



# Annual Analysis of Cultural and Environmental Investment Pool Returns

Fiscal Year 2014

CAMBRIDGE



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Fiscal Year 2014

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**Investment Portfolio Returns**

Commentary	1
1 Summary of Long-Term Investment Portfolio Returns	9
2 Long-Term Investment Portfolio Nominal Return Percentiles	10
3 Summary of Long-Term Investment Portfolio Nominal Return Percentiles by Asset Size	11
4 Dispersion of Participants' Asset Class Returns	12
5 Analysis of Top and Bottom Performers: Asset Allocation	13
6 Analysis of Top and Bottom Performers: Asset Class Returns	14
7 Performance Reporting Methodologies	15
8 Calculation of Net Returns	16
9 Policy Portfolio Benchmarking	17
10 Frequently Used Components of Policy Portfolio Benchmarks	18
11 Risk/Return and Sharpe Ratio	19

**Portfolio Asset Allocation**

Commentary	20
12 Asset Allocation Percentiles	23
13 Summary Asset Allocation by Asset Size	24
14 Historical Mean Asset Allocation Trends	25
15 Changes in Target Asset Allocation by Asset Size	26
16 Uncalled Capital Committed to Private Investment Funds	27

**Investment Management Structures**

Commentary	28
17 Number of External Managers and Investment Vehicles	30
18 Dispersion in Number of Managers for Selected Asset Classes	31
19 Externally Managed Investment Pool Holdings by Strategy	32
20 Portfolio Implementation: Hedge Funds	33
21 Portfolio Implementation: Private Investments	34
22 Portfolio Implementation: Traditional Equities and Bonds	36

<b>Additions to and Withdrawals from the LTIP</b>	
Commentary	38
23 Net Flow Rate Comparison	41
24 Additions to and Withdrawals from the Long-Term Investment Portfolio	42
25 Spending Policy Types	43
26 Target Spending Rates for Market Value–Based Spending Policies	44
27 Changes in Target Spending Rates	45
28 Smoothing Periods for Market Value–Based Spending Policies	46
29 Characteristics of Constant Growth and Hybrid Spending Policies	47
30 Long-Term Investment Portfolio Support of Operations	48
<b>Detailed Data by Institution Code</b>	
Commentary	49
31 Total Return by Institution Organized by Private Investment Performance Methodology	50
32 Nominal and Real Return by Institution	52
33 Nominal and Real Return After Spending by Institution	54
34 Nominal Total Return, Standard Deviation, and Sharpe Ratio by Institution	56
35 Calculation of Net Returns by Institution	58
36 Detailed Asset Allocation by Institution	60
37 Target Asset Allocation by Institution	64
38 Net Flow Rate by Institution	66
<b>Notes on the Data</b>	67
<b>Glossary</b>	69
<b>Participating Institutions</b>	72

## Fiscal Year 2014 Returns

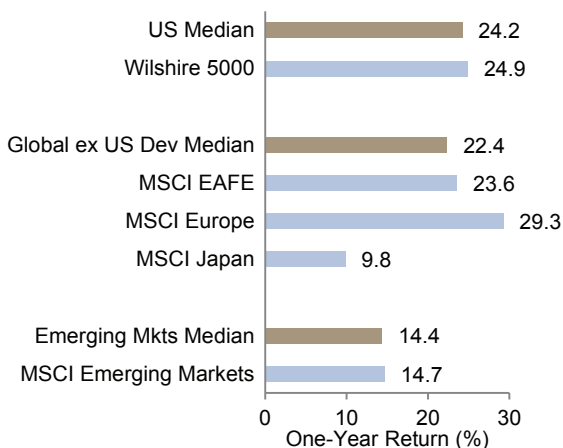
The mean fiscal year 2014 total return for participants in this study was 16.3% (Exhibit 1), the fourth period of double digit performance in the last five fiscal years. There was some variation in average returns among endowments of disparate asset sizes. Institutions with assets over \$300 million reported an average return of 16.9% while those with assets under \$100 million reported 15.8% (Exhibit 3). After factoring in inflation of 2.1% in fiscal year 2014 (as measured by the Consumer Price Index), the mean real return for all respondents is adjusted to 13.9%.

In this year's survey, we asked respondents to provide composite returns for the major asset classes in their portfolio. The charts in this section provide fiscal year 2014 median performance for the participant group across these asset classes alongside returns for relevant indexes (all index returns in US\$ terms).

**Public Equity.** Equity-oriented investments continued to drive endowment performance in fiscal year 2014. Returns for public equity

### Public Equity: Median Participant Return Versus Index Returns

Trailing One-Year as of June 30, 2014



Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data provided by MSCI Inc. and Wilshire Associates. MSCI data provided "as is" without any express or implied warranties.

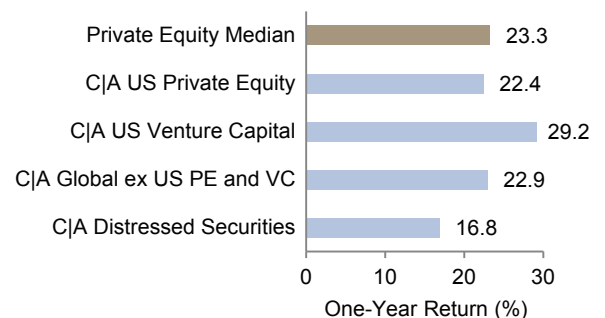
indexes were above 20% in most developed countries. Among participants in this study, median performance for US equities was 24.2%, slightly lower than the Wilshire 5000 Index. While returns in Europe were nearly 30%, lower returns in Japan resulted in global ex US equities underperforming US markets. Median participant performance for global ex US developed equities was 22.4%, slightly lagging the MSCI EAFE Index. Emerging markets equities again lagged developed markets in fiscal year 2014, with the median participant return at 14.4%.

**Private Equity.** For participants in this study, median performance for private equities was 23.3% in fiscal year 2014.<sup>1</sup> Historically, there has been considerably more variation in private equity fund returns when compared to public equities, underscoring the importance of manager selection within this strategy. Excluding outliers that make up the top and bottom 10% of participants, private equity

<sup>1</sup> Throughout this section of the report, participants' private equity performance statistics also include venture capital and distressed securities that are invested through a private investment vehicle. All private investment return statistics in this study are reported as an internal rate of return (IRR).

### Private Equity: Median Participant Return Versus Index Returns

Trailing One-Year as of June 30, 2014



Sources: Cambridge Associates LLC and cultural and environmental institutions data as reported to Cambridge Associates LLC.

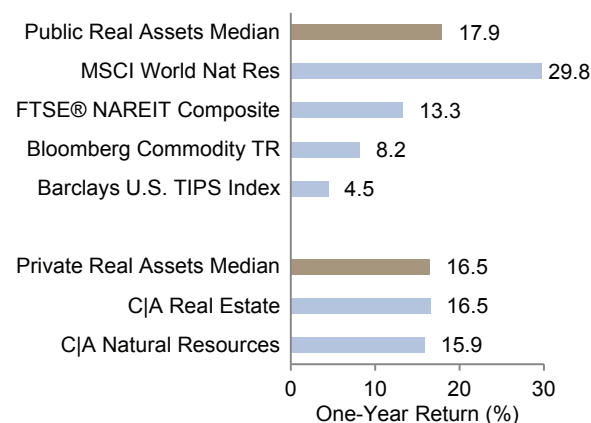


returns in fiscal year 2014 ranged from 29.5% to 16.2% (Exhibit 4). In contrast, the range of participants' total public equity returns was 23.4% to 19.9%. In addition to the wide dispersion normally associated with private equity, some of the variance in private equity returns is attributable to the broad range of strategies incorporated in this composite and each institution's custom asset mix across these strategies. The Cambridge Associates LLC US Venture Capital Index® produced the highest return (29.2%) in fiscal year 2014 among the strategies in this composite.

**Real Assets.** Public real assets consist of a diversified group of investments, including natural resources equities, commodities, public real estate, and inflation-linked bonds. The median participant return for fiscal year 2014 was 17.9%. As a result of the varying asset allocation strategies among participants, returns reported for public real assets varied considerably. Returns ranged from 27.9% at the 10th

### Real Assets: Median Participant Return Versus Index Returns

Trailing One-Year as of June 30, 2014



Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Bloomberg L.P., Cambridge Associates LLC, FTSE International Limited, and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.

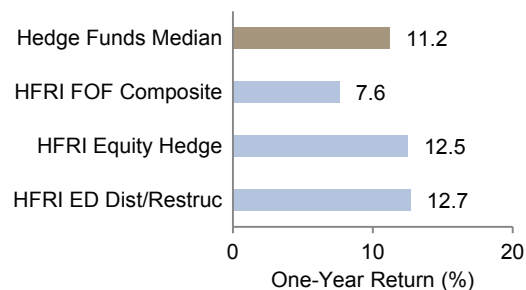
percentile to 12.7% at the 90th percentile. On an index basis, natural resource equities produced the best performance in this category, returning nearly 30%.

Median participant performance for private real assets was 16.5%. While the CA Real Estate and CA Natural Resources benchmarks produced similar returns, participants reported a wide range of returns within this category. Returns ranged from 32.4% at the 10th percentile to 4.9% at the 90th percentile.

**Hedge Funds.** The median participant saw double-digit hedge fund performance (11.2%), though hedge funds still underperformed equities in fiscal year 2014. On an index basis, equity-oriented hedge funds outperformed more diversified funds-of-funds over the one-year period. The variation in participants' hedge fund returns was considerably lower than that in private equity and real assets. Returns ranged from 13.8% at the 10th percentile to 7.9% at the 90th percentile.

### Hedge Funds: Median Participant Return Versus Index Returns

Trailing One-Year as of June 30, 2014

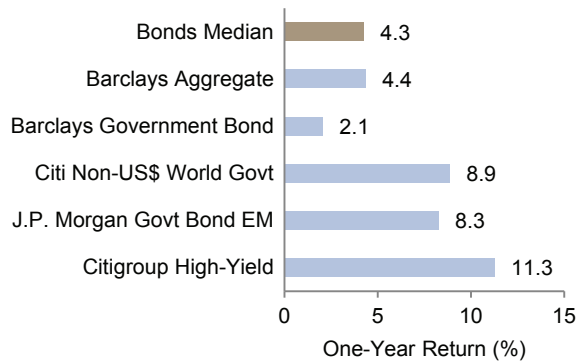


Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data are provided by Hedge Fund Research, Inc.

**Bonds.** Bonds turned in the lowest performance among the major asset classes in fiscal year 2014, with median performance at just 4.3%. Global sovereign bonds outperformed US sovereigns, while returns for high-yields bonds surpassed 11%.

### Bonds: Median Participant Return Versus Index Returns

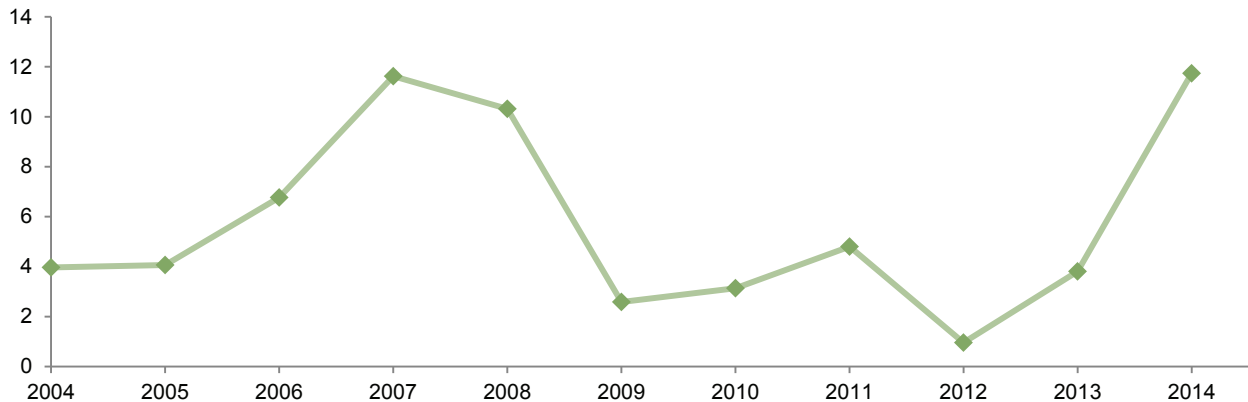
Trailing One-Year as of June 30, 2014



Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Citigroup Global Markets, and J.P. Morgan Securities, Inc.

### Rolling Five-Year Average Annual Compound Returns

Years Ended June 30 • Percent (%)



Source: Cultural and environmental institution data as reported to Cambridge Associates LLC.

Note: Analysis includes data for 33 institutions that provided returns for the last 15 years.

### Long-Term Returns

The mean average annual compound return (AACR) was 11.6% for the five-year period ending June 30, 2014. As the chart below shows, this represents the highest return over the last decade, matching the five-year period ending in fiscal year 2007. Similar to fiscal year 2007, this most recent five-year period incorporates the vast majority of a recovery following a recession in which stock markets had significantly declined.

Average returns for the ten-year period were 7.1% on a nominal basis and 4.7% on a real basis (Exhibit 1). There continues to be disparity in returns among endowments of different asset sizes for these longer time periods. Institutions with the largest asset sizes outperformed the smallest institutions by 130 basis points (bps) and 170 bps over the five- and ten-year periods, respectively (Exhibit 3).



### Analysis of Top and Bottom Performers

Many factors contribute to investor returns, including asset allocation policy, manager selection, and the timing of investments. A true attribution analysis on peer investment performance would require an extraordinary amount of detailed data. Since that level of granularity is not available for each of the institutions in this study, we cannot perform attribution analysis that attempts to deconstruct returns into precise components. However, our data do allow us to make broader observations that can help illuminate the main drivers of performance for the fiscal year 2014 period. In the following section, we present analysis on some of these main factors that impact peer investment return statistics.

#### Performance Attribution: Asset Allocation.

The importance of an asset allocation mix and its contributions to performance cannot be understated. Equity-oriented investments continued to produce strong returns in fiscal year 2014. Endowments that entered the year with higher equity allocations tended to achieve better investment performance.

Exhibit 5 breaks the participant group down into four quartiles based on fiscal year 2014 investment performance and displays the beginning year average asset allocation of each quartile. The greatest disparity in allocations was within US equity. Institutions that posted a trailing one-year return in the top quartile entered the year with the highest average allocation to US equity (28.3%), nearly 4 ppts higher than the second-highest-performing quartile and over 8 ppts higher than the bottom-performing quartile. Institutions in the top quartile also had the highest average allocation to private equity and venture capital (5.8%). Conversely, asset classes with lower

or no equity exposure underperformed in 2014. Institutions in the bottom quartile of performers had the highest average allocation to bonds, hedge funds, and cash.

#### Performance Attribution: Asset Class

**Performance.** In addition to an asset class mix that was better suited for the 2014 return environment, top performers also tended to report better performance in underlying asset classes. Exhibit 6 narrows the peer group down into the same four quartiles based on total portfolio performance for fiscal year 2014 and presents median asset class returns for each quartile. The median return for the top quartile of performers surpassed the median return of the total participant group in all but one of the major asset classes. In contrast, the median return for the bottom quartile of performers trailed the overall median in all but two asset classes. The largest outperformance for the top quartile of performers was in US equity, where the median return for top performers was nearly 200 bps greater than the median return for the total peer group.

