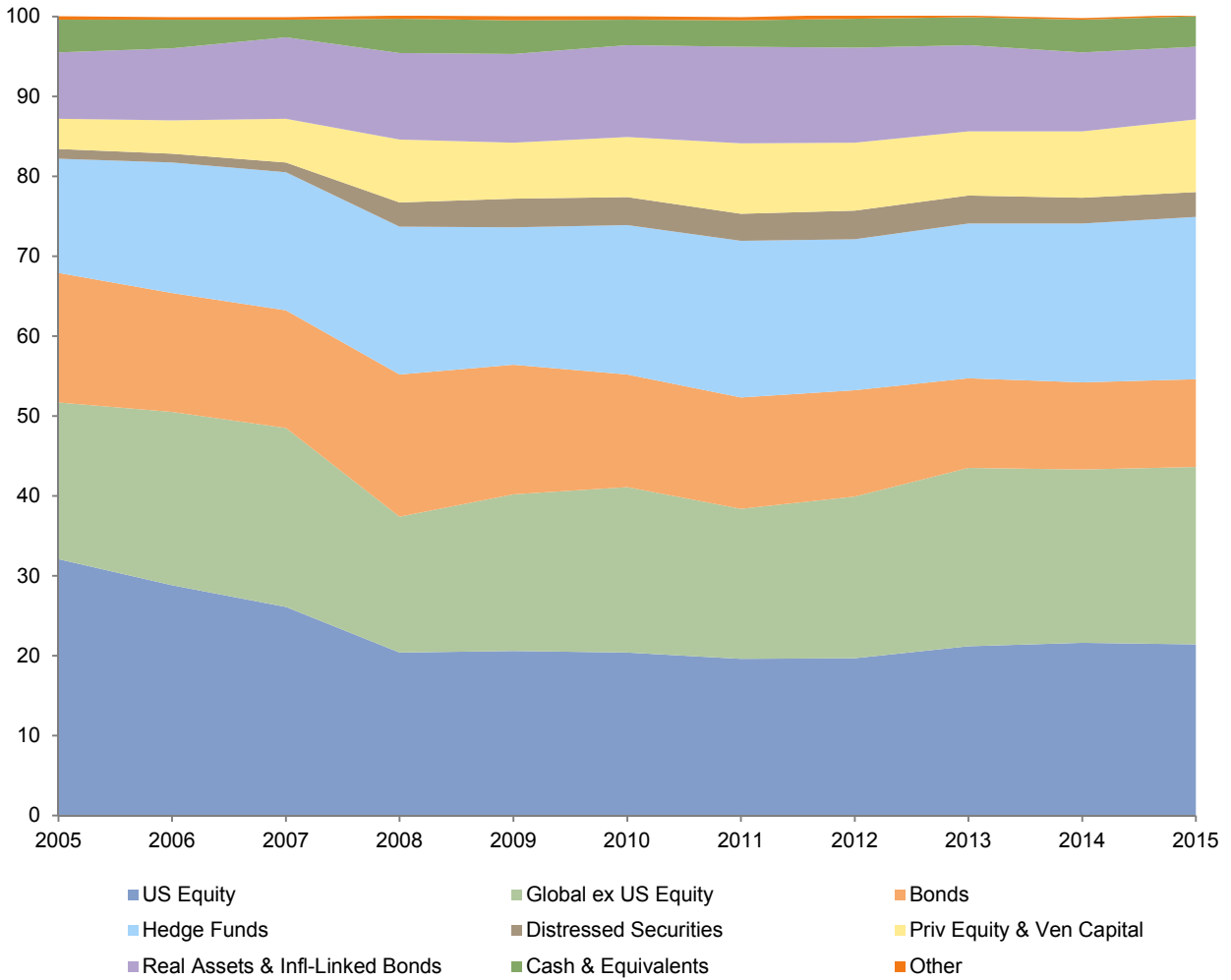


Distribution by Asset Class: Asset Allocation (n = 432)



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

Exhibit 2
Historical Mean Asset Allocation Trends: US Endowments and Foundations
 Years Ended December 31 • Percent (%)



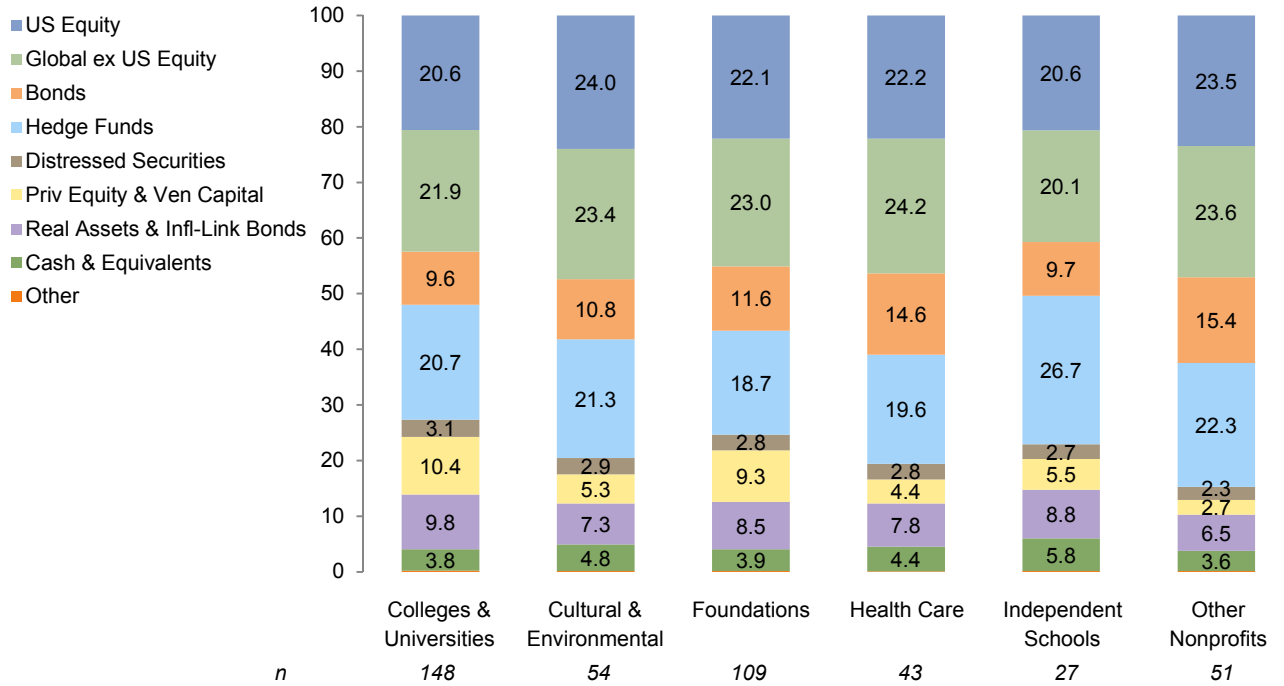
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
US Equity	32.1	28.8	26.1	20.4	20.6	20.4	19.6	19.7	21.2	21.6	21.4
Global ex US Equity	19.6	21.7	22.4	17.0	19.6	20.7	18.8	20.2	22.3	21.7	22.2
<i>Developed Markets</i>	15.1	16.8	16.7	13.4	14.0	14.3	12.9	13.3	15.2	14.5	15.3
<i>Emerging Markets</i>	4.4	4.9	5.7	3.6	5.6	6.4	6.0	6.9	7.0	7.2	6.8
Bonds	16.2	14.9	14.7	17.8	16.2	14.1	13.9	13.3	11.2	10.9	11.0
Hedge Funds	14.3	16.3	17.3	18.5	17.2	18.7	19.6	18.9	19.4	19.9	20.3
Distressed Securities	1.2	1.1	1.2	3.0	3.6	3.5	3.4	3.6	3.5	3.2	3.1
Priv Equity & Ven Capital	3.8	4.2	5.5	7.9	7.0	7.5	8.8	8.5	8.0	8.3	9.1
Real Assets & Inflation-Linked Bonds	8.3	9.0	10.2	10.8	11.1	11.5	12.1	11.9	10.8	9.9	9.1
Cash & Equivalents	4.1	3.6	2.2	4.3	4.2	3.2	3.3	3.6	3.5	4.1	3.8
Other	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.2	0.2	0.2