#### Benchmarking

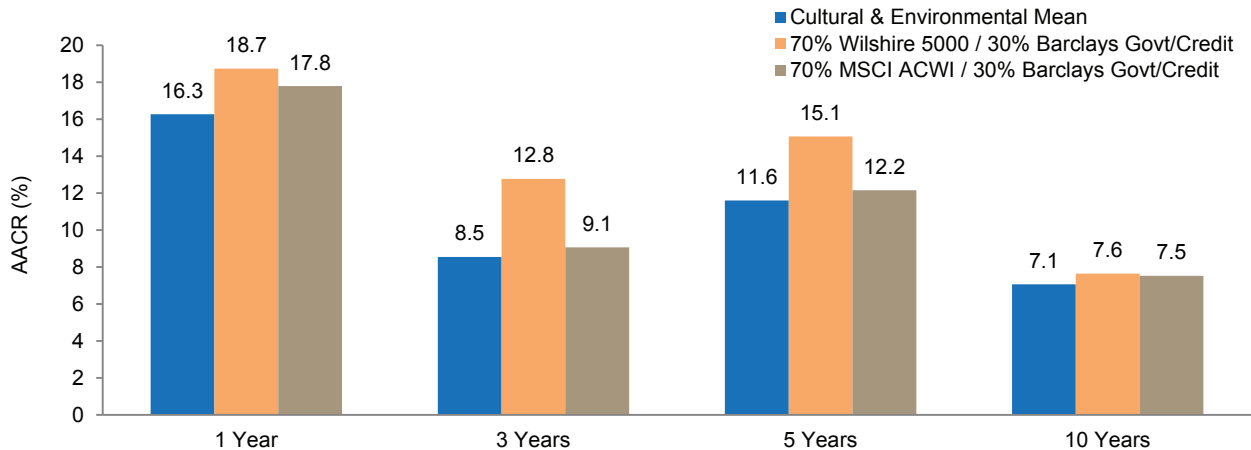
##### Relative Returns: Simple Portfolio

**Benchmark.** Since the stock market bottom on March 9, 2009, US equities have been among the top-performing investments. Consequently, diversified endowment portfolios have considerably lagged a simple 70/30 benchmark that uses a US index for the equity component.

As the chart on the next page shows, endowments have fared better against a 70/30 benchmark that uses a global equity index, although the five-year mean return (11.6%) still lags the overall benchmark (12.2%). Over the ten-year period, the mean return underperformed the domestic and global benchmarks by 50 bps and 40 bps, respectively.

## Mean Returns Versus 70/30 Simple Benchmarks

As of June 30, 2014 • Percent (%)



Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data provided by Barclays, MSCI Inc., Thomson Reuters Datastream, and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties.

Note: Number of participants providing returns over the one-, five-, ten-, and 20-year time periods were 53, 53, 50, and 46, respectively.

### Relative Returns: Policy Portfolio

**Benchmark.** Each institution has its own blend of unique characteristics and risk tolerances. Consequently, investment policies will vary, leading to different asset allocation structures for institutions that might otherwise be considered worthy peers. While performance results of peers can be informative, they are not necessarily the most effective benchmark to evaluate an institution's investment performance. The comparison of an institution's return to its policy portfolio benchmark is the true mark for determining whether an endowment is being successfully managed against its target investment policy.

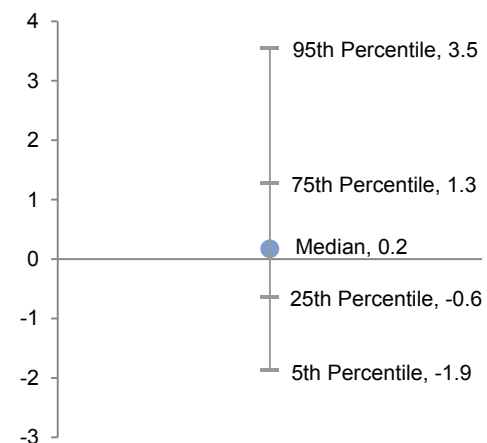
In this year's study, 41 institutions provided fiscal year 2014 performance for their policy portfolio benchmark. More than half of these institutions (23 of 41) earned a return that surpassed their policy portfolio benchmark. Excluding outliers at the top and bottom 5% of participants, returns versus the policy portfolio benchmark ranged from outperformance of 350 bps to underperformance of 190 bps. The chart at right shows the range of distribution for participants.

### Policy Portfolio Benchmark Components.

Nearly all participants (93%) use a detailed, asset class-specific benchmark to evaluate the performance of the total portfolio (Exhibit 9). Exhibit 10 summarizes the most frequently

### Range of Out/Underperformance of Total Return Versus Policy Portfolio Benchmark

One-Year Statistics as of June 30, 2014 • Percentage Points



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Data points represent the difference between the total portfolio return and the policy portfolio benchmark return. Graph displays a range of data for 41 institutions that provided fiscal year 2014 returns for their total portfolio and policy portfolio benchmark.

used benchmarks in policy portfolios by asset class/strategy. The most commonly cited benchmark used to evaluate the US equity portion of the portfolio was the Russell 3000® Index. Global ex US equity was most often measured by a blend of the MSCI EAFE and MSCI Emerging Markets indexes. Some institutions prefer to measure their long-only equities against a global index instead of benchmarking the domestic and international equities separately. For these institutions, the MSCI All Country World Index is the most frequently used benchmark. The most frequently used bond benchmark was the Barclays Aggregate Bond Index, though many institutions use unique index combinations to better reflect their underlying bond exposure.

Most respondents used an HFRI index for hedge funds, with the Fund of Funds Composite Index being the most common. Private equity and venture capital were most often measured against the Cambridge Associates LLC Private Equity and Venture Capital indexes. Due to the diverse asset classes and strategies that fall under real assets, the vast majority of respondents use a combination of indexes that is unique to their own portfolio. Just 12% of respondents use the CPI-U plus a premium (e.g., CPI-U + 5%) to broadly benchmark their combined real assets allocation.

### Risk-Adjusted Returns

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. The mean Sharpe ratio of respondents over the trailing five-year

period (1.21) was lower than that of the 70/30 portfolio benchmark containing a US equity component (1.40), but higher than a 70/30 portfolio benchmark with a global equity component (1.09) (Exhibit 11).

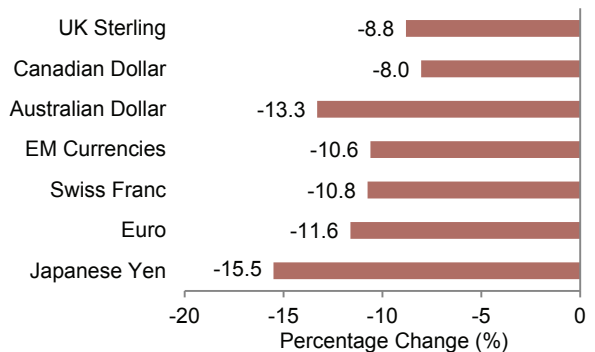
### Post-Fiscal Year 2014 Outlook

At the time of this publication, we are more than halfway through the fiscal year that ends June 30, 2015. The chart at the top of the next page details returns for the major marketable asset class indexes for the six-month period of July 1, 2014, through December 31, 2014. US equities continued to produce positive returns during this period, with the Wilshire 5000 Index increasing by 5.3%. The bull market in US equities continued in part because of the momentum of the US economy and growth rates that exceeded other developed regions. US GDP grew by 4.6% and 5.0% in the second and third quarters of 2014, respectively.

The US dollar began consistently rising against other major currencies in July and finished the year up strongly against all. Consequently, the second half of calendar year 2014 saw a divergence in returns of US equities and unhedged

### Currency Performance Versus the US Dollar

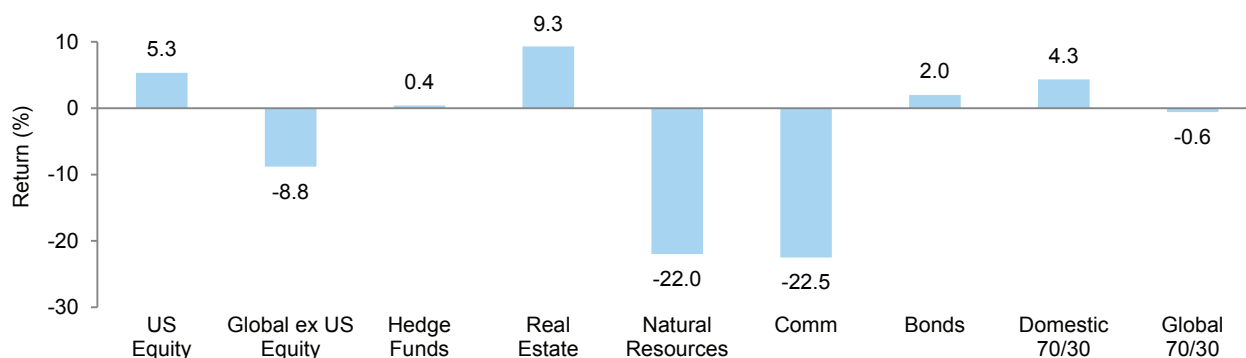
July 1, 2014 – December 31, 2014



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Note: EM currencies is an equal-weighted basket of 20 currencies.

### Marketable Asset Class Returns Through the First Half of Fiscal Year 2015

Returns for July 1, 2014, to December 31, 2014 • Percent (%)



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Asset classes are represented by the following: Wilshire 5000 Index ("US Equity"), MSCI All Country World ex US Index ("Global ex US Equity"), HFRI Fund Weighted Composite Index ("Hedge Funds"), FTSE® NAREIT Composite Index ("Real Estate"), MSCI World Natural Resources Index ("Natural Resources"), Bloomberg Commodity Index ("Commodities"), Barclays Government/Credit Index ("Bonds"), 70% Wilshire 5000 / 30% Barclays Government/Credit ("Domestic 70/30"), and 70% MSCI All Country World / 30% Barclays Government/Credit

global ex US equities. The MSCI All Country World ex US Index returned -8.8% in US\$ terms. For the same period, the spread between the return for a domestic 70/30 blended benchmark (4.3%) and a global 70/30 benchmark (-0.6%) was nearly 500 bps.<sup>2</sup>

Returns for real assets were mixed over the second half of calendar year 2014. Commodities and natural resource equities were dragged down considerably by collapsing oil prices, with representative benchmarks for both asset classes declining by more than 20%. US REITs were the strongest-performing assets among the selected marketable asset class benchmarks, due in part to yield chasing, with a return of 9.3%.

Asset classes with lower or no equity exposure posted small gains over this same six-month period. The Barclays Government/Credit Bond

Index grew by 2.0% as the ten-year Treasury yield declined through the end of 2014. A broad universe of hedge funds represented by the HFRI Fund Weighted Composite Index increased marginally (0.4%).

The global economic landscape poses many challenges for investors heading into the second half of fiscal year 2015 and beyond. Will US equities continue to outperform global peers? The prospect is unlikely according to our research publication *Five Key Questions for 2015*. Valuations for other developed countries and emerging markets peers look more compelling than for US equities.<sup>3</sup> In currency and fixed income markets, investors must manage the effects of diverging global monetary policies. The Federal Reserve concluded its asset purchase program in October 2014. Most market observers expect the Fed to increase the benchmark Federal Funds rate in 2015, although recent economic turmoil overseas has

<sup>2</sup> The mean allocation among participants for the long-only equity portion of the portfolio was split nearly evenly between US and global ex US markets (Exhibit 14), making the 70/30 benchmark that uses the MSCI ACWI as the equity component a more appropriate benchmark for most participants in this study.

<sup>3</sup> On a monthly basis, we provide our views and advice on asset classes and strategies via our *Asset Class Views* publication on our website.

raised uncertainty around the timing and extent of an increase. Meanwhile, the Bank of Japan dramatically increased its quantitative easing program in late 2014, and the European Central Bank announced plans to embark on its own QE program beginning in March 2015. Finally, other market dynamics and events could disrupt markets in 2015, including further volatility in the price of oil, geopolitical crises in Russia and the Middle East, and a continued slowdown in the growth rate of China's economy. ■

**Exhibit 1**  
**Summary of Long-Term Investment Portfolio Returns**  
 Years Ended June 30, 2014 • Percent (%)

**Nominal Total Returns**

	Average Annual Compound Nominal Return			
	1 Year	3 Years	5 Years	10 Years
<b>Responding Institutions</b>				
High	21.6	11.4	14.5	10.0
Low	13.0	6.1	6.6	3.5
Mean	16.3	8.5	11.6	7.1
Median	16.1	8.6	11.6	7.2
<i>n</i>	53	53	50	46
Mean After Spending	11.1	3.6	6.3	1.6
<i>n</i>	18	14	11	4
<b>Benchmarks</b>				
70% Wilshire 5000 / 30% Barclays Govt/Credit	18.7	12.8	15.1	7.6
70% MSCI ACWI / 30% Barclays Govt/Credit	17.8	9.1	12.2	7.5
Wilshire 5000	24.9	16.3	19.1	8.3
MSCI ACWI ex US	22.3	6.2	11.6	8.2
Barclays Govt/Credit	4.3	4.1	5.1	4.9
CPI-U	2.1	1.8	2.0	2.3

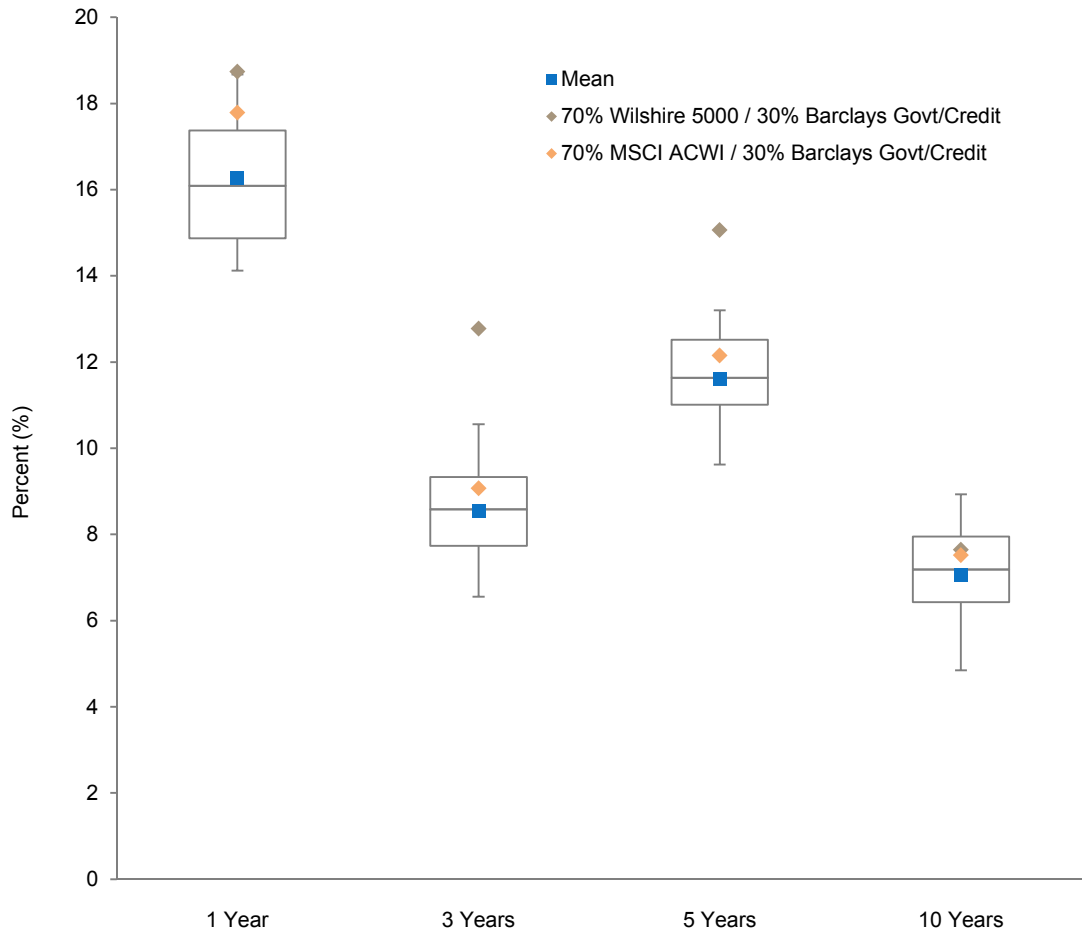
**Real Total Returns**

	Average Annual Compound Real Return			
	1 Year	3 Years	5 Years	10 Years
<b>Responding Institutions</b>				
High	19.2	9.4	12.2	7.5
Low	10.7	4.2	4.5	1.1
Mean	13.9	6.6	9.4	4.7
Median	13.7	6.6	9.4	4.8
<i>n</i>	53	53	50	46
Mean After Spending	8.8	1.7	4.2	-0.7
<i>n</i>	18	14	11	4
<b>Benchmarks</b>				
70% Wilshire 5000 / 30% Barclays Govt/Credit	16.3	10.7	12.8	5.2
70% MSCI ACWI / 30% Barclays Govt/Credit	15.4	7.1	9.9	5.1
Wilshire 5000	22.4	14.2	16.8	5.8
MSCI ACWI ex US	19.8	4.3	9.4	5.8
Barclays Govt/Credit	2.2	2.2	3.0	2.6

Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data provided by Barclays, MSCI Inc., Thomson Reuters Datastream, US Department of Labor - Bureau of Labor Statistics, and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties.

Note: Real returns are adjusted for inflation as measured by the Consumer Price Index.

**Exhibit 2**  
**Long-Term Investment Portfolio Nominal Return Percentiles**  
 Years Ended June 30, 2014 • Percent (%)



	1 Year	3 Years	5 Years	10 Years
5th Percentile	18.7	10.6	13.2	8.9
25th Percentile	17.4	9.3	12.5	7.9
Median	16.1	8.6	11.6	7.2
75th Percentile	14.9	7.7	11.0	6.4
95th Percentile	14.1	6.6	9.6	4.8
Mean	16.3	8.5	11.6	7.1
<i>n</i>	53	53	50	46
Wilshire 5000/Barclays Govt/Credit <sup>1</sup>	18.7	12.8	15.1	7.6
MSCI ACWI/Barclays Govt/Credit <sup>2</sup>	17.8	9.1	12.2	7.5

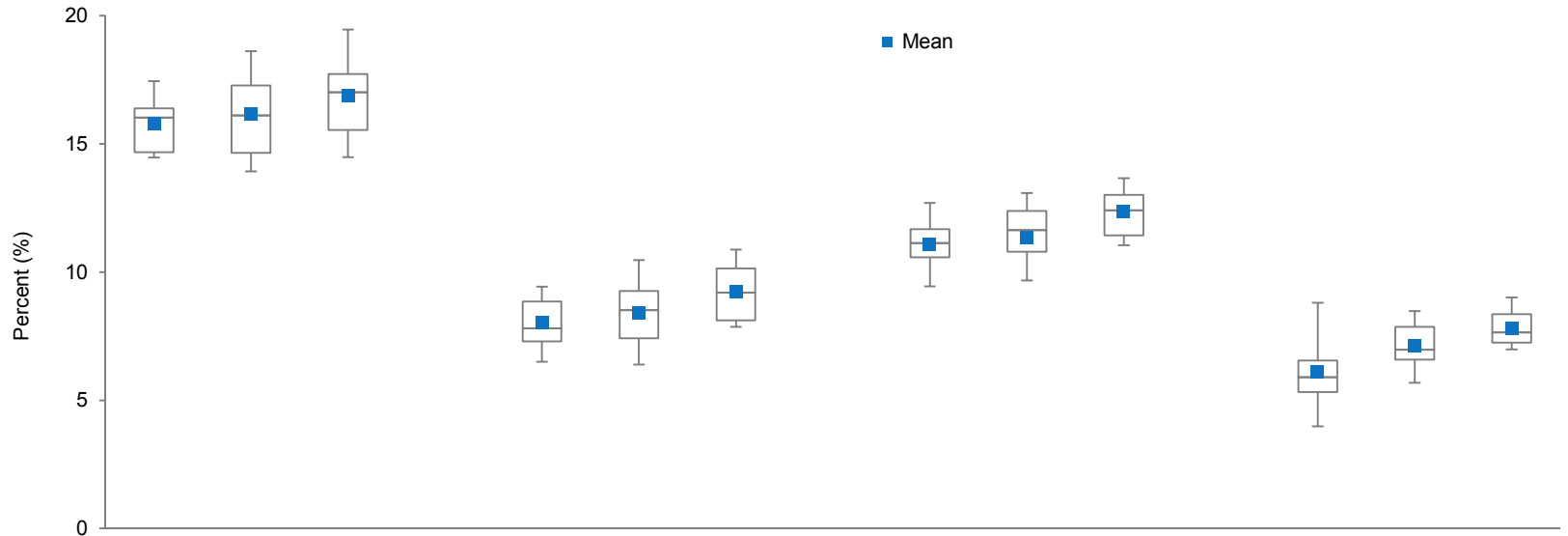
Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data provided by Barclays, MSCI Inc., Thomson Reuters Datastream, and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties. Note: Three-, five-, and ten-year returns are annualized.

<sup>1</sup> 70% Wilshire 5000 / 30% Barclays Government/Credit Bond Index.

<sup>2</sup> 70% MSCI ACWI / 30% Barclays Government/Credit Bond Index.



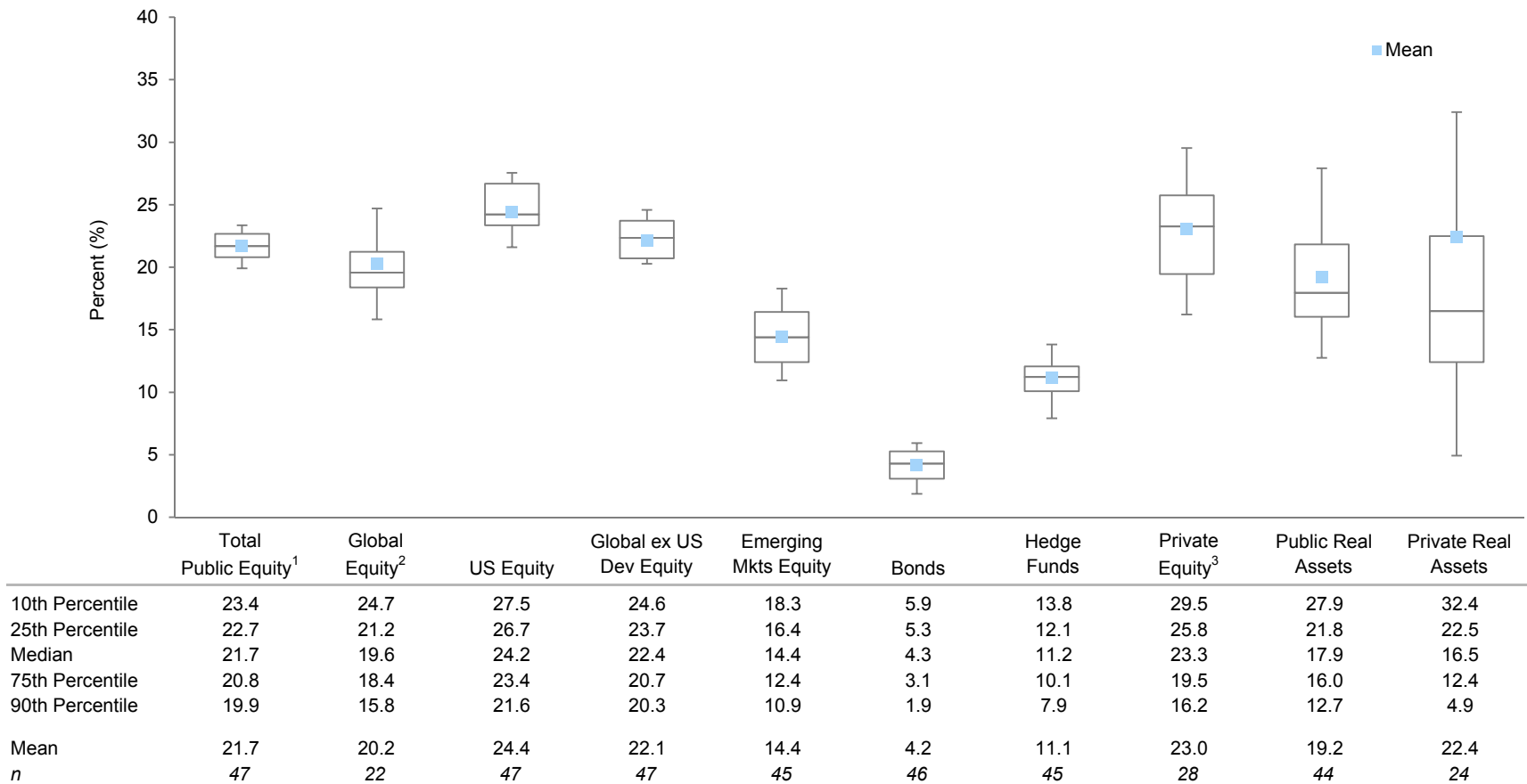
**Exhibit 3**  
**Summary of Long-Term Investment Portfolio Return Percentiles by Asset Size**  
 Years Ended June 30, 2014 • Percent (%)



	1 Year			3 Years			5 Years			10 Years		
	Under \$100 mm	\$100 mm to \$300 mm	Over \$300 mm	Under \$100 mm	\$100 mm to \$300 mm	Over \$300 mm	Under \$100 mm	\$100 mm to \$300 mm	Over \$300 mm	Under \$100 mm	\$100 mm to \$300 mm	Over \$300 mm
5th Percentile	17.4	18.6	19.5	9.4	10.5	10.9	12.7	13.1	13.7	8.8	8.5	9.0
25th Percentile	16.4	17.3	17.7	8.9	9.3	10.1	11.7	12.4	13.0	6.6	7.9	8.4
Median	16.0	16.1	17.0	7.8	8.5	9.2	11.1	11.6	12.4	5.9	7.0	7.6
75th Percentile	14.7	14.7	15.5	7.3	7.4	8.1	10.6	10.8	11.4	5.3	6.6	7.3
95th Percentile	14.5	13.9	14.5	6.5	6.4	7.9	9.4	9.7	11.1	4.0	5.7	7.0
Mean	15.8	16.2	16.9	8.0	8.4	9.2	11.1	11.4	12.4	6.1	7.1	7.8
n	15	22	16	15	22	16	14	20	16	13	17	16

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Note: Three-, five-, and ten-year returns are annualized.

**Exhibit 4**  
**Dispersion of Participants' Asset Class Returns**  
 Trailing One-Year as of June 30, 2014



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Private equity and private real assets return statistics are reported as internal rates of return (IRR).

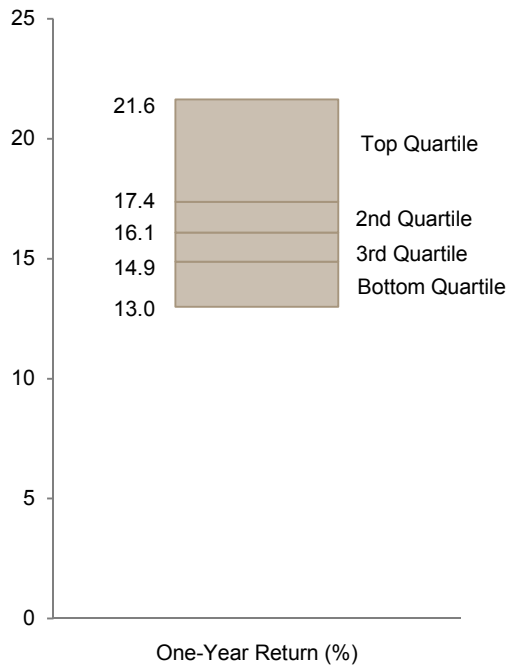
<sup>1</sup> Total public equity is a composite of global equity, US equity, global ex US developed equity, and emerging markets equity.

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

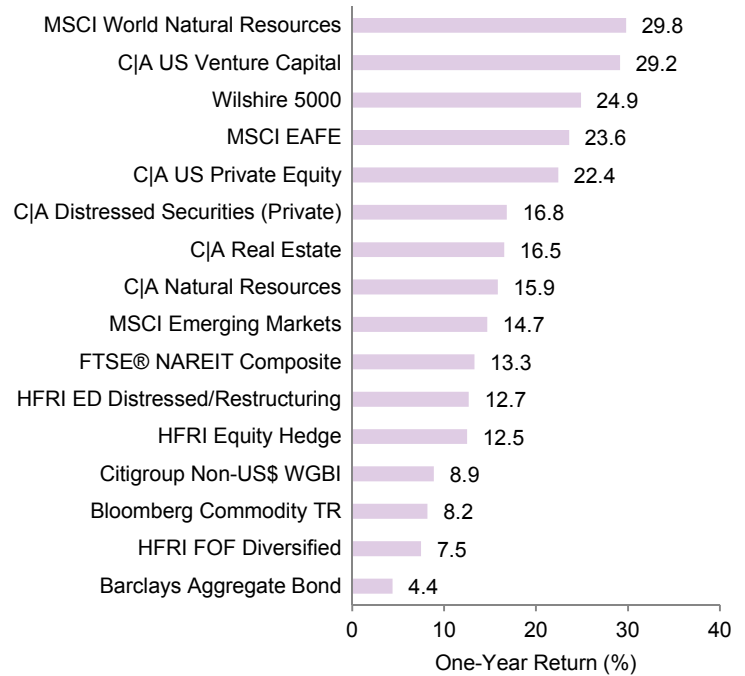
<sup>3</sup> Private equity also includes venture capital and distressed securities that are invested through a private investment vehicle.