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

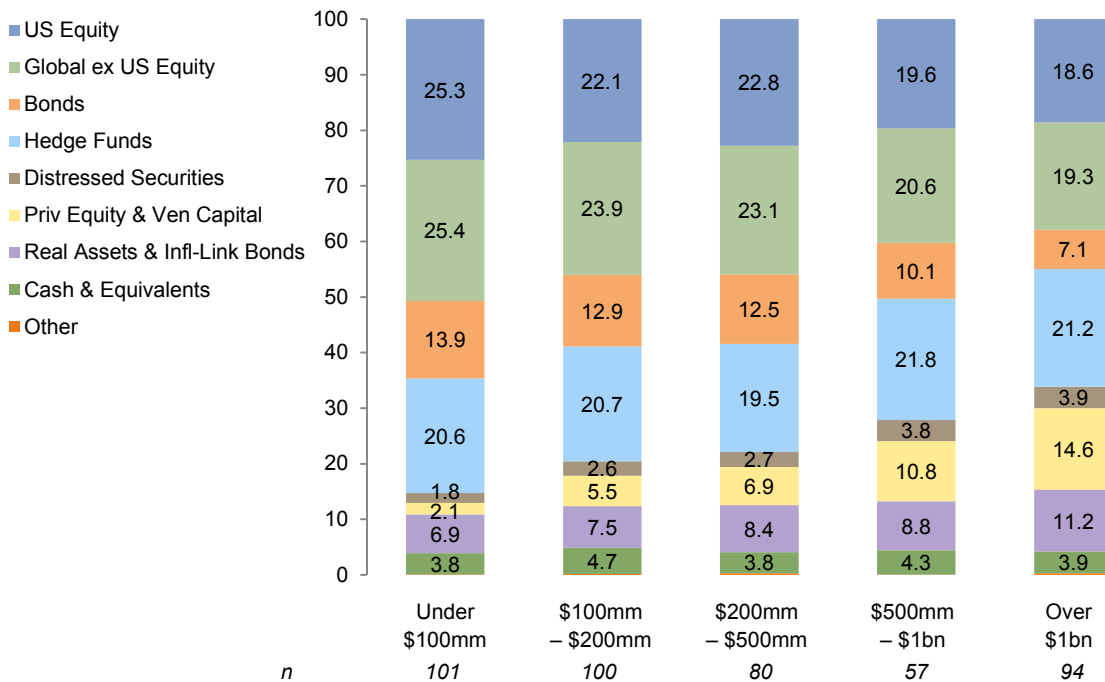
Note: The table represents 201 US endowments and foundations that provided asset allocation data for each year from 2005 to 2015.

Exhibit 3
Summary Asset Allocation: US Endowments and Foundations
 As of December 31, 2015 • Percent (%)

By Peer Group



By Asset Size



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

Exhibit 4
Detailed Asset Allocation by Peer Group: US Endowments and Foundations
 As of December 31, 2015 • Percent (%)

	Colleges & Universities (n = 148)		Cultural & Environmental (n = 54)		Foundations (n = 109)		Health Care (n = 43)		Independent Schools (n = 27)		Other Nonprofits (n = 51)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
US Equity	20.6	20.1	24.0	22.6	22.1	22.1	22.2	22.9	20.6	19.3	23.5	23.7
Global ex US Equity	21.9	22.3	23.4	24.4	23.0	23.3	24.2	24.3	20.1	19.6	23.6	24.7
Developed Markets	15.0	15.2	16.5	17.1	15.9	16.6	17.6	16.7	14.5	14.4	16.9	16.1
Emerging Markets	6.9	6.7	6.9	6.9	7.0	7.2	6.7	6.6	5.6	5.3	6.7	6.9
Bonds	9.6	9.6	10.8	10.7	11.6	11.1	14.6	14.3	9.7	10.4	15.4	15.4
US Bonds	7.9	7.9	9.2	9.1	9.9	9.3	11.7	11.9	8.4	8.8	12.7	12.2
Developed Markets ex US	0.8	0.0	0.6	0.0	0.7	0.0	1.3	0.7	0.5	0.0	1.2	0.6
Emerging Markets	0.5	0.0	0.6	0.0	0.6	0.0	0.8	0.3	0.5	0.0	0.9	0.6
High-Yield Bonds	0.4	0.0	0.5	0.0	0.4	0.0	0.7	0.0	0.3	0.0	0.7	0.0
Hedge Funds	20.7	20.4	21.3	21.6	18.7	18.9	19.6	18.8	26.7	30.0	22.3	19.8
Long/Short Hedge Funds	9.8	8.9	9.6	8.8	8.9	8.7	10.2	9.9	13.8	13.0	10.8	10.2
Absolute Return (ex Distressed)	10.8	10.9	11.7	11.1	9.7	9.0	9.4	8.4	12.9	11.3	11.5	10.6
Distressed Securities	3.1	2.5	2.9	2.6	2.8	2.6	2.8	1.9	2.7	2.0	2.3	2.0
Hedge Fund Structure	1.7	1.5	1.9	1.7	1.6	1.4	2.2	1.7	1.2	1.0	1.7	1.6
Private Equity Structure	1.3	0.8	1.0	0.1	1.2	0.6	0.7	0.0	1.4	1.0	0.7	0.0
Private Equity & Venture Capital	10.4	10.3	5.3	3.7	9.3	7.1	4.4	1.8	5.5	5.9	2.7	0.0
Non-Venture Private Equity	5.2	4.8	2.7	1.7	3.8	2.7	1.9	0.0	2.9	1.9	1.0	0.0
Venture Capital	4.4	3.7	1.8	0.3	4.4	1.9	1.9	0.3	1.8	1.4	1.2	0.0
Other Private Investments	0.8	0.0	0.8	0.0	1.1	0.1	0.5	0.0	0.8	0.0	0.4	0.0
Real Assets & Infl-Linked Bonds	9.8	9.4	7.3	7.7	8.5	8.5	7.8	8.3	8.8	7.6	6.5	6.3
Private Real Estate	2.7	2.4	1.2	0.1	2.1	1.3	1.3	0.0	2.0	0.0	0.7	0.0
Public Real Estate	0.5	0.0	0.5	0.0	0.5	0.0	0.5	0.0	0.3	0.0	0.7	0.0
Commodities	0.7	0.3	0.7	0.0	0.9	0.1	0.8	0.5	0.7	0.8	1.1	0.5
Inflation-Linked Bonds	0.4	0.0	0.7	0.0	0.3	0.0	0.5	0.3	0.4	0.0	0.5	0.0
Private Oil & Gas/Natural Resources	2.5	2.2	1.4	0.3	1.8	1.0	1.1	0.0	2.2	1.4	0.7	0.0
Timber	0.4	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.1	0.0	0.0	0.0
Public Energy/Natural Resources	2.6	2.3	2.7	2.4	2.7	2.3	3.3	3.7	3.0	2.5	2.9	2.6
Cash & Equivalents	3.8	2.9	4.8	3.3	3.9	3.3	4.4	3.2	5.8	4.4	3.6	2.0
Other Assets	0.2	0.0	0.2	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.2	0.0

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

Exhibit 5
Detailed Asset Allocation by Asset Size: US Endowments and Foundations

As of December 31, 2015 • Percent (%)

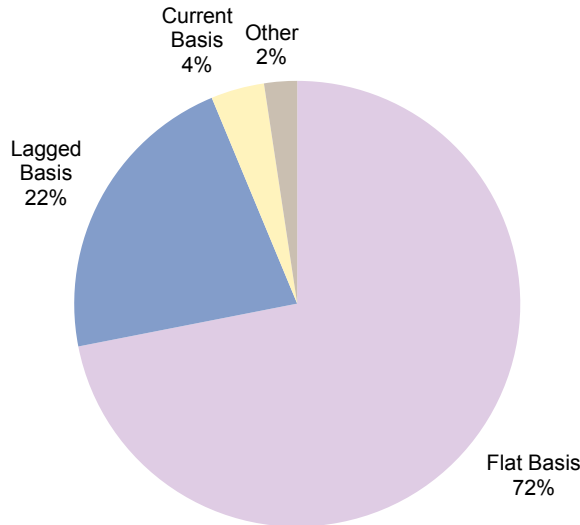
	All Endow & Foundation (n = 432)		Under \$100mm (n = 101)		\$100mm to \$200mm (n = 100)		\$200mm to \$500mm (n = 80)		\$500mm to \$1bn (n = 57)		Over \$1bn (n = 94)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
US Equity	21.9	21.4	25.3	25.5	22.1	22.0	22.8	21.9	19.6	18.8	18.6	16.5
Global ex US Equity	22.7	23.1	25.4	25.7	23.9	24.6	23.1	22.8	20.6	21.5	19.3	18.9
Developed Markets	15.9	15.9	18.5	18.7	17.1	17.1	16.1	16.4	14.1	14.6	12.6	12.4
Emerging Markets	6.8	6.9	6.8	7.1	6.8	6.9	7.0	6.9	6.6	6.9	6.6	6.6
Bonds	11.4	11.1	13.9	13.5	12.9	13.0	12.5	12.0	10.1	9.2	7.1	6.7
US Bonds	9.5	9.3	11.8	11.9	10.8	10.9	10.7	9.7	8.4	8.5	5.5	5.5
Developed Markets ex US	0.8	0.0	1.0	0.3	0.8	0.2	0.8	0.0	0.7	0.0	0.8	0.0
Emerging Markets	0.6	0.0	0.8	0.0	0.8	0.4	0.5	0.0	0.5	0.0	0.3	0.0
High-Yield Bonds	0.5	0.0	0.5	0.0	0.5	0.0	0.4	0.0	0.4	0.0	0.5	0.0
Hedge Funds	20.7	19.9	20.6	19.0	20.7	19.2	19.5	19.1	21.8	21.8	21.2	21.0
Long/Short Hedge Funds	10.0	9.2	11.5	11.1	10.2	9.9	8.1	7.6	9.1	8.5	10.3	8.7
Absolute Return (ex Distressed)	10.7	10.1	9.2	7.9	10.5	9.8	11.4	10.3	12.7	12.4	10.8	11.0
Distressed Securities	2.9	2.4	1.8	1.5	2.6	2.1	2.7	2.5	3.8	3.4	3.9	3.4
Hedge Fund Structure	1.7	1.5	1.4	1.2	1.7	1.4	1.5	1.4	1.9	1.8	2.2	2.0
Private Equity Structure	1.1	0.4	0.4	0.0	0.9	0.4	1.1	0.7	1.9	1.2	1.7	1.2
Private Equity & Venture Capital	7.6	6.3	2.1	0.0	5.5	3.6	6.9	6.5	10.8	9.7	14.6	14.2
Non-Venture Private Equity	3.6	2.4	0.7	0.0	2.2	1.5	3.1	2.4	5.4	5.0	7.3	7.5
Venture Capital	3.3	1.6	0.8	0.0	2.1	0.4	2.9	2.2	4.8	4.0	6.7	5.5
Other Private Investments	0.8	0.0	0.6	0.0	1.1	0.1	0.9	0.5	0.7	0.4	0.7	0.0
Real Assets & Infl-Linked Bonds	8.5	8.3	6.9	7.0	7.5	7.5	8.4	8.7	8.8	9.0	11.2	11.2
Private Real Estate	1.9	1.0	0.6	0.0	1.0	0.0	1.7	1.2	2.2	1.9	4.5	4.2
Public Real Estate	0.5	0.0	0.5	0.0	0.4	0.0	0.7	0.0	0.7	0.0	0.4	0.0
Commodities	0.8	0.3	1.2	0.8	0.9	0.7	0.8	0.1	0.5	0.1	0.6	0.0
Inflation-Linked Bonds	0.5	0.0	0.5	0.0	0.6	0.0	0.5	0.0	0.2	0.0	0.5	0.0
Private Oil & Gas/Natural Resources	1.8	1.0	0.4	0.0	1.2	0.2	1.6	1.5	2.5	2.2	3.7	3.7
Timber	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.0	0.5	0.1
Public Energy/Natural Resources	2.8	2.5	3.7	4.0	3.4	3.5	3.0	2.6	2.4	2.1	1.0	0.0
Cash & Equivalents	4.1	3.1	3.8	2.6	4.7	3.2	3.8	3.3	4.3	3.9	3.9	3.0
Other Assets	0.2	0.0	0.1	0.0	0.2	0.0	0.3	0.0	0.1	0.0	0.3	0.0

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

Exhibit 6
Performance Reporting Methodologies

As of December 31, 2015 • Methods Used to Account for Performance of Private Investments in Fourth Quarter 2015

**Performance Reporting Methodology:
US Endowments and Foundations**
(n = 335)

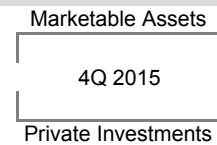


By Asset Size

	Current Basis	Flat Basis	Lagged Basis	Other
Under \$100 million <i>n</i>	2% 1	98% 47	—	—
\$100 million to \$200 million <i>n</i>	—	100% 74	—	—
\$200 million to \$500 million <i>n</i>	—	93% 62	6% 4	1% 1
\$500 million to \$1 billion <i>n</i>	9% 5	69% 37	15% 8	7% 4
Over \$1 billion <i>n</i>	8% 7	23% 21	66% 61	3% 3

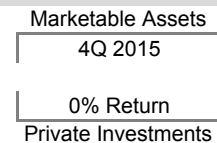
Current Basis

Total investment pool return for 4Q 2015 includes marketable asset performance and private investment performance for October 1, 2015, to December 31, 2015. All 13 institutions in our endowment universe using this methodology used estimated valuations.