**Exhibit 5**  
**Analysis of Top and Bottom Performers: Asset Allocation**  
 As of June 30, 2014

**LTIP Performance Quartiles**



**Index Returns**



**Mean Asset Allocation by LTIP Quartile (%) as of June 30, 2013**

Quartile	US Equity	Global ex US Equity	Bonds	Hedge Funds	Distressed Securities	Priv Equity & Ven Cap	Real Assets & Infr-Linked Bonds	Cash	Other
Top Quartile	28.3	23.1	10.9	16.6	4.0	5.8	9.1	2.0	0.2
2nd Quartile	24.7	25.0	14.1	16.1	2.3	5.2	9.2	3.4	0.0
3rd Quartile	21.7	21.6	10.9	22.4	3.6	5.3	10.4	3.6	0.6
Bottom Quartile	19.8	22.2	14.7	23.0	3.2	1.4	9.7	6.0	0.0
All Cultural & Environmental Mean	23.7	23.0	12.6	19.5	3.3	4.4	9.6	3.8	0.2

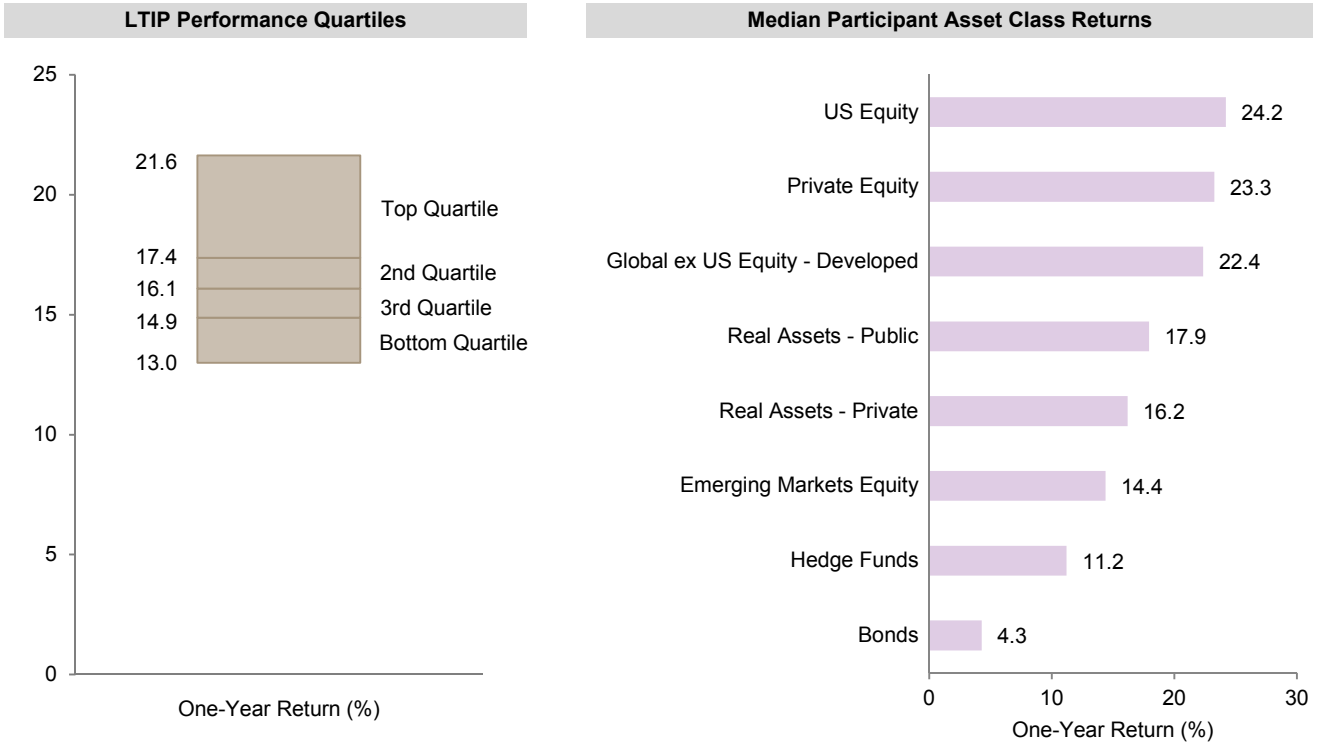
  

Divergence of Asset Allocation from Mean

Deviation (%)
-4%
-3%
-2%
-1%
Mean
+1%
+2%
+3%
+4%

Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data are provided by Barclays, Bloomberg L.P., Citigroup Global Markets, FTSE International Limited, Hedge Fund Research, Inc., MSCI Inc., the National Association of Real Estate Investment Trusts, and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties. Note: Performance quartiles are based on the long-term investment portfolio's (LTIP) trailing one-year return as of June 30, 2014.

**Exhibit 6**  
**Analysis of Top and Bottom Performers: Asset Class Returns**  
 As of June 30, 2014



**Median One-Year Participant Asset Class Return by LTIP Performance Quartile**

Quartile	US Equity	Global ex US Developed Equity	Emerging Markets Equity	Bonds	Hedge Funds	Private Equity	Real Assets - Public	Real Assets - Private
Top Quartile	26.0	22.2	15.8	4.6	11.3	24.4	19.4	17.1
2nd Quartile	25.2	23.8	11.9	3.9	11.2	24.2	20.8	16.8
3rd Quartile	23.7	22.4	14.7	3.6	11.9	18.2	18.3	15.7
Bottom Quartile	23.6	20.7	14.6	4.4	10.3	25.0	16.6	10.5
All Cultural & Environmental Median	24.2	22.4	14.4	4.3	11.2	23.3	17.9	16.2

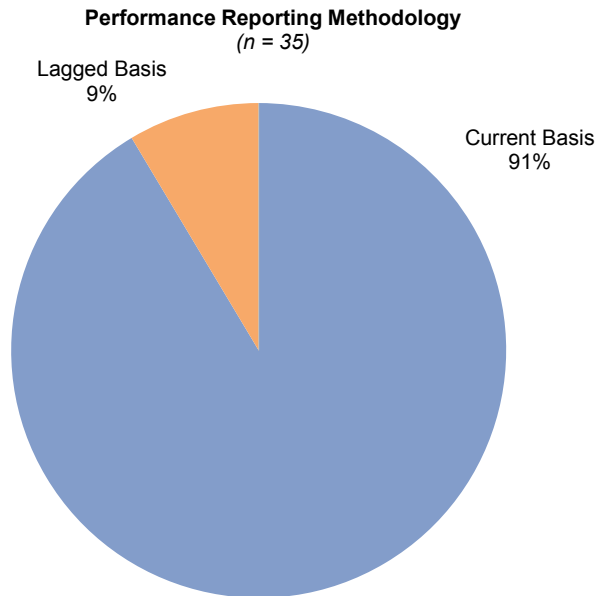
**Divergence of Performance from Median**

Asset Class	Divergence from Median (%)
US Equity	+1.8%
Global ex US Developed Equity	+0.2%
Emerging Markets Equity	-0.2%
Bonds	+0.1%
Hedge Funds	+0.1%
Private Equity	+1.0%
Real Assets - Public	-0.1%
Real Assets - Private	-0.6%

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Notes: Performance quartiles are based on the long-term investment portfolio's (LTIP) trailing one-year return as of June 30, 2014. Returns for private equity and private real assets are reported as an internal rate of return (IRR) and include only those institutions that report on a current basis. Private equity also includes venture capital and distressed securities that are invested through a private investment vehicle.

**Exhibit 7**  
**Performance Reporting Methodologies**

As of June 30, 2014 • Methods Commonly Used to Account for Performance of Private Investments



**By Asset Size**

	Current Basis	Lagged Basis
Under \$100 Million	100% (n = 5)	0% (n = 0)
\$100 Million to \$300 Million	100% (n = 14)	0% (n = 0)
Over \$300 Million	81% (n = 13)	19% (n = 3)

**Current Basis**

Total investment pool return for 2014 includes marketable asset and private investment performance for July 1, 2013, to June 30, 2014. Of the 32 institutions using this methodology, 31 used confirmed private investment valuations while one used estimated valuations.

Marketable Assets			
3Q13	4Q13	1Q14	2Q14
Private Investments			

**Lagged Basis**

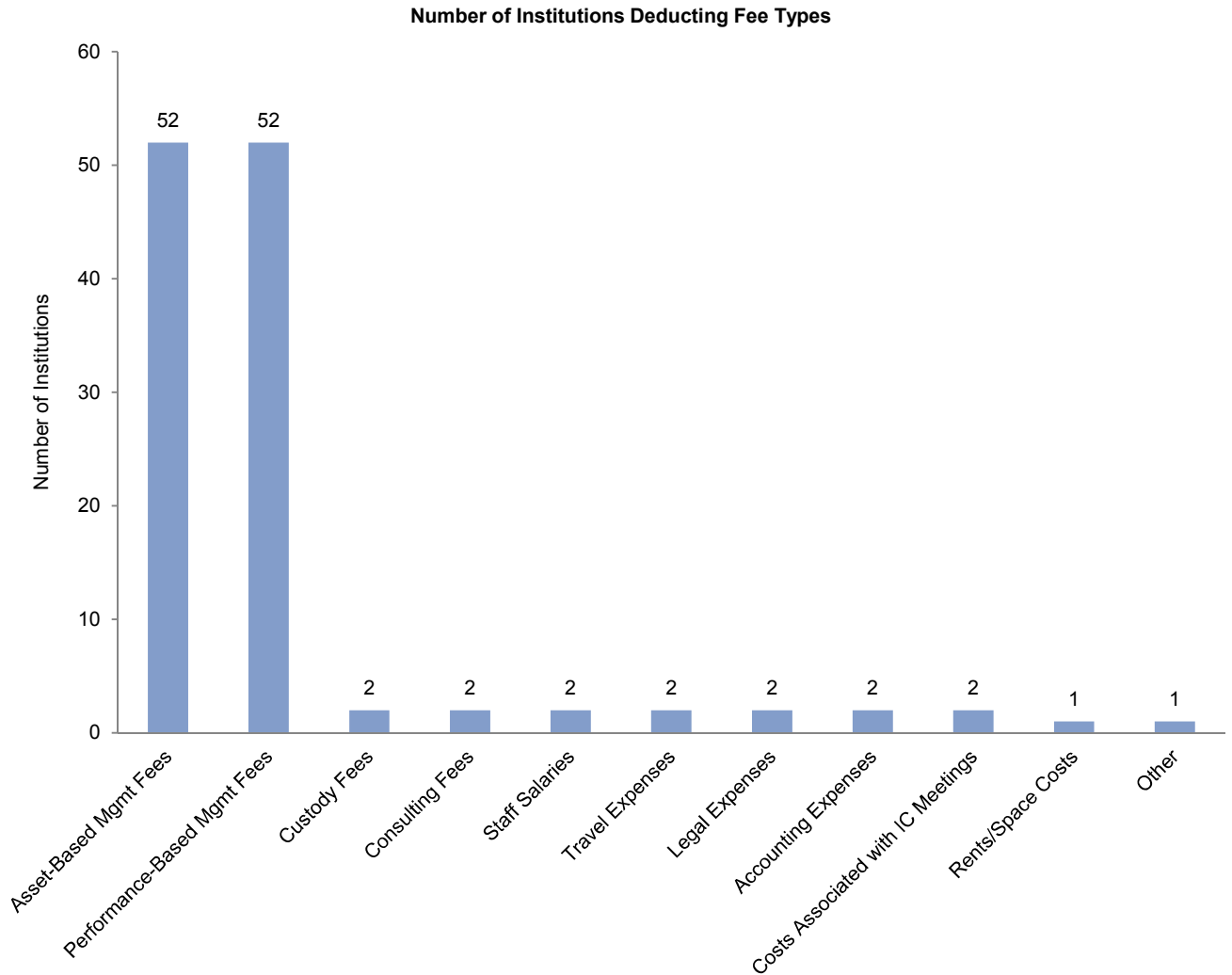
Total investment pool return for 2014 includes marketable asset performance for July 1, 2013, to June 30, 2014, and private investment performance for April 1, 2013, to March 31, 2014.

Marketable Assets				
2Q13	3Q13	4Q13	1Q14	2Q14
Private Investments				

Source: Cultural and environmental institutions 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. Eighteen cultural and environmental institutions have no significant private investment allocations (<1% of their total investment portfolios) and are excluded from this exhibit.

**Exhibit 8**  
**Calculation of Net Returns**  
 Fiscal Year 2014



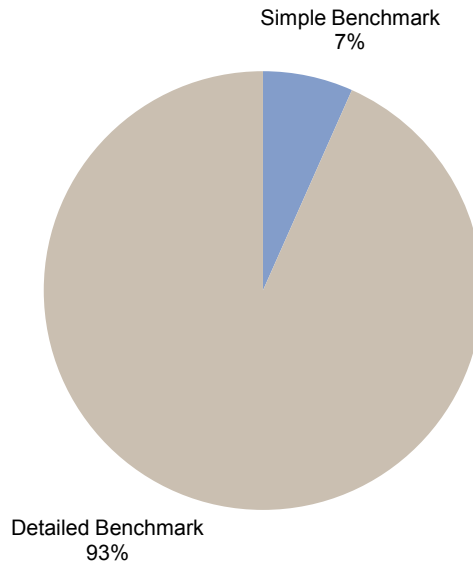
**Combination of Fees Deducted**

Asset-Based Mgmt Fees	Perf-Based Mgmt Fees	Custody Fees	Consulting Fees	Staff Salaries	Travel Expenses	Legal Expenses	Accounting Expenses	Costs Assoc with IC Meetings	Rents/Space Costs	Other	Number of Institutions	%
x	x										49	94
x	x					x					1	2
x	x	x	x	x	x		x	x		x	1	2
x	x	x	x	x	x	x	x	x	x		1	2

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

**Exhibit 9**  
**Policy Portfolio Benchmarking**  
 As of June 30, 2014

**Proportion of Institutions Using Simple Policy Portfolio Benchmarks Versus Detailed Benchmarks (n = 45)**



**Breakdown by Investment Pool Size**

	Simple Benchmark	Detailed Benchmark
Under \$100 Million	0% (n = 0)	100% (n = 13)
\$100 Million to \$300 Million	10% (n = 2)	90% (n = 18)
Over \$300 Million	8% (n = 1)	92% (n = 11)

**Description of Policy Portfolio Benchmark Types**

**Simple Benchmark:** The use of broad market indexes to benchmark the performance of the total portfolio. Typically, an equity/fixed income blend is used (e.g., 70% MSCI ACWI / 30% Barclays Aggregate Bond Index), with the equity weighting used as a rough approximation of the portfolio's allocation to equities and equity-like investments.

**Detailed Benchmark:** The use of asset class-specific benchmarks, with weights typically reflective of policy portfolio targets, to benchmark the performance of the total portfolio.

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.