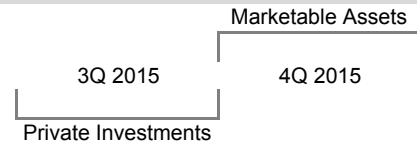
Flat Basis

Total investment pool return for 4Q 2015 includes marketable asset performance for October 1, 2015, to December 31, 2015. Private investment portion of the investment pool is represented by a flat return (0%) for October 1, 2015, to December 31, 2015.



Lagged Basis

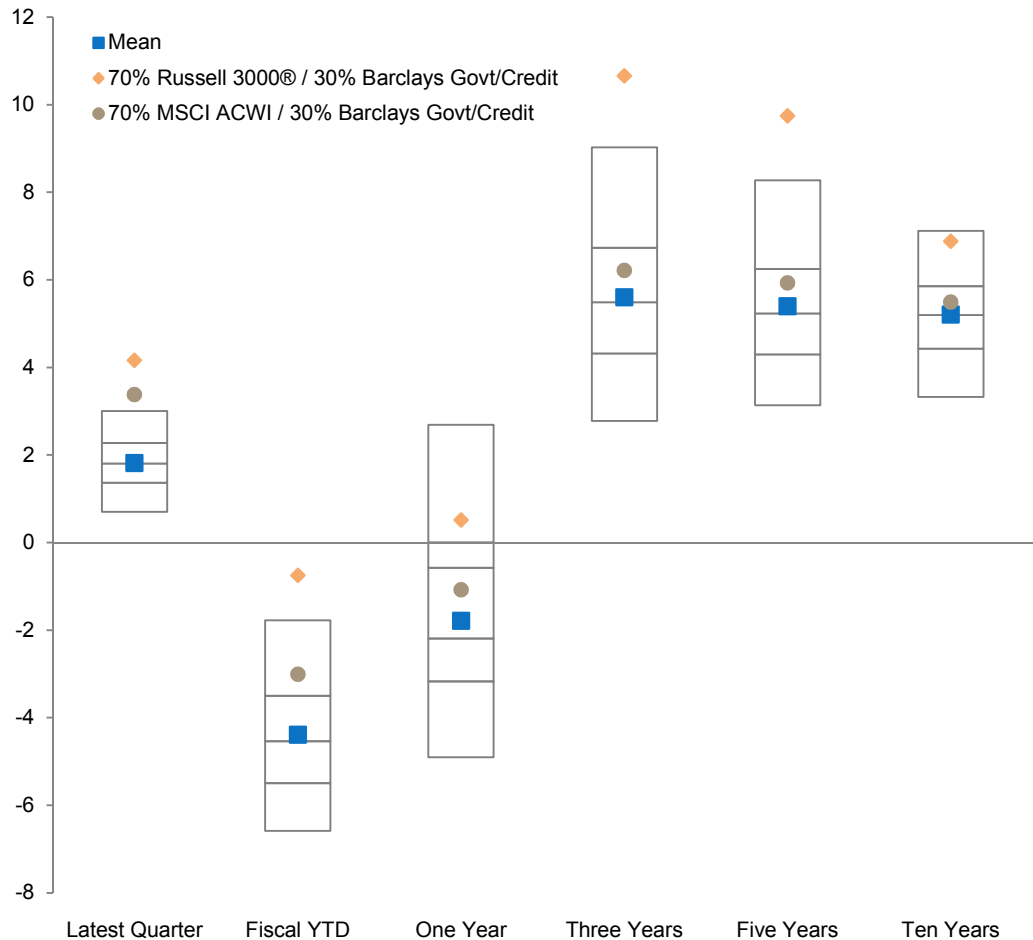
Total investment pool return for 4Q 2015 includes marketable asset performance for October 1, 2015, to December 31, 2015, and private investment performance for July 1, 2015, to September 30, 2015. Of the 73 institutions in our endowment universe using this methodology, four will restate 4Q 2015 returns to reflect private investment valuations on a current basis.



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

Notes: Private investments include total allocation to non-venture private equity, venture capital, distressed securities (private equity structure), private oil & gas/natural resources, timber, private real estate, and other private investments. Excluded from this exhibit are 97 US endowments and foundations that have no significant private investment allocations (<1% of their total investment portfolios).

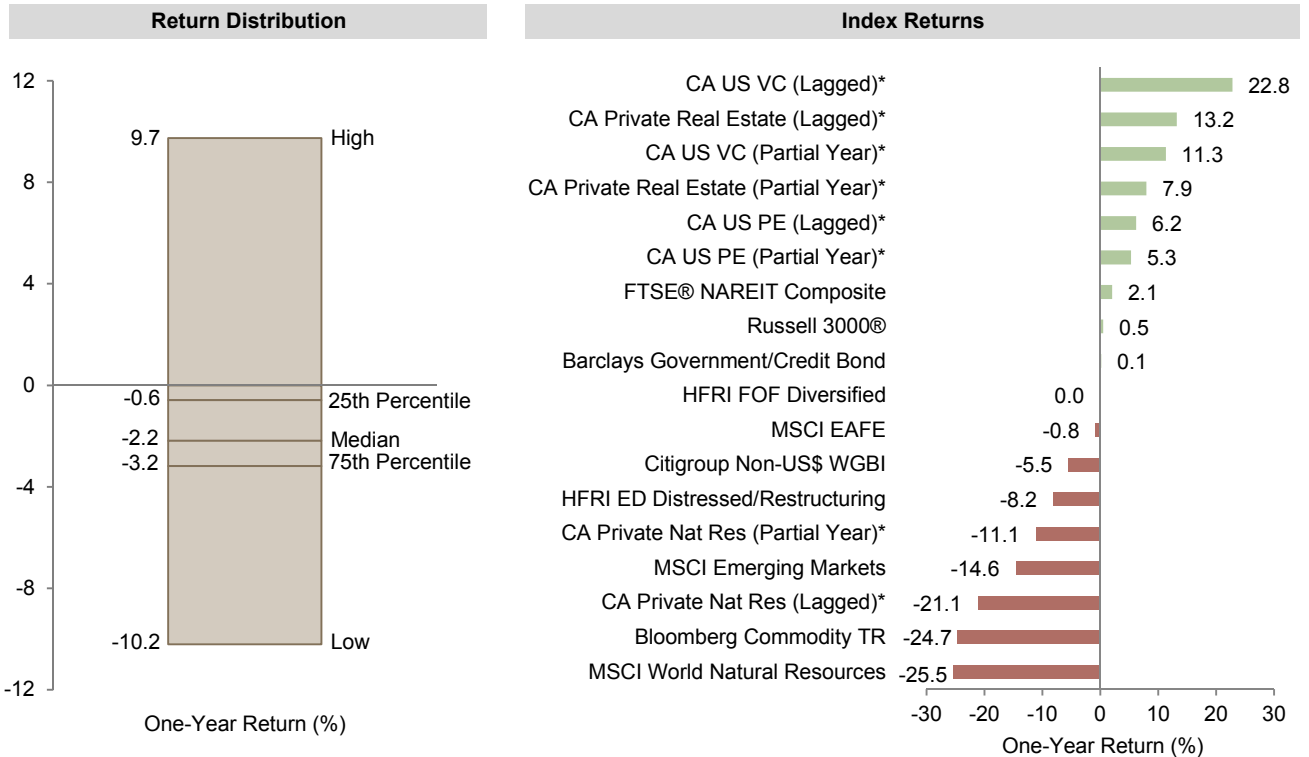
Exhibit 7
Nominal Return Percentiles: US Endowments and Foundations
 Period Ended December 31, 2015 • Percent (%)