**Exhibit 10**  
**Frequently Used Components of Policy Portfolio Benchmarks**  
 As of June 30, 2014

**Simple Policy Benchmarks**

	Benchmark Description	Percent (%) of Institutions
Simple Benchmark Combinations ( <i>n</i> = 3)	Combination: Russell 3000® and Barclays Aggregate Bond indexes	33
	Combination: MSCI World and Barclays Aggregate Bond indexes	33
	Combination: MSCI All Country World Index (Hedged US\$) and CPI-U + 5%	33

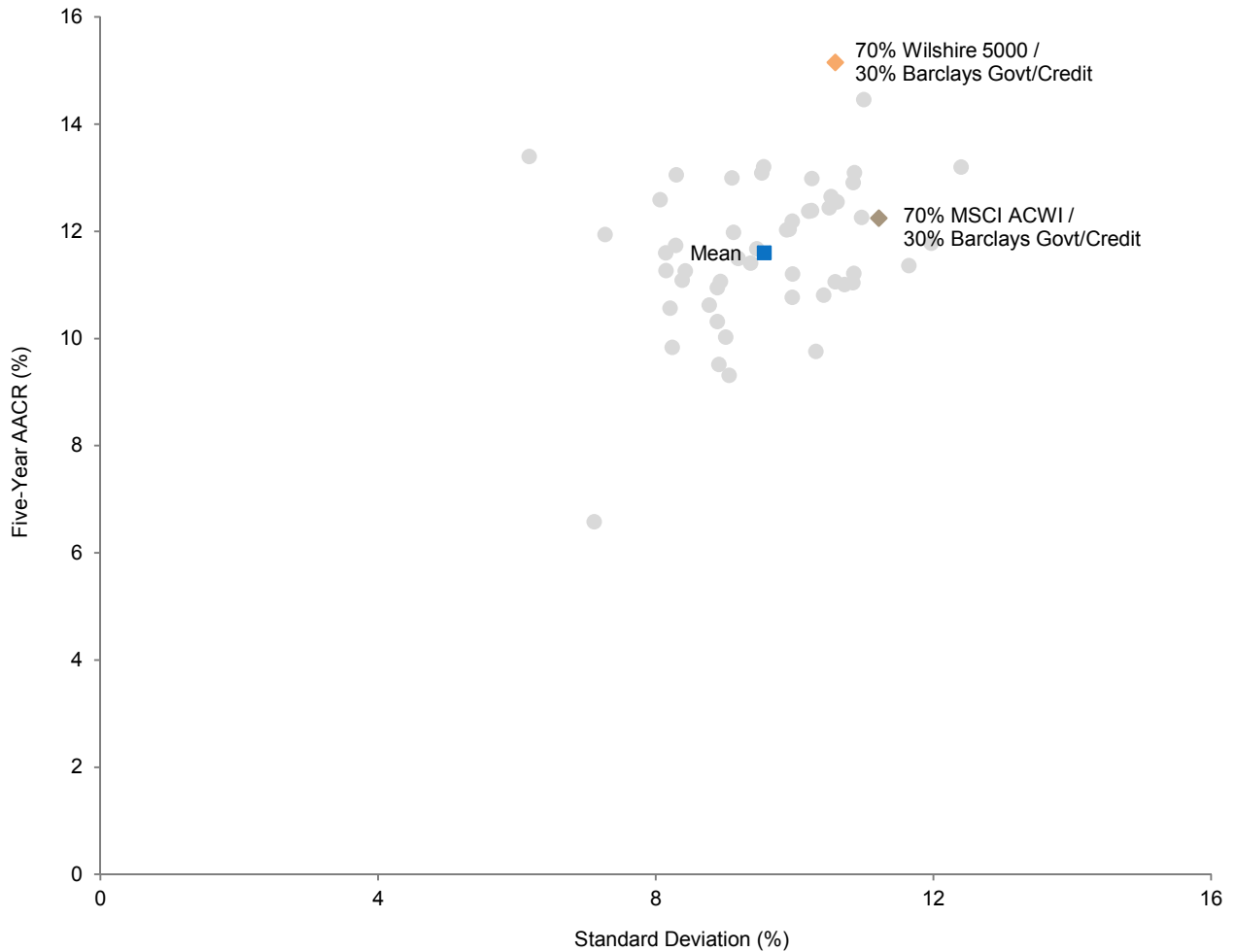
**Detailed Policy Benchmarks**

Asset Class/ Strategy	Benchmark Description	Percent (%) of Institutions
Global Equity ( <i>n</i> = 8)	MSCI All Country World Index	75
	MSCI World Index	25
US Equity ( <i>n</i> = 33)	Russell 3000® Index	58
	S&P 500 Index	27
	Wilshire 5000 Index	6
	3 Other Unique Benchmarks/Combinations	9
Global ex US Equity ( <i>n</i> = 35)	Combination: MSCI EAFE and MSCI Emerging Markets indexes	60
	MSCI All Country World ex US Index	17
	MSCI Emerging Markets Index	6
	4 Other Unique Benchmarks/Combinations	17
Bonds ( <i>n</i> = 42)	Barclays Aggregate Bond Index	38
	Barclays Government/Credit Bond Index	10
	Combination: Barclays Aggregate Bond and Citigroup WGBI indexes	7
	18 Other Unique Benchmarks/Combinations	45
Hedge Funds ( <i>n</i> = 37)	HFRI Fund of Funds Composite Index	41
	HFRI Fund of Funds Diversified Index	27
	91-Day Treasury Bills + prespecified percentage	14
	5 Other Unique Benchmarks/Combinations	19
Private Investments ( <i>n</i> = 14)	Cambridge Associates LLC Private Equity® and/or Venture Capital® indexes	43
	S&P 500 Index + prespecified percentage	21
	Russell 3000® Index + prespecified percentage	14
	3 Other Unique Benchmarks/Combinations	21

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: The percent of institutions calculation only includes those with a benchmark to the specific asset class/strategy.

**Exhibit 11**  
**Risk/Return and Sharpe Ratio**  
 Five Years Ended June 30, 2014



	AACR (%)	Standard Deviation (%)	Sharpe Ratio
5th Percentile	13.2	11.4	1.52
25th Percentile	12.5	10.5	1.29
75th Percentile	11.0	8.8	1.08
95th Percentile	9.6	7.6	0.99
Mean	11.6	9.6	1.21
Median	11.6	9.5	1.20
<i>n = 50</i>			
70% Wilshire 5000 / 30% Barclays Govt/Credit	15.2	10.6	1.40
70% MSCI ACWI / 30% Barclays Govt/Credit	12.2	11.2	1.09

Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data are provided by Barclays, BofA Merrill Lynch, MSCI Inc., and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties.

Note: Analysis includes only institutions that provided underlying quarterly returns, and excludes those that only provided annual returns.

### Fiscal Year 2014 Asset Allocation

Just under half of the average long-term investment portfolio consisted of public equities in fiscal year 2014 (Exhibit 12). On average, allocations to global ex US equities (24.9%) were higher than those to US equities (23.2%). Portfolios had significant exposure to alternative assets, with 19.7% allocated to hedge funds and 4.4% allocated to private equity/venture capital, on average. Another 3.2% 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 9.7% of portfolios, on average. Average allocations to bonds and cash were 11.3% and 3.4%, respectively.

As Exhibit 12 shows, allocations to 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. Smaller portfolios continue to maintain higher allocations to US equities and global ex US equities, in part because smaller asset sizes may preclude a meaningful degree of diversification into alternative assets (particularly private investments). The average allocation to both hedge funds and private equity and venture capital is highest for institutions with assets over \$300 million (Exhibit 13).

### Historical Asset Allocation

Average asset allocations at the end of fiscal year 2014 look considerably different than those reported a decade ago. In general, allocations to US equities and bonds decreased substantially while allocations to global ex US equities, hedge funds, private investments, and real assets increased. However, the greatest extent of these changes occurred over the first half of the decade. Exhibit 14 displays the average asset allocation for the constant group of participants that provided data over the last 10 years.

Changes in portfolio allocations were generally more modest over the latter part of the decade, and in some cases a reverse of the longer-term trends. After 2010, US equity allocations ticked back up, increasing by an average of 1.6 ppts. Conversely, average hedge fund allocations, which rose substantially for much of the past ten years, have declined by 1.7 ppts since 2012.

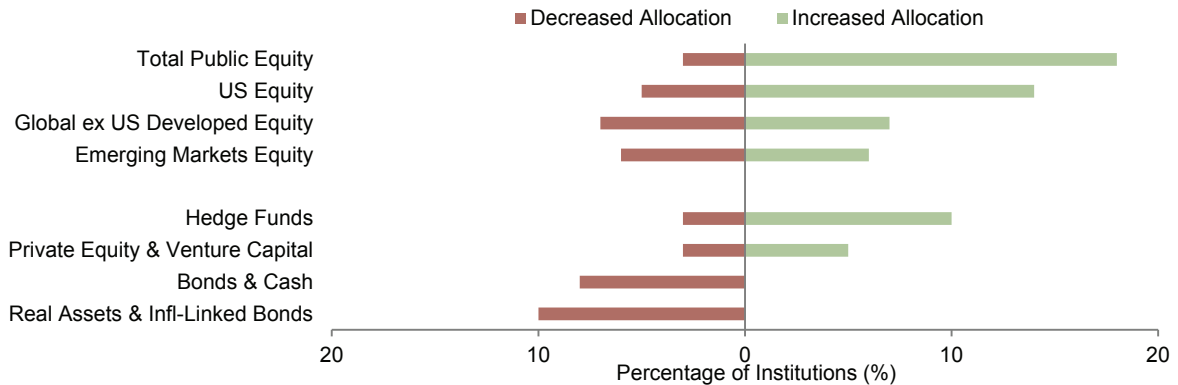
### Target Asset Allocation

While 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 be misleading in determining whether institutions are altering their long-term asset allocation policies. An analysis of target asset allocations is more suitable for such an evaluation. The vast majority of survey participants (40 of 53) provided target asset allocation data for both fiscal year 2013 and fiscal year 2014. Nearly two-thirds of these 40 institutions (65%) kept their targets unchanged from fiscal year 2013. The smallest portfolios were most likely to make changes to their policy targets (42%), followed by midsized portfolios (35%) and the largest portfolios (29%).

As the chart at the top of the next page shows, nearly 20% of participating institutions increased their targets to public equities in fiscal year 2014, significantly more than the proportion that decreased their target. Institutions were more likely to increase their policy target to US equity compared to other geographic regions. Among the other broad asset allocation categories, institutions were more likely to increase their allocation to hedge funds and private equity than decrease them. In contrast, all institutions making a change to their bonds and real assets targets decreased their target allocation. Exhibit 15 shows detailed data by asset size.

### Changes in Target Asset Allocation

June 30, 2013 to June 30, 2014 • Percentage of Institutions Increasing or Decreasing Targets



Source: Cultural and environmental data as reported to Cambridge Associates LLC.

Notes: Exhibit represents data for 40 cultural and environmental institutions that provided target asset allocation data for 2013 and 2014. Real assets includes targets to both public and private assets.

### 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. Participating institutions, particularly those with larger asset sizes, continue to allocate a higher portion of their portfolios to private investments.<sup>1</sup> The average allocation to private investments for all participants was 8.3%. Those with portfolios greater than \$300 million had an average allocation of 18.5%.

One issue that investors should be mindful of is the global capital overhang in the private equity industry. The capital overhang represents unexpired, uncalled capital commitments and is essentially the industry's dry powder. A recent research note from our Private Investment Series commented on this global overhang and its implications.<sup>2</sup> With capital appearing to be

deployed at a slower pace than historically, the overhang is larger than expected. Too much overhang and the pressure to put capital to work before it expires could amplify competition and place upward pressure on transaction values, impacting returns.

Investors would be wise to note exactly where their uncalled capital commitments exist, as overhang amounts will vary by geography, strategy, and fund size. While the total industry overhang value appears large, localized overhang amounts are much more relevant for investors, and may be the cause for more or less concern, depending on the geography or strategy.

The capital overhang also has implications on portfolio liquidity, as uncalled capital represents a commitment of capital to be funded in the future. Acceleration in the pace of capital deployments could increase liquidity requirements for portfolios. While annual spending distributions usually represent the biggest liquidity need of a portfolio, institutions with private investment programs must also consider the potential impact of uncalled capital commitments.

For participants with private investment programs, uncalled capital commitments as a

<sup>1</sup> Private investments include private equity, venture capital, private distressed securities, private real estate, private oil & gas/natural resources, and timber.

<sup>2</sup> See Andrea Auerbach et al., "The Global Overhang (According to Goldilocks): Too Much, Too Little, or Just Right?," Cambridge Associates Research Note, May 2014.

percentage of the total long-term investment portfolio (LTIP) value averaged 5.0% at the end of fiscal year 2014 (Exhibit 16). Predictably, institutions with larger asset sizes tend to have a higher ratio of uncalled capital commitments to the total LTIP value. For those with asset sizes greater than \$300 million, uncalled capital commitments represented an average of 6.8% of their total LTIP value (ranging from 2.4% to 14.0%, excluding outliers).

Larger portfolios also tend to have a higher ratio of uncalled capital commitments to the LTIP's total liquid assets, which exclude hedge funds and private investments. For institutions with asset sizes greater than \$300 million, uncalled capital commitments represented an average of 11.6% of their total liquid assets. For institutions with asset sizes under \$300 million, the average was just 4.8%.

Institutions can use a variety of sources to fund capital calls, including private investment fund distributions, cash reserves, and proceeds from sales of other investment assets. As the analysis below shows, private investment programs for most participants were cash flow positive in fiscal year 2014, meaning the amount of fund distributions was higher than paid-in capital calls.

## Mission-Related Investing

Mission-related investing (MRI) generally refers to the incorporation of environmental and social considerations into the investment decision-making process. MRI can encompass a variety of strategies and approaches, including, but not limited to: environmental, social, and governance (ESG) investing, impact investing, and socially responsible investing (SRI).

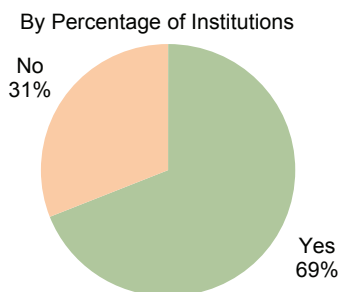
MRI has been gaining traction in the nonprofit industry in recent years, with a particular focus on addressing climate change concerns. This trend is in part due to a growing movement on many college campuses, where student-led campaigns are urging higher education endowments to divest from fossil fuels. Our recent research note on fossil fuel divestment<sup>3</sup> provides a framework for institutional deliberations of divestment and highlights some practical considerations. Despite the increased attention on these issues, only one institution in this study reported some type of MRI activity. Institutions that pursue MRI do so for a variety of reasons, including social motivations, to address concerns of constituents, and to enhance investment returns. ■

<sup>3</sup> Please see Jessica Matthews and Tom Mitchell et al., "The Fossil Fuel Divestment Discussion," Cambridge Associates Research Note, June 2014.