	Latest Quarter	Fiscal YTD	One Year	Three Years	Five Years	Ten Years
5th Percentile	3.0	-1.8	2.7	9.0	8.3	7.1
25th Percentile	2.3	-3.5	-0.6	6.7	6.3	5.9
Median	1.8	-4.5	-2.2	5.5	5.2	5.2
75th Percentile	1.4	-5.5	-3.2	4.3	4.3	4.4
95th Percentile	0.7	-6.6	-4.9	2.8	3.1	3.3
Mean	1.8	-4.4	-1.8	5.6	5.4	5.2
<i>n</i>	432	432	432	425	417	378
70% Russell 3000® / 30% Barclays Govt/Credit	4.2	-0.7	0.5	10.7	9.7	6.9
70% MSCI ACWI / 30% Barclays Govt/Credit	3.4	-3.0	-1.1	6.2	5.9	5.5

Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.
 Notes: Three-, five-, and ten-year returns are annualized. The 70/30 simple portfolio benchmarks are calculated assuming rebalancing occurs on the final day of each quarter.

Exhibit 8
One-Year Asset Allocation of Top and Bottom Performers: US Endowments and Foundations
 As of December 31, 2015



Quartile	US Equity	DM ex US Equity	EM Equity	Bonds	Hedge Funds	Dist Sec	PE & VC	Private RA	Public RA & ILBs	Cash	Other
Top Quartile	18.0	12.1	6.5	7.6	22.7	3.8	14.1	8.4	2.3	4.5	0.2
2nd Quartile	22.2	15.3	6.5	10.9	21.8	3.1	7.6	4.0	4.1	4.2	0.1
3rd Quartile	22.9	16.6	7.2	13.1	19.5	3.0	5.4	2.7	5.8	3.8	0.1
Bottom Quartile	24.7	17.9	7.8	13.8	18.6	2.0	2.4	1.4	7.0	4.2	0.3
E&F Universe Mean	21.9	15.5	7.0	11.3	20.7	3.0	7.4	4.1	4.8	4.2	0.2

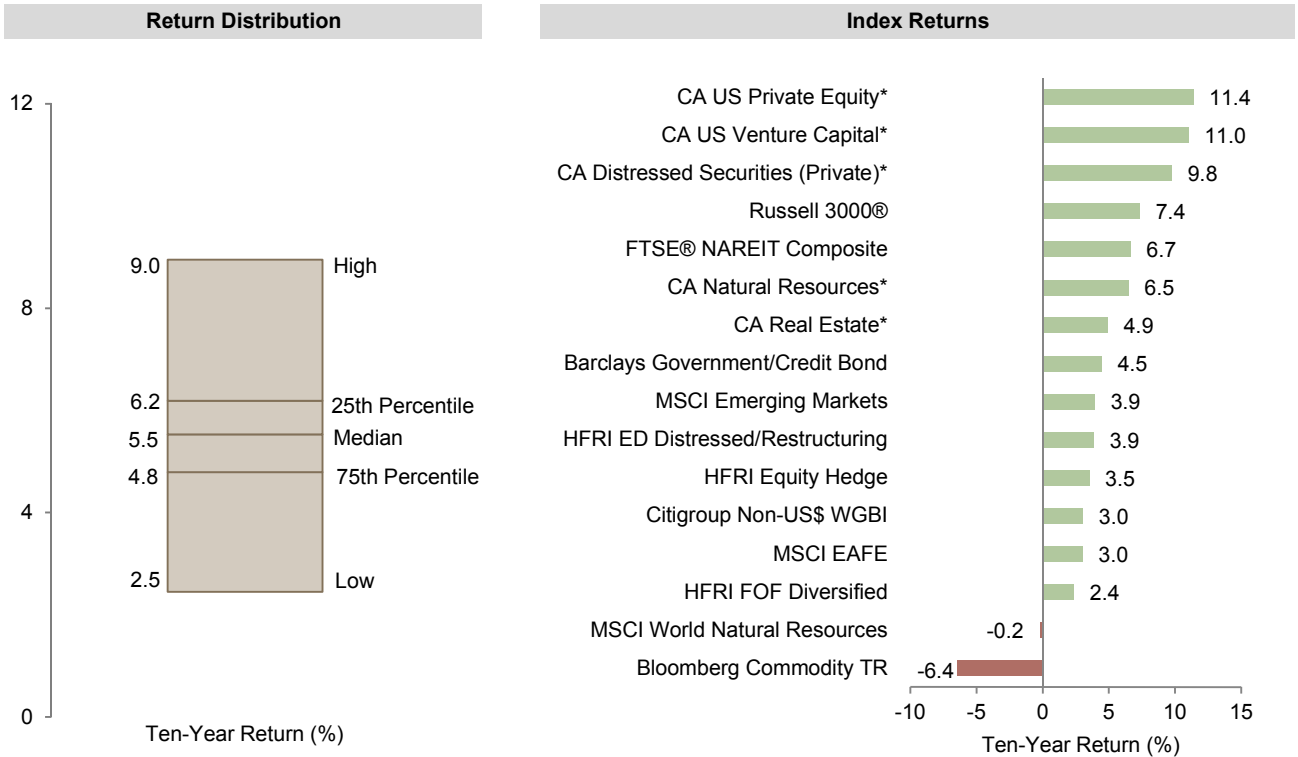
Divergence of Asset Allocation from Mean

Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Bloomberg L.P., Cambridge Associates LLC, Citigroup Global Markets, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., and the National Association of Real Estate Investment Trusts. MSCI data provided "as is" without any express or implied warranties.

Notes: CA US endowment and foundation universe performance quartiles are based on the trailing one-year return as of December 31, 2015. Mean allocations are for the 2014 and 2015 December 31 periods. Analysis includes data for 417 institutions.

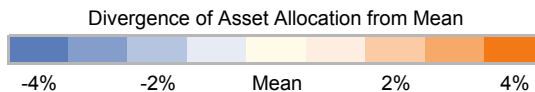
* Private investment returns are pooled end-to-end returns. Partial year return represents the period 1/1/15–9/30/15 and lagged return represents the period 10/1/14–9/30/15. These periods align with endowments and foundations using the flat and lagged methodologies, respectively, to report private investment performance. See Exhibit 6 for more detail on these reporting methodologies.