### Private Investment Program Cash Flow

Fiscal Year 2014 • Data for 29 Cultural and Environmental Institutions

#### Was Your Private Investment Program Cash Flow Positive in Fiscal Year 2014?



By Asset Size

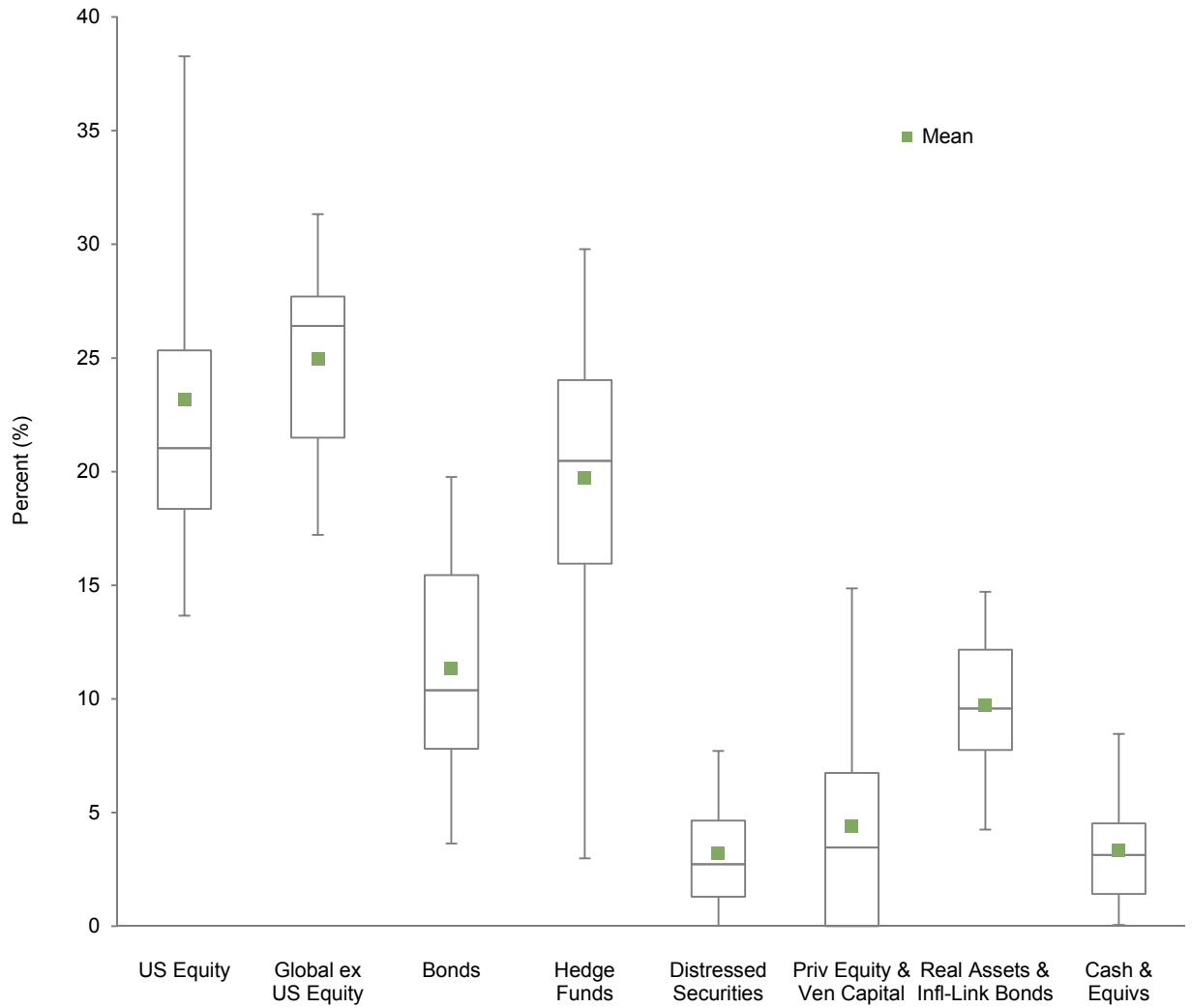
	Yes	No
Under \$300 Million	67% (n = 10)	33% (n = 5)
Over \$300 Million	71% (n = 10)	29% (n = 4)

Source: Cultural and environmental 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 fiscal year 2014.

**Exhibit 12**  
**Asset Allocation Percentiles**  
 As of June 30, 2014

**Asset Allocation Distribution by Asset Class (n = 53)**



	US Equity	Global ex US Equity	Bonds	Hedge Funds	Distressed Securities	Priv Equity & Ven Capital	Real Assets & Infl-Link Bonds	Cash & Equivs
5th Percentile	38.3	31.3	19.8	29.8	7.7	14.9	14.7	8.5
25th Percentile	25.3	27.7	15.4	24.0	4.6	6.7	12.2	4.5
Median	21.0	26.4	10.4	20.5	2.7	3.5	9.6	3.1
75th Percentile	18.4	21.5	7.8	15.9	1.3	0.0	7.8	1.4
95th Percentile	13.7	17.2	3.6	3.0	0.0	0.0	4.3	0.1
Mean	23.2	24.9	11.3	19.7	3.2	4.4	9.7	3.4

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

**Exhibit 13**  
**Summary Asset Allocation by Asset Size**

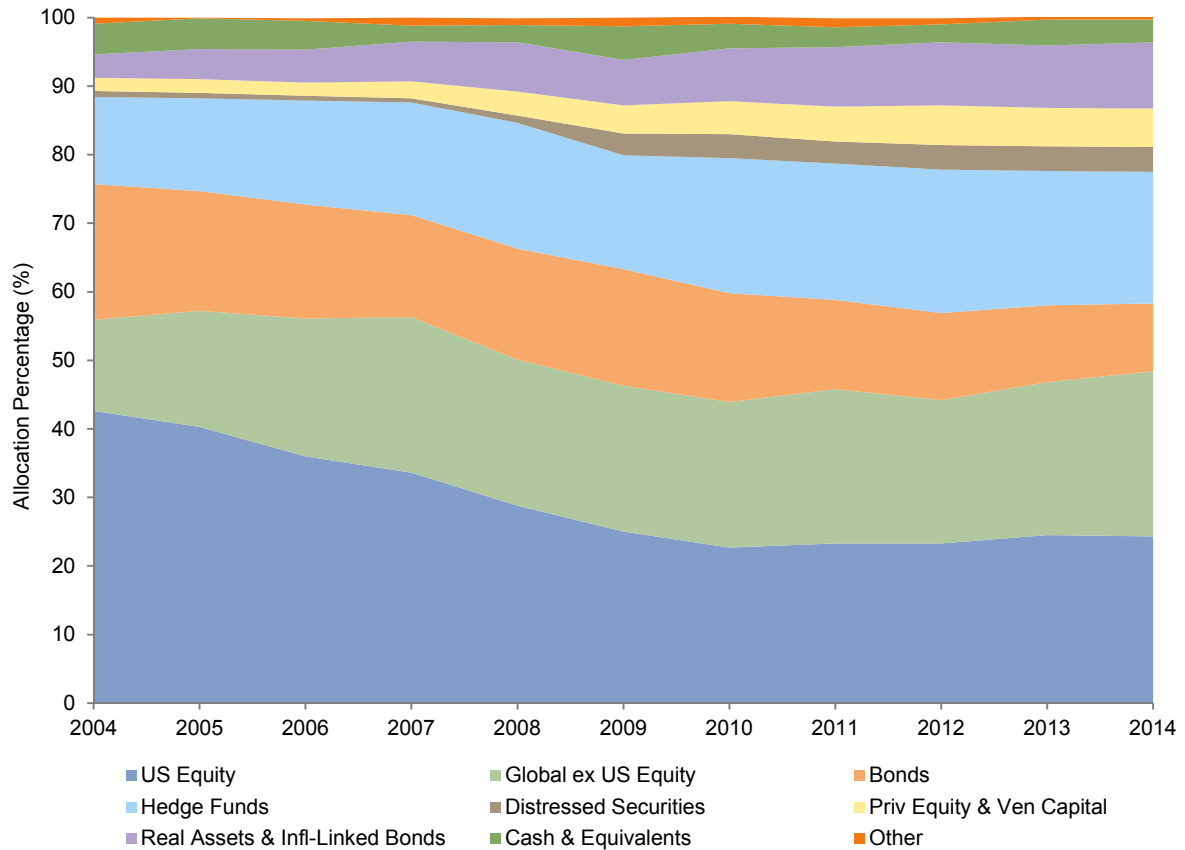
As of June 30, 2014 • Percent (%)

	Under \$100 mm (n=15)		From \$100 mm to \$300 mm (n=22)		Over \$300 mm (n=16)	
	Mean	Median	Mean	Median	Mean	Median
<b>US Equity</b>	<b>25.3</b>	<b>24.8</b>	<b>22.8</b>	<b>20.7</b>	<b>21.7</b>	<b>20.0</b>
<b>Global ex US Equity</b>	<b>25.7</b>	<b>27.1</b>	<b>26.3</b>	<b>27.1</b>	<b>22.4</b>	<b>23.4</b>
Developed Markets	18.9	19.0	18.4	18.7	15.0	15.6
Emerging Markets	6.8	7.4	7.9	7.7	7.5	7.5
<b>Bonds</b>	<b>14.8</b>	<b>14.2</b>	<b>12.2</b>	<b>13.0</b>	<b>6.8</b>	<b>6.4</b>
US Bonds	11.2	10.9	9.2	9.4	5.6	5.2
Global ex US Bonds (Developed)	1.2	0.3	1.2	0.9	0.4	0.0
Global ex US Bonds (Emerging)	1.1	0.1	1.4	0.9	0.5	0.0
High-Yield Bonds	1.2	0.0	0.5	0.0	0.3	0.0
<b>Hedge Funds</b>	<b>18.3</b>	<b>19.7</b>	<b>20.1</b>	<b>21.0</b>	<b>20.5</b>	<b>21.1</b>
Long/Short Hedge Funds	10.3	10.6	9.9	9.3	8.0	7.7
Absolute Return (ex Distressed)	8.0	6.2	10.2	9.5	12.6	13.8
<b>Distressed Securities</b>	<b>1.8</b>	<b>1.6</b>	<b>3.4</b>	<b>2.8</b>	<b>4.2</b>	<b>4.4</b>
Hedge Fund Structure	1.6	1.6	2.1	2.2	2.5	2.1
Private Equity Structure	0.2	0.0	1.3	0.6	1.7	1.3
<b>Private Equity &amp; Venture Capital</b>	<b>1.0</b>	<b>0.0</b>	<b>2.8</b>	<b>1.2</b>	<b>9.9</b>	<b>8.0</b>
Venture Capital	0.2	0.0	0.8	0.0	2.7	1.9
Non-Venture Private Equity	0.6	0.0	1.3	0.4	5.8	4.8
Other Private Investments	0.2	0.0	0.7	0.0	1.4	0.6
<b>Real Assets &amp; Infl-Linked Bonds</b>	<b>9.7</b>	<b>10.0</b>	<b>9.2</b>	<b>8.9</b>	<b>10.5</b>	<b>9.7</b>
Private Real Estate	0.2	0.0	0.4	0.0	3.4	2.2
Public Real Estate	1.0	0.0	0.5	0.0	0.4	0.0
Commodities	1.7	2.1	1.6	0.7	0.6	0.0
Inflation-Linked Bonds	1.7	1.7	0.9	0.5	0.2	0.0
Private Oil & Gas/Natural Resources	0.0	0.0	1.0	0.0	3.2	2.5
Timber	0.0	0.0	0.0	0.0	0.3	0.0
Public Energy/Natural Resources	5.0	5.6	4.8	5.0	2.3	2.1
<b>Cash &amp; Equivalents</b>	<b>3.5</b>	<b>3.8</b>	<b>3.1</b>	<b>2.3</b>	<b>3.6</b>	<b>3.5</b>
<b>Other</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.4</b>	<b>0.0</b>

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.



**Exhibit 14**  
**Historical Mean Asset Allocation Trends**  
 Years Ended June 30 • Percent (%)



	Constant Universe											All Inst
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2014
US Equity	42.6	40.3	36.0	33.6	28.8	25.0	22.7	23.3	23.3	24.5	24.3	23.2
Global ex US Equity	13.3	16.9	20.1	22.7	21.3	21.3	21.2	22.5	20.9	22.3	24.1	24.9
<i>Developed Markets</i>	11.8	14.2	16.5	17.8	16.3	16.4	15.7	16.2	14.6	15.7	17.1	17.5
<i>Emerging Markets</i>	1.5	2.6	3.6	5.0	5.1	4.9	5.5	6.3	6.3	6.6	7.0	7.4
Bonds	19.8	17.5	16.6	14.9	16.2	17.0	15.9	13.0	12.7	11.2	9.9	11.3
Hedge Funds	12.7	13.5	15.2	16.4	18.3	16.6	19.7	19.9	20.9	19.6	19.2	19.7
Distressed Securities	0.9	0.8	0.7	0.6	1.1	3.2	3.5	3.2	3.6	3.6	3.6	3.2
Priv Equity & Ven Capital	1.9	2.0	1.9	2.5	3.5	4.1	4.8	5.1	5.8	5.6	5.6	4.4
Real Assets & Inflation-Linked Bonds	3.4	4.4	4.8	5.8	7.2	6.6	7.7	8.7	9.2	9.1	9.7	9.7
Cash & Equivalents	4.5	4.5	4.2	2.3	2.5	4.9	3.6	2.9	2.6	3.8	3.3	3.4
Other	0.9	0.1	0.4	1.2	1.0	1.3	1.0	1.3	0.9	0.4	0.4	0.2

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Constant universe represents 24 institutions that provided asset allocation data for each year from 2004 to 2014. All institutions mean represents 53 institutions that provided 2014 data.