Exhibit 9
Trailing Ten-Year Asset Allocation of Top and Bottom Performers: US Endowments and Foundations
 As of December 31, 2015



Mean Asset Allocation by Performance Quartile (%): December 31, 2005 to December 31, 2015

Quartile	US Equity	DM ex US Equity	EM Equity	Bonds	Hedge Funds	Dist Sec	PE & VC	Private RA	Public RA & ILBs	Cash	Other
Top Quartile	19.2	12.3	5.9	10.4	19.7	3.4	12.0	8.7	4.0	4.1	0.3
2nd Quartile	22.9	13.3	6.0	11.5	22.0	3.2	7.7	4.3	5.0	3.6	0.4
3rd Quartile	24.8	16.5	6.0	15.4	15.2	2.5	5.2	3.3	7.4	3.4	0.3
Bottom Quartile	24.9	16.7	5.5	18.9	15.8	1.9	3.5	1.9	7.0	3.4	0.4
E&F Universe Mean	22.9	14.7	5.9	14.0	18.2	2.8	7.1	4.6	5.8	3.6	0.3

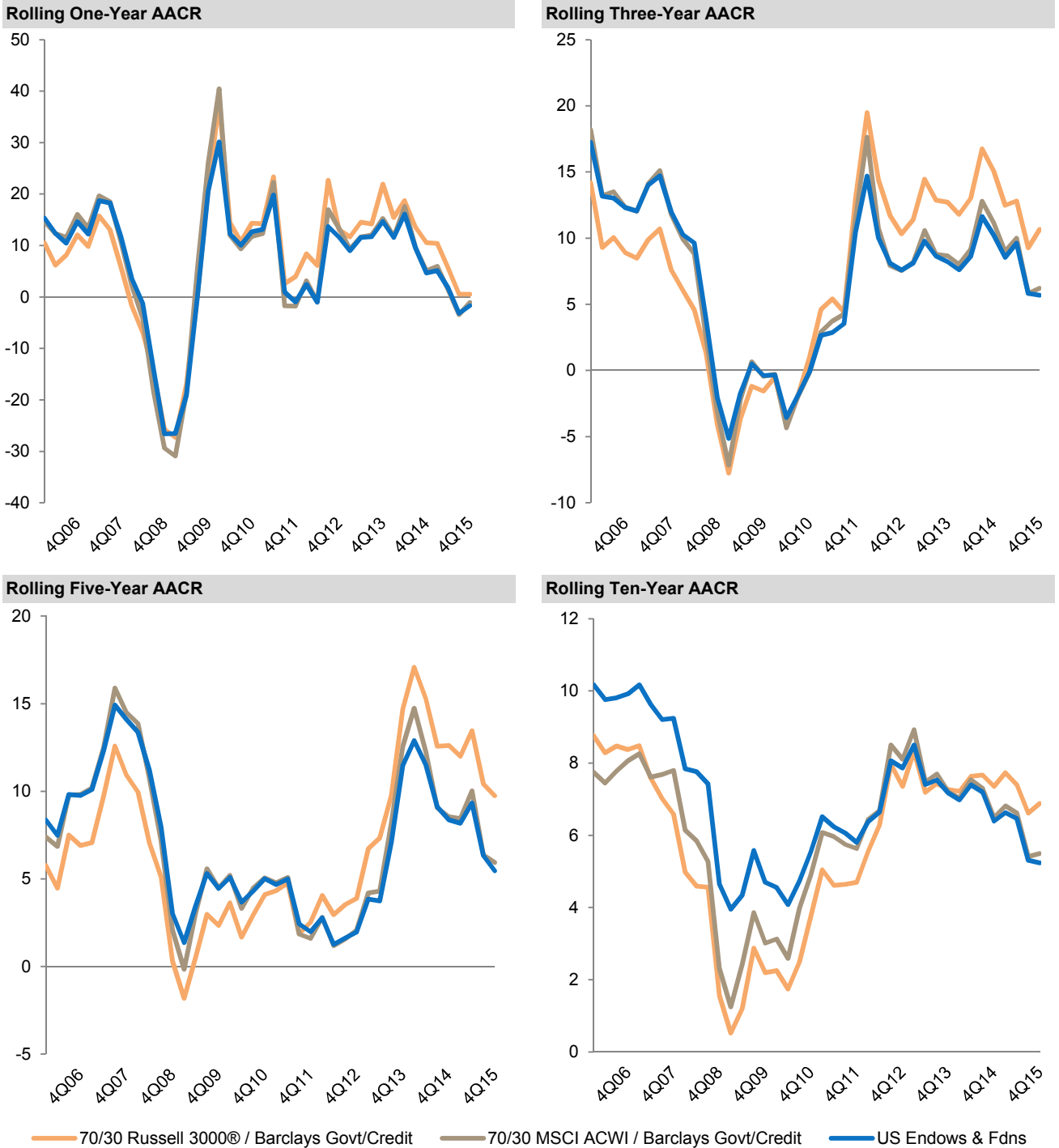


Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Bloomberg L.P., Cambridge Associates LLC, Citigroup Global Markets, Frank Russell Company, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., and the National Association of Real Estate Investment Trusts. MSCI data provided "as is" without any express or implied warranties.

Notes: CA US Endowment and Foundation Universe performance quartiles are based on the trailing ten-year return as of December 31, 2015. Mean allocations are for the 11 December 31 periods from 2005 and 2015. Analysis includes data for 201 institutions.

* Private investment returns are pooled end-to-end returns. Returns are for the period January 1, 2006, to September 30, 2015.

Exhibit 10
Nominal Returns Over Time: US Endowments and Foundations
 Periods Ended First Quarter 2006 – Fourth Quarter 2015 • Percent (%)



Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.
 Note: The 70/30 simple portfolio benchmarks are calculated assuming rebalancing occurs on the final day of each quarter.

Exhibit 11

Nominal Total Return Summary by Peer Group: US Endowments and Foundations

Periods Ended December 31, 2015 • Percent (%)

	Latest Quarter	Calendar YTD	Average Annual Compound			
			One Year	Three Years	Five Years	Ten Years
Colleges & Universities						
5th Percentile	2.8	-1.9	3.1	9.4	8.6	7.4
25th Percentile	2.2	-3.2	-0.1	7.2	6.9	6.0
75th Percentile	1.3	-5.3	-3.0	5.0	4.9	4.6
95th Percentile	0.4	-6.5	-4.4	3.4	3.7	3.8
Mean	1.7	-4.3	-1.3	6.2	5.9	5.4
Median	1.7	-4.4	-1.7	6.2	5.7	5.4
<i>n</i>	148	148	148	147	144	138
Cultural & Environmental						
5th Percentile	3.3	-2.3	1.6	8.4	7.4	6.8
25th Percentile	2.7	-3.7	-1.1	6.6	6.1	5.8
75th Percentile	1.5	-5.4	-2.9	4.6	4.4	4.4
95th Percentile	1.1	-6.1	-4.3	3.0	3.1	3.3
Mean	2.1	-4.5	-1.9	5.6	5.3	5.1
Median	2.1	-4.6	-2.0	5.4	5.2	5.3
<i>n</i>	54	54	54	54	53	49
Foundations						
5th Percentile	3.1	-1.4	3.6	9.4	8.3	7.4
25th Percentile	2.3	-3.4	-0.7	6.7	6.3	6.1
75th Percentile	1.4	-5.3	-3.1	4.5	4.3	4.5
95th Percentile	0.9	-6.4	-4.5	3.0	3.1	3.2
Mean	1.8	-4.2	-1.6	5.8	5.4	5.3
Median	1.8	-4.5	-2.2	5.5	5.2	5.2
<i>n</i>	109	109	109	106	104	89
Health Care						
5th Percentile	2.6	-2.7	0.0	7.4	6.9	6.7
25th Percentile	2.2	-3.7	-0.9	5.9	5.5	5.6
75th Percentile	1.5	-5.8	-4.0	3.4	3.8	4.1
95th Percentile	1.0	-7.0	-5.4	2.7	3.2	3.5
Mean	1.9	-4.8	-2.6	4.8	4.9	4.9
Median	1.9	-4.8	-2.5	4.6	5.0	4.8
<i>n</i>	43	43	43	43	43	39
Independent Schools						
5th Percentile	3.0	-1.1	1.0	7.6	8.2	6.5
25th Percentile	2.2	-2.9	-0.4	6.7	6.3	5.9
75th Percentile	1.4	-5.0	-3.2	4.0	3.9	4.5
95th Percentile	0.9	-6.4	-5.5	3.2	3.5	3.4
Mean	1.8	-3.9	-1.9	5.2	5.2	5.3
Median	1.9	-4.0	-1.8	4.8	4.7	5.5
<i>n</i>	27	27	27	27	27	25
Other Nonprofits						
5th Percentile	3.0	-2.0	0.3	6.8	6.1	5.9
25th Percentile	2.3	-4.0	-2.1	5.4	5.3	5.3
75th Percentile	1.3	-5.7	-3.7	3.5	3.5	4.1
95th Percentile	0.9	-7.0	-5.3	2.1	2.7	3.4
Mean	1.8	-4.8	-2.7	4.5	4.6	4.7
Median	1.8	-4.8	-2.7	4.4	4.5	4.7
<i>n</i>	51	51	51	48	46	38

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

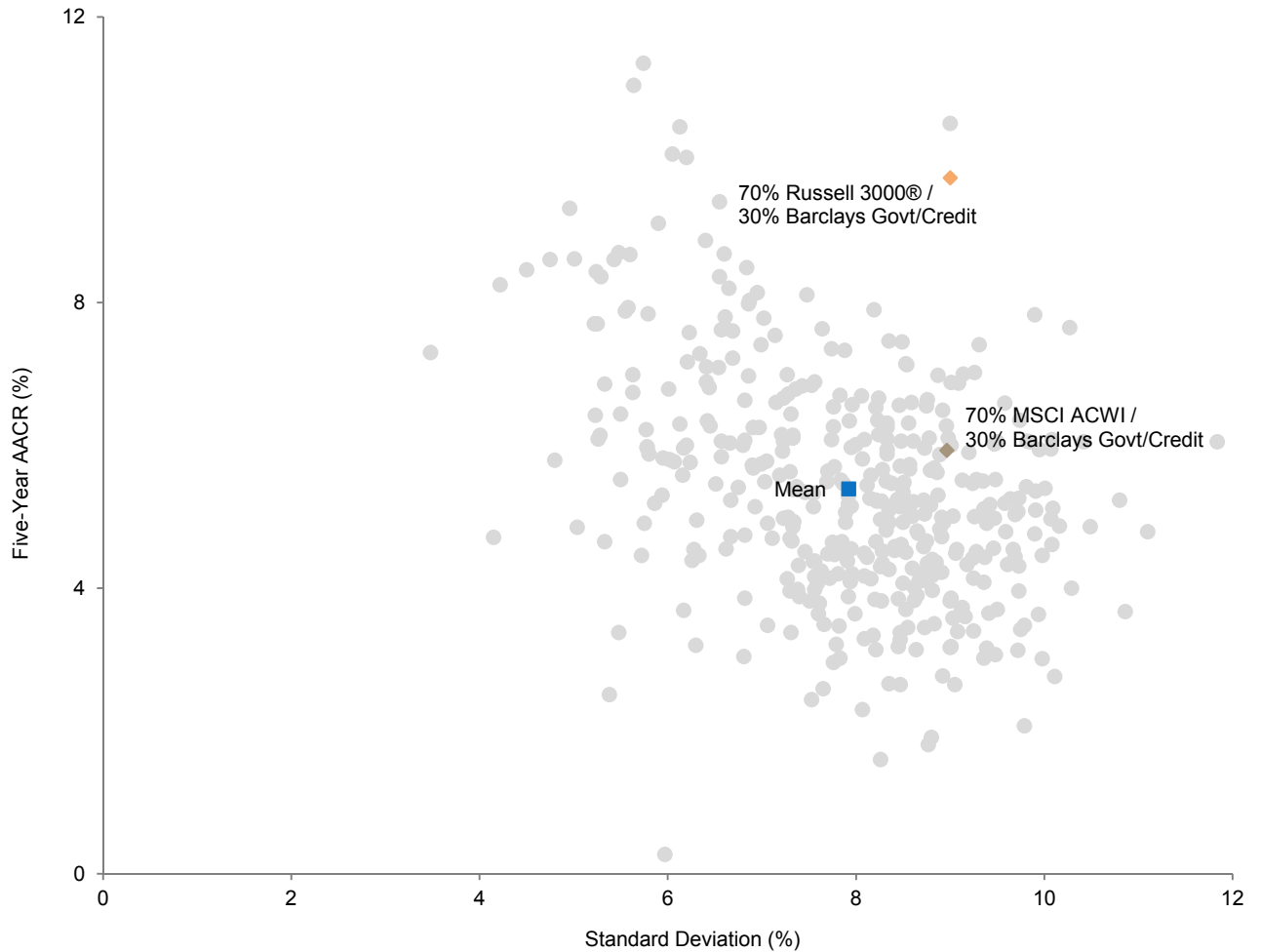
Exhibit 12**Nominal Total Return Summary by Asset Size: US Endowments and Foundations**

Periods Ended December 31, 2015 • Percent (%)

	Latest Quarter	Fiscal YTD	Average Annual Compound			
			One Year	Three Years	Five Years	Ten Years
Under \$100 Million						
5th Percentile	3.1	-2.8	-0.6	6.5	6.1	6.1
25th Percentile	2.5	-4.2	-2.1	5.3	5.1	5.0
75th Percentile	1.5	-5.8	-4.0	3.5	3.5	3.9
95th Percentile	1.0	-6.9	-5.1	2.3	2.6	2.8
Mean	2.0	-5.0	-3.0	4.4	4.3	4.5
Median	2.1	-5.2	-2.9	4.4	4.4	4.3
<i>n</i>	101	101	101	96	92	75
\$100 Million to \$200 Million						
5th Percentile	3.0	-3.0	-0.0	7.4	6.6	6.4
25th Percentile	2.3	-4.1	-1.3	5.9	5.5	5.5
75th Percentile	1.4	-5.7	-3.4	3.7	3.9	4.3
95th Percentile	0.9	-6.8	-5.0	2.8	3.1	3.3
Mean	1.9	-4.9	-2.5	4.8	4.7	4.9
Median	1.9	-4.9	-2.6	4.8	4.7	4.8
<i>n</i>	100	100	100	99	99	91
\$200 Million to \$500 Million						
5th Percentile	3.0	-2.6	0.1	7.8	6.9	6.5
25th Percentile	2.3	-4.0	-1.4	6.4	6.1	5.6
75th Percentile	1.6	-5.4	-3.2	4.6	4.6	4.6
95th Percentile	0.9	-6.8	-5.0	3.3	3.5	3.6
Mean	1.9	-4.7	-2.4	5.5	5.3	5.1
Median	1.9	-4.7	-2.4	5.5	5.2	5.1
<i>n</i>	80	80	80	79	77	73
\$500 Million to \$1 Billion						
5th Percentile	2.7	-2.0	1.6	8.3	7.8	6.9
25th Percentile	2.1	-3.2	-0.2	6.8	6.2	5.8
75th Percentile	1.2	-4.9	-2.6	5.2	5.0	4.9
95th Percentile	0.7	-5.8	-3.7	3.4	3.8	4.1
Mean	1.7	-4.2	-1.4	6.0	5.8	5.4
Median	1.6	-4.3	-1.9	5.9	5.6	5.5
<i>n</i>	57	57	57	57	55	51
Over \$1 Billion						
5th Percentile	2.7	-1.0	4.7	10.2	9.6	7.9
25th Percentile	2.1	-2.2	2.1	8.8	8.1	6.9
75th Percentile	1.0	-4.0	-0.9	6.3	6.1	5.5
95th Percentile	0.3	-5.2	-3.1	4.8	4.5	4.8
Mean	1.5	-3.1	0.5	7.5	7.0	6.2
Median	1.6	-3.0	0.1	7.5	7.0	6.0
<i>n</i>	94	94	94	94	94	88