**Exhibit 15****Changes in Target Asset Allocation by Asset Size**

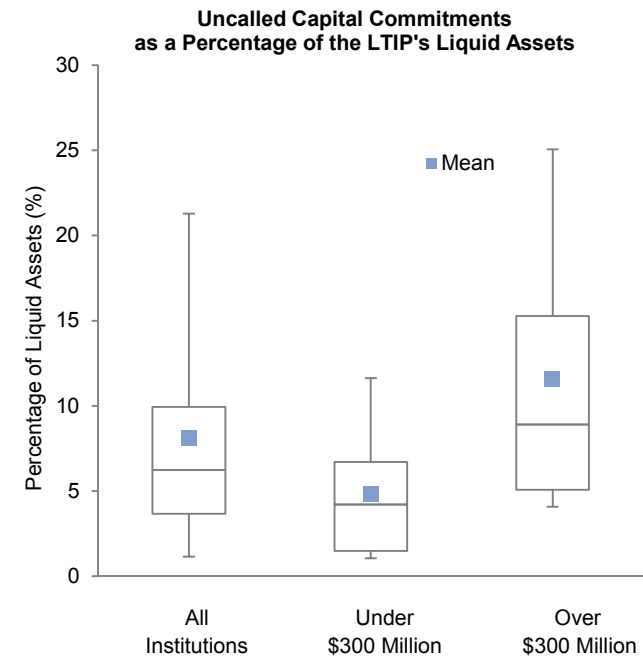
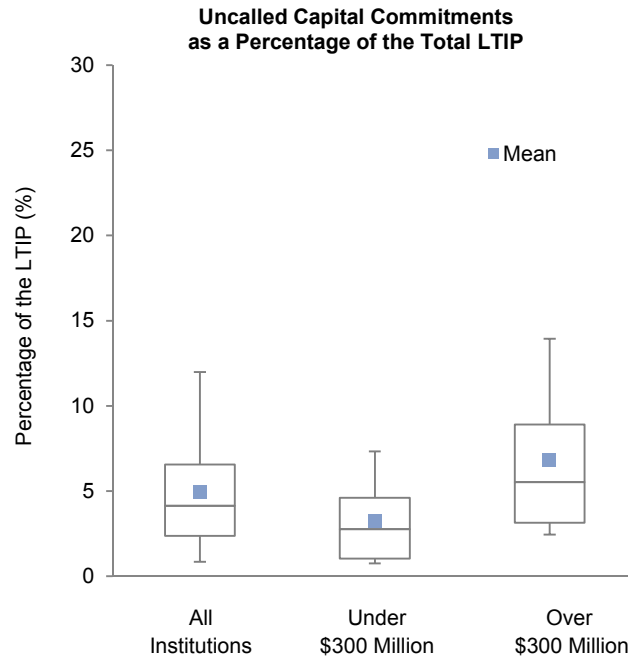
June 30, 2013 to June 30, 2014 • Percentage of Institutions Making Changes to Targets

	Under \$100 mm (n=12)				From \$100 mm to \$300 mm (n=17)				Over \$300 mm (n=11)			
	Mean Target AA (%)		% Institutions Making Changes to Targets		Mean Target AA (%)		% Institutions Making Changes to Targets		Mean Target AA (%)		% Institutions Making Changes to Targets	
	2013	2014	Increased	Decreased	2013	2014	Increased	Decreased	2013	2014	Increased	Decreased
Traditional Equity Total	49.8	51.3	25%	0%	43.3	46.1	12%	0%	40.0	41.0	18%	9%
<i>US Equity</i>	23.5	23.8	17%	8%	22.3	22.8	13%	7%	18.9	19.1	10%	0%
<i>Global ex US Developed</i>	18.8	19.3	0%	13%	16.3	16.5	9%	9%	13.4	14.6	11%	0%
<i>Emerging Markets</i>	7.5	7.8	0%	0%	8.3	8.3	0%	8%	8.4	8.8	18%	9%
Hedge Funds	17.5	17.2	17%	8%	19.0	20.3	12%	0%	22.4	23.4	0%	0%
Private Equity & Venture Capital	1.6	1.6	0%	0%	3.9	3.9	6%	0%	10.7	10.5	9%	9%
Bonds & Cash	17.9	17.7	0%	8%	17.7	17.1	0%	12%	12.8	12.1	0%	0%
Real Assets & Infl-Linked Bonds	12.2	11.9	0%	8%	11.1	10.6	0%	6%	12.8	12.2	0%	18%
Other	1.1	0.4	0%	8%	5.0	2.1	0%	6%	1.4	0.8	0%	0%

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Asset sizes are as of June 30, 2014. Geographic breakouts within the traditional equity category were not provided by all respondents. Therefore, the sum of mean targets to US equity, global ex US developed, and emerging markets will not equal the traditional equity total. Real assets category includes targets to both public and private assets. Other category includes target allocations to distressed securities, opportunistic investing, tactical asset allocation, and other special situations.

**Exhibit 16**  
**Uncalled Capital Committed to Private Investment Funds**  
 As of June 30, 2014 • Percent (%)



	All Institutions	Under \$300 Million	Over \$300 Million
5th Percentile	12	7.3	14.0
25th Percentile	6.6	4.6	8.9
Median	4.1	2.8	5.5
75th Percentile	2.4	1.0	3.1
95th Percentile	0.9	0.7	2.4
Mean	5.0	3.2	6.8
<i>n</i>	29	15	14

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

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

## Number of External Managers

Many factors contribute to the number of managers employed within an investment portfolio. As the figure below shows, the scale of total assets under management often is a primary factor, as portfolios with more assets generally spread their assets across a greater number of managers. On average, institutions with assets over \$300 million employed 45 external investment managers in fiscal year 2014 (Exhibit 17). In contrast, mid-sized portfolios had an average of 23 managers while smaller portfolios reported even fewer (15). The number of investment vehicles is even higher for each peer group, mainly because of the allocation of capital across multiple funds of the same investment manager in private investment asset classes.

Even within the broad asset size groups, the range of managers employed can be wide. Within the smallest portfolios, the number of managers employed at the 5th percentile (21) is substantially higher than the number used at the 95th percentile (six). The disparity

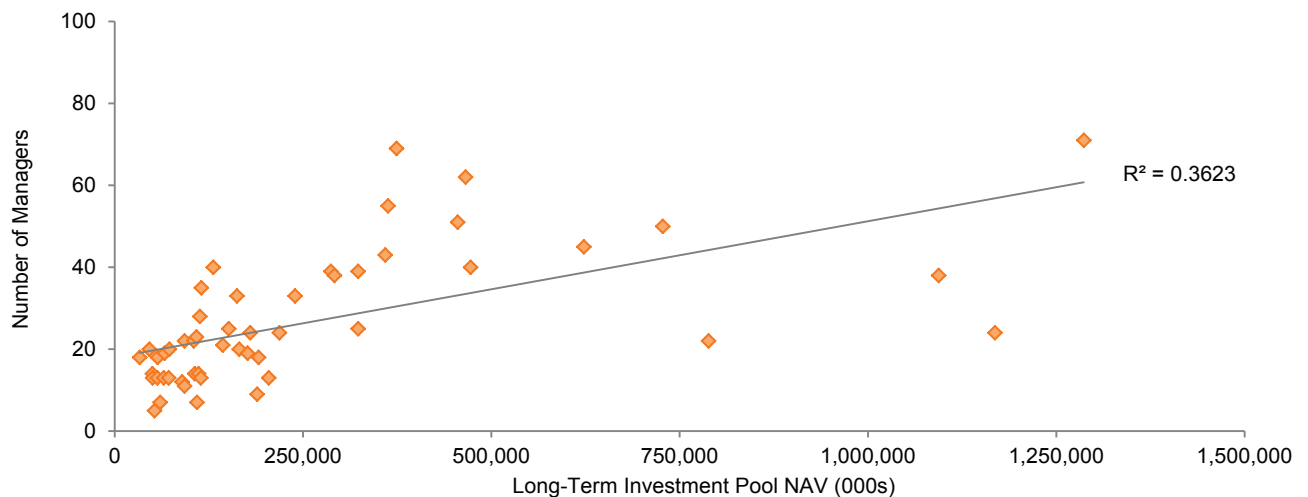
between the number of managers employed at the 5th and 95th percentiles is even wider for mid-sized portfolios (39 and nine, respectively) and those with assets over \$300 million (70 and 23, respectively). Much of the variation can be attributed to the management of alternative asset classes. As Exhibit 18 shows, the dispersion in the number of alternative assets managers employed, particularly within hedge funds and private investments, is wider than that of the more traditional equity and bond asset classes. Further detail on these and other asset classes are provided for the three broad asset size groups in Exhibit 19.

## Asset Class Implementation

**Alternative Assets.** Less than half of participants (39%) have constructed a hedge fund program that solely use single manager funds while another 26% rely only on funds-of-funds (Exhibit 20). The remaining institutions employ a combination of single manager funds and funds-of-funds. Implementation practices also vary across private investment

### Number of External Managers Versus LTIP Market Value

As of June 30, 2014 • Data for 51 Cultural & Environmental Institutions

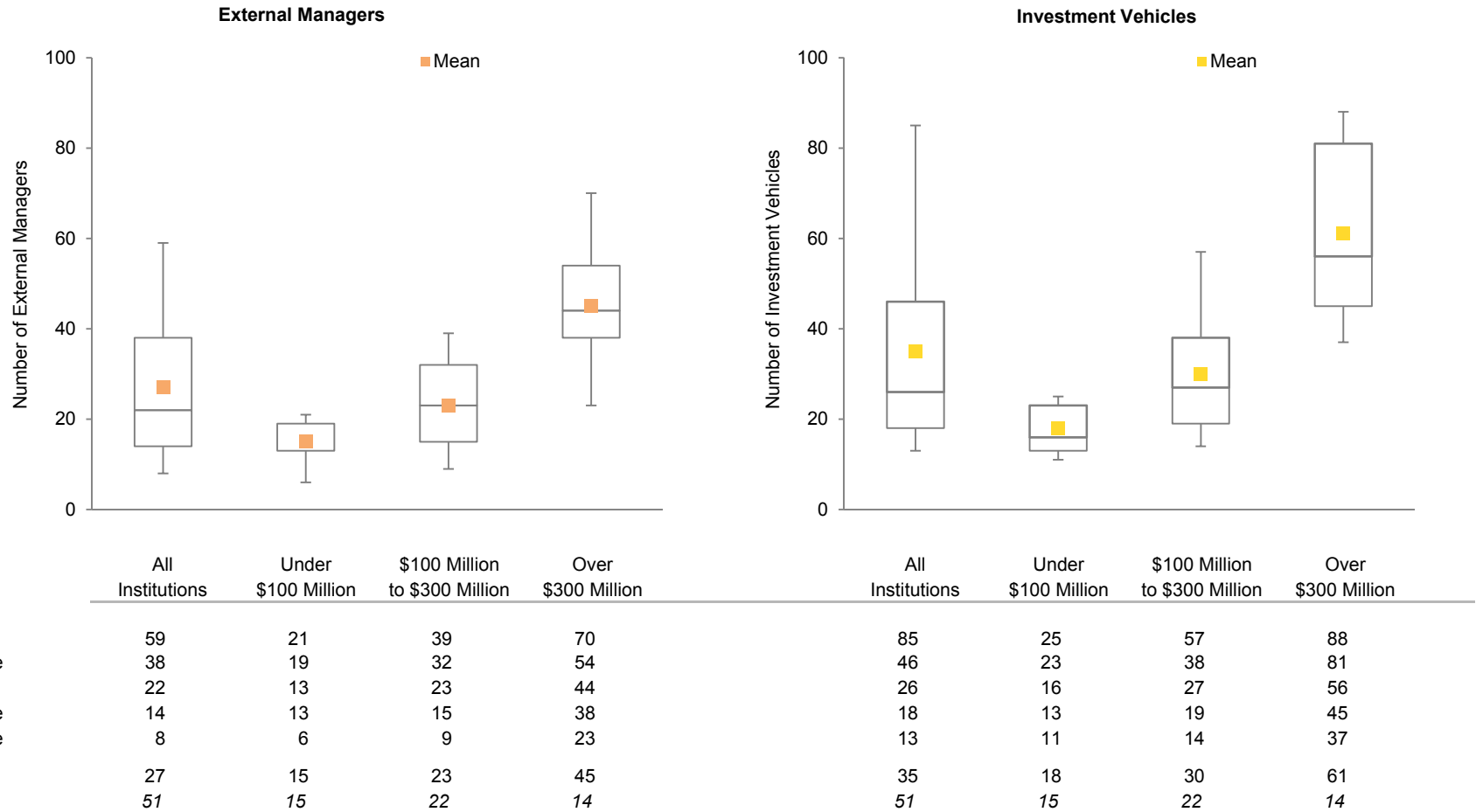


Source: Cultural and environmental data as reported to Cambridge Associates LLC.

asset classes. Nearly half of institutions (46%) rely on a combination of single manager funds and funds-of-funds to implement their private equity portfolios. For venture capital, over 65% of participants used only funds-of-funds. A sole reliance upon single manager funds is more prevalent in real estate (61%) than for private energy/natural resources (43%) (Exhibit 21). Smaller portfolios generally use funds-of-funds managers more than larger portfolios in all alternative asset classes (Exhibit 19). Exhibits 20 and 21 display implementation data by asset size, including the mean allocation of assets for institutions that use a combination of strategies to implement their alternative asset programs.

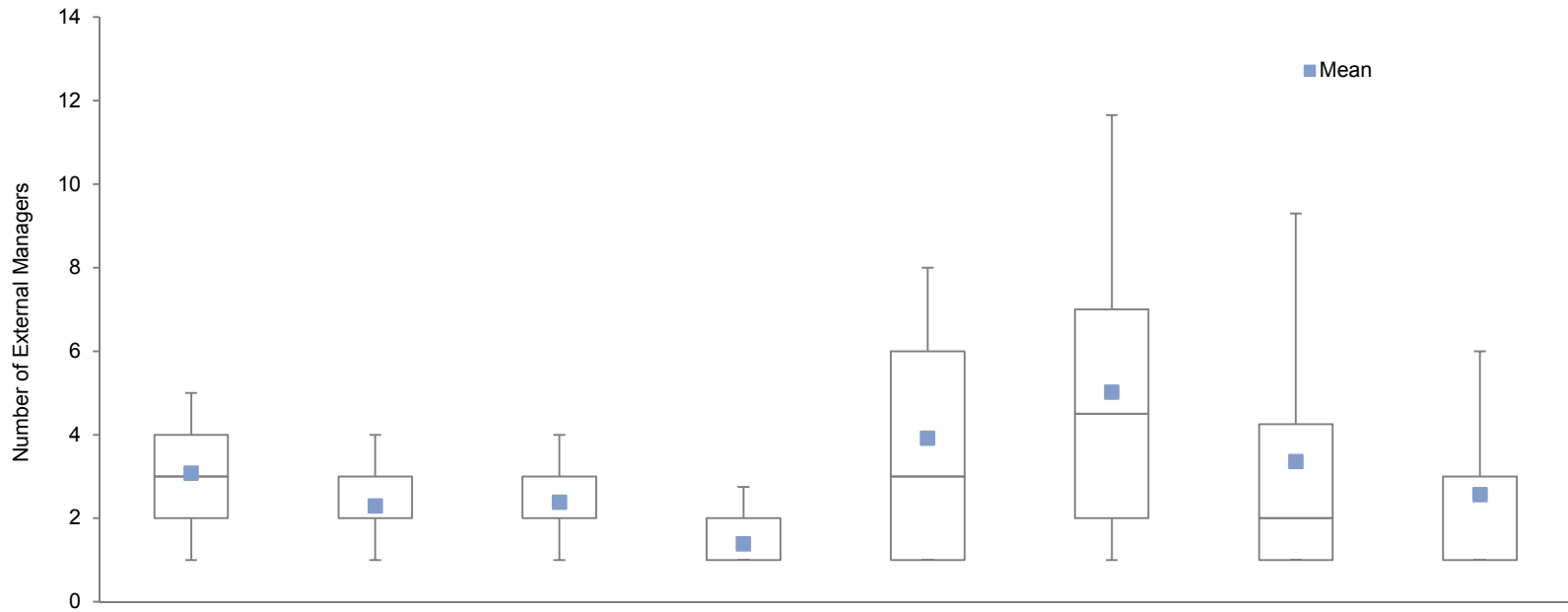
**Public Equities and Bonds.** Of the institutions that provided data on their portfolio implementation, 41% used active managers for all of their US equity allocation. The proportion was higher for global ex US equity allocations, where developed markets and emerging markets allocations were achieved solely through active managers for 78% and 67% of respondents, respectively. For bonds, a majority of respondents used only active managers for their total allocation to US markets (61%). All respondents used only active managers for their global ex US developed markets and emerging markets bond portfolios. Exhibit 22 shows further detail on these practices for the various asset size bands. ■

**Exhibit 17**  
**Number of External Managers and Investment Vehicles**  
 As of June 30, 2014



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Note: Funds-of-funds are counted as one separate investment manager and investment vehicle.