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

Exhibit 13
Standard Deviation and Sharpe Ratio: US Endowments and Foundations
 Five Years Ended December 31, 2015



	AACR (%)	Standard Deviation (%)	Sharpe Ratio
5th Percentile	8.3	9.9	1.39
25th Percentile	6.3	8.9	0.85
75th Percentile	4.3	7.0	0.53
95th Percentile	3.1	5.5	0.39
Mean	5.4	7.9	0.74
Median	5.2	8.2	0.66
<i>n</i> = 416			
70% Russell 3000® / 30% Barclays Govt/Credit	9.7	9.0	1.08
70% MSCI ACWI / 30% Barclays Govt/Credit	5.9	9.0	0.68

Sources: Endowment and foundation data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Frank Russell Company, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties. Sharpe ratio calculated using data from BofA Merrill Lynch.

Notes: This exhibit includes only those institutions that have provided trailing quarterly returns. The 70/30 simple portfolio benchmarks are calculated assuming rebalancing occurs on the final day of each quarter.

Absolute Return: The use of different strategies (e.g., global macro, market neutral, open mandate) to produce a positive return regardless of the direction and fluctuation of capital markets. Common techniques include using arbitrage, derivatives, futures, leverage, options, short selling, and unconventional assets.

Bonds (Fixed Income): Includes long-term promissory notes that cannot be exchanged for other assets, government bonds, preferred stocks, structured debt, and derivatives where bonds are the underlying assets. Generally earn interest paid semiannually and are repaid at the principal (par) value. Does not include mortgage real estate.

Cash & Equivalents: Highly liquid, virtually risk-free assets with maturities of less than one year (e.g., certificates of deposit, commercial paper, nonconvertible bonds, and Treasury bills). Manager-held discretionary cash is included in the asset class category for which that manager's strategy is classified (with the exception of multi-strategy funds in which assets are allocated across multiple asset classes).

Commodities: Diversified baskets of fully collateralized, long-only, commodity futures contracts. Includes funds whose value is based on the spot price of a commodity.

Developed Markets: Markets within countries that have an established economic infrastructure.

Distressed Securities: Securities of companies that are currently in default, bankruptcy, financial distress, or a turnaround situation.

Emerging Markets: Typically includes countries that have an underdeveloped or developing infrastructure with significant potential for economic growth and increased

capital markets participation by foreign investors.

Emerging Markets Debt: Debt instruments of emerging markets countries and issuers, including US\$-denominated and local currency bonds.

Emerging Markets Equity: Equity securities of emerging markets countries; considered emerging even if the equity market is fully functional and well regulated.

Equities: Ownership positions in companies that can be traded in public markets. Often produce current income, which is paid in the form of quarterly dividends. The holders' claims are subordinate to the claims of preferred stockholders and bondholders. Includes convertible bonds if they are held as an opportunistic means of eventually acquiring a company's stock. Also includes futures, options, rights, and warrants where the underlying assets are equities.

Faculty Mortgages: Homeownership loans issued by an institution to faculty or staff.

High-Yield Bonds: Bonds regarded, on balance, as predominantly speculative with respect to capacity to pay interest and repay principal in accordance with the terms of the obligation. Typically, these bonds have a credit rating of BB or lower and pay higher yields because they are more risky than investment-grade bonds. Also includes collateralized bond obligations (CBOs).

Inflation-Linked Bonds: Fixed coupon bonds that earn interest paid semi-annually on inflation-adjusted principal.

Long/Short Hedge Funds: Portfolios with long positions in undervalued companies and short positions in overvalued companies to capture the disparity in prospective returns, while maintaining a low level of overall market risk.

Long-Term Investment Portfolio: The group of assets that an institution deems best represents its investment policies and endowment asset allocation and returns. These assets should be subject to frequent market valuation and may include operating funds. Pooled income funds and charitable remainder trusts should be excluded if the investment strategy varies from the institution's asset allocation policy. Assets that cannot be fairly valued such as artwork, copyrights, and patents should also be excluded.

Non-Venture Private Equity: Through negotiation or tender offer, a takeover of a majority percentage of a company's equity with the purpose of acquiring its assets and operations. Includes leveraged buyouts (LBOs).

Other Assets: Should only include assets that cannot be classified as one or more of the other asset classes.

Other Private Investments: Includes funds that are invested across multiple private investments and cannot be allocated to a single asset class. Includes multi-strategy fund-of-funds and secondary-market private investments.

Private Investments: Investments that are not traded in the public market including, but not limited to, leveraged buyouts, venture capital, private real estate, private distressed securities, and private energy and natural resources.

Private Oil & Gas/Natural Resources: Funds created to invest in the exploration or development of energy-related reserves and natural resources.

Private Real Estate: Includes ownership positions in land and buildings as well as private operating companies. May also include equity-like investments in mortgages or land leases that include substantial participation in revenues and capital appreciation. Does not include equity

mortgages such as collateralized mortgage obligations (CMOs), mortgage-backed securities, publicly traded REITs, or other public real estate.

Public Energy/Natural Resources: Includes marketable energy funds and natural resources.

Public Real Estate: Includes REITs and other public real estate equity such as umbrella partnership REITs (UPREITs) and other public operating companies (REOCs).

Real Returns: The real, or inflation-adjusted, rate of return for a given investment is calculated by dividing the nominal total return by the appropriate deflator for the same time period. Throughout this report, the measure used for this purpose is the Consumer Price Index (CPI). Note that simply subtracting CPI from the nominal total return does not result in an accurate computation of real total return. The formula is:

$$\frac{1 + \text{Nominal Total Return}}{1 + \text{CPI}} - 1 = \frac{\text{Real}}{\text{Total Return}}$$

Sharpe Ratio: The excess return, or the return over the risk-free rate, on a portfolio divided by the total volatility as measured by the standard deviation of 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 standard deviation of returns). The higher the Sharpe ratio (assuming the ratio is above zero), 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.

Standard Deviation: The standard deviation of a portfolio's return is used as a measure of its total risk (measured by variability of returns). It is a measure of the extent to which returns vary from their average. The larger the standard deviation, the wider the range of likely returns and the greater the risk implicit in the portfolio.

Timber: Funds created to invest in timber-related business. Usually limited partnerships.

Total Return: The sum of income earned and appreciation, both realized and unrealized, for a specified period of time. Preferred method of calculation uses time-weighted cash flows.

Traditional Assets: Include US equities, non-US equities (including emerging markets), US investment-grade bonds, non-dollar bonds, high-yield bonds, emerging markets debt, and all cash and cash equivalents.

Venture Capital: Investments in private securities of new companies or companies considered to be in the early stages of growth; these investments may have high risk and the potential for high return. ■