**Exhibit 18**  
**Dispersion in Number of Managers for Selected Asset Classes**  
 As of June 30, 2014



	US Equity	Global ex US Devel Equity	Emerging Markets Equity	US Bonds	Long/Short Hedge Funds	Absolute Return Hedge Funds	Private Equity	Venture Capital
5th Percentile	5	4	4	3	8	12	9	6
25th Percentile	4	3	3	2	6	7	4	3
Median	3	2	2	1	3	5	2	1
75th Percentile	2	2	2	1	1	2	1	1
95th Percentile	1	1	1	1	1	1	1	1
Mean	3	2	2	1	4	5	3	3
<i>n</i>	51	51	49	46	35	48	28	23

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

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

**Exhibit 19**  
**Externally Managed Investment Pool Holdings by Strategy**  
As of June 30, 2014

Strategy	Under \$100 Million			\$100 Million to \$300 Million			Over \$300 Million		
	Average Number of			Average Number of			Average Number of		
	Managers	Vehicles	<i>n</i>	Managers	Vehicles	<i>n</i>	Managers	Vehicles	<i>n</i>
<b>Traditional Equity</b>									
Global Equity	2	2	6	2	2	10	2	2	12
US Equity	3	3	15	3	3	22	4	4	14
Global ex US Equity - Developed	2	2	15	2	2	22	3	3	14
Global ex US Equity - Emerging	2	2	13	2	2	22	3	3	14
<b>Traditional Bonds</b>									
Global Bonds	2	2	8	1	1	10	1	1	6
US Bonds	2	2	13	1	1	21	1	2	12
Global ex US Bonds - Developed	1	1	1	1	1	1	—	—	0
Global ex US Bonds - Emerging	2	2	2	1	1	7	1	1	2
High-Yield Bonds	1	1	5	1	1	3	1	1	2
<b>Hedge Funds</b>									
Long/Short Hedge Funds	2	2	7	4	4	15	5	5	13
Absolute Return (ex Distressed Securities)	3	3	13	4	5	21	8	8	14
<b>Distressed Securities</b>									
Distressed (Hedge Fund Structure)	1	1	1	2	2	9	1	1	11
Distressed (Private Equity Structure)	1	2	2	2	4	13	3	5	12
<b>Private Investments</b>									
Non-Venture Private Equity	1	2	3	2	4	11	5	8	14
Venture Capital	1	1	3	2	4	7	3	4	13
Other Private Investments	1	1	2	2	3	9	3	4	13
<b>Real Assets &amp; Inflation-Linked Bonds</b>									
Private Real Estate	1	2	2	1	2	7	3	5	14
Public Real Estate	1	1	4	1	1	4	1	1	4
Commodities	1	1	5	1	1	6	1	1	4
Inflation-Linked Bonds (TIPS)	1	1	3	1	1	3	1	1	1
Private Oil & Gas/Natural Resources	—	—	0	2	4	7	4	6	14
Timber	—	—	0	1	1	2	1	1	3
Public Energy/Natural Resources	2	2	8	2	2	17	2	2	8
Diversified (Multi-Strategy) Real Assets	1	1	7	1	1	9	1	1	2
<b>Cash</b> (Dedicated Cash Managers Only)	1	1	10	1	1	18	1	1	9
<b>Tactical Asset Allocation</b>	—	—	0	1	1	5	1	1	1
<b>Other</b>	—	—	0	1	1	1	—	—	0

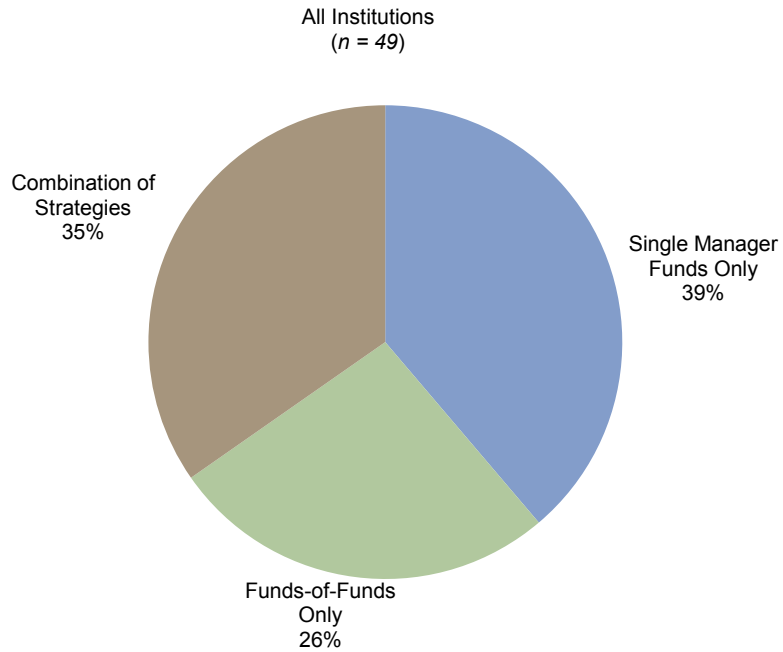
Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: *n* indicates the number of institutions that are included in the average number of managers and average number of vehicles. Only those institutions with an allocation to the specific asset class are included in each category. As a result, the sum of the individual asset classes will not equal the true total average of managers and vehicles. Please reference Exhibit 17 for that information.



**Exhibit 20**  
**Portfolio Implementation: Hedge Funds**  
 As of June 30, 2014

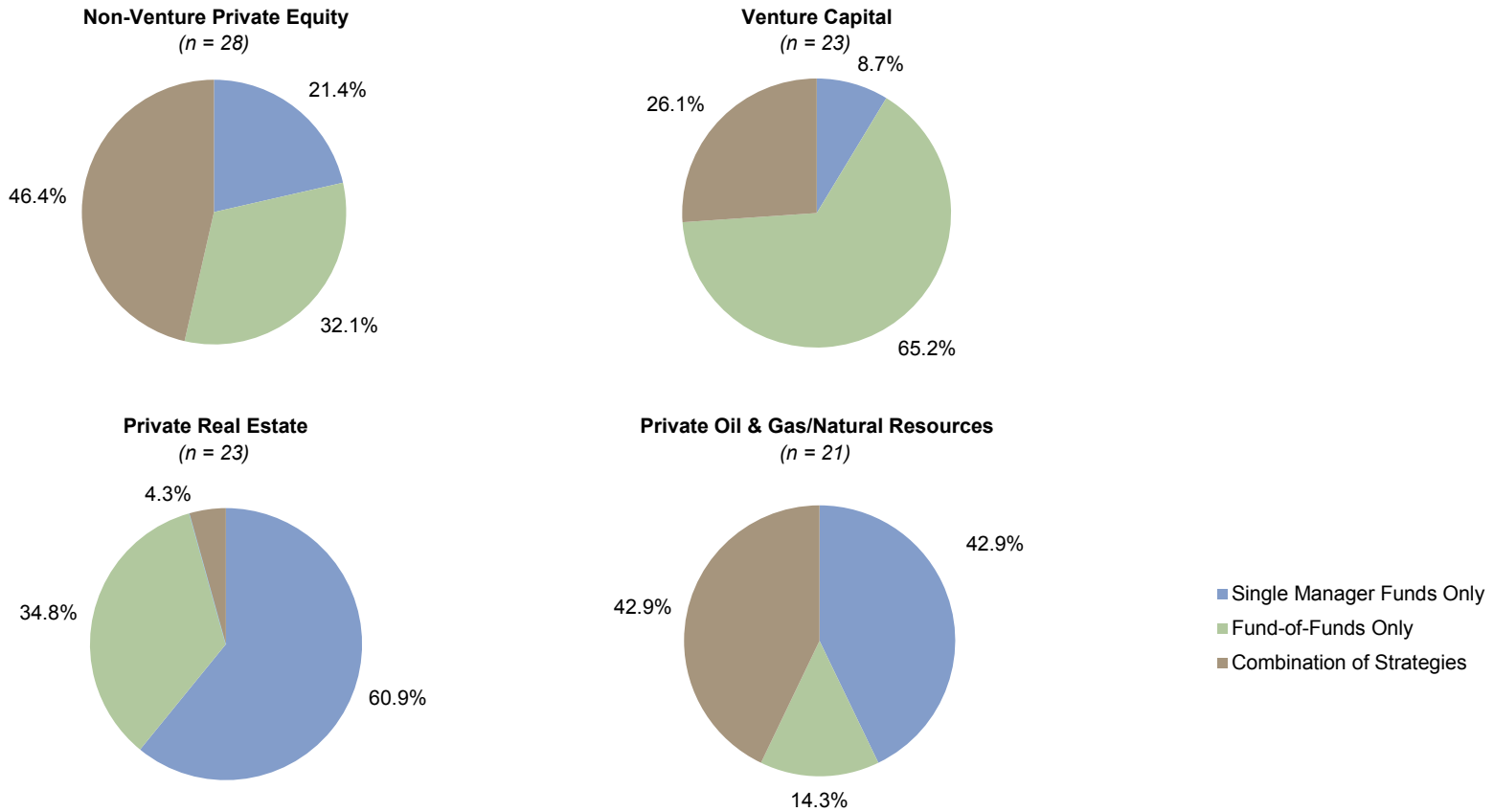
**Hedge Fund Allocation Implementation**



	Percentage (%) of Respondents			Mean Allocation of Assets for Respondents Using Combination of Strategies	
	Single Manager Funds Only	Fund-of-Funds Only	Combination of Strategies	Single Manager Funds	Fund-of-Funds
Under \$100 Million (n = 14)	7.1%	35.7%	57.2%	31.9%	68.1%
\$100 Million to \$300 Million (n = 21)	33.3%	33.3%	33.3%	57.7%	42.3%
Over \$300 Million (n = 14)	78.6%	7.1%	14.3%	46.2%	53.8%

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

**Exhibit 21**  
**Portfolio Implementation: Private Investments**  
 As of June 30, 2014



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Notes: *n* represents the number of institutions that provided the portfolio implementation for each asset class.

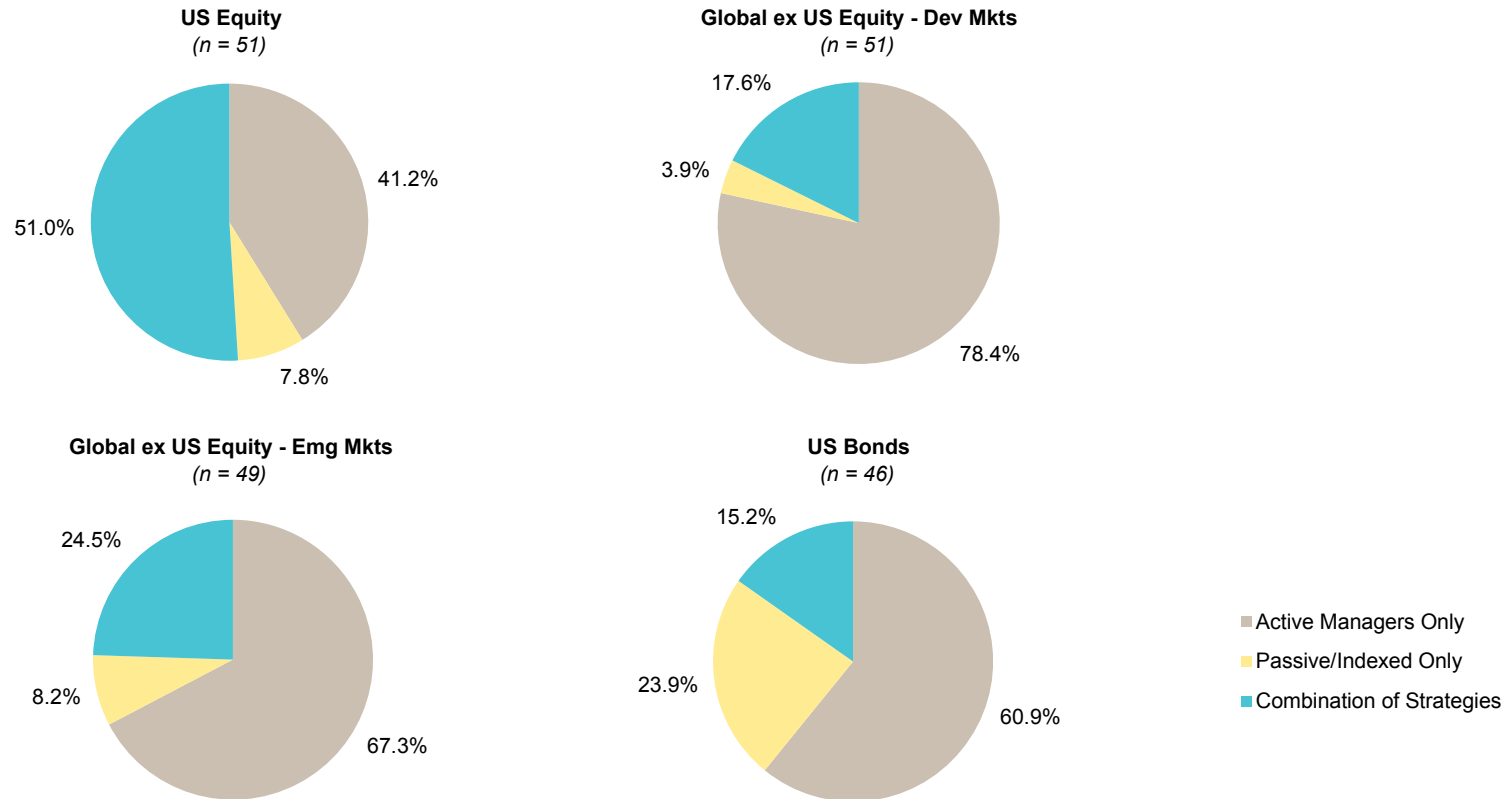
**Exhibit 21 (continued)**  
**Portfolio Implementation: Private Investments**  
As of June 30, 2014

	Percentage (%) of Respondents					Mean Allocation of Assets for Respondents Using Combination of Strategies			
	Fund Commitments		Direct Investments			Single Manager Funds	Fund-of- Funds	Direct Co- investments	Direct Solo Investments
	Single Manager Funds Only	Fund-of- Funds Only	Direct Co- investments Only	Direct Solo Investments Only	Combination of Strategies				
<b>Non-Venture Private Equity</b>									
Under \$300 Million (n = 14)	14.3%	64.3%	0.0%	0.0%	21.4%	19.1%	80.9%	0.0%	0.0%
Over \$300 Million (n = 14)	28.6%	0.0%	0.0%	0.0%	71.4%	44.1%	55.7%	0.2%	0.0%
<b>Venture Capital</b>									
Under \$300 Million (n = 10)	0.0%	90.0%	0.0%	0.0%	10.0%	74.8%	25.2%	0.0%	0.0%
Over \$300 Million (n = 13)	15.4%	46.2%	0.0%	0.0%	38.4%	18.5%	81.5%	0.0%	0.0%
<b>Private Real Estate</b>									
Under \$300 Million (n = 9)	22.2%	77.8%	0.0%	0.0%	0.0%	—	—	—	—
Over \$300 Million (n = 14)	85.7%	7.1%	0.0%	0.0%	7.2%	56.2%	43.8%	0.0%	0.0%
<b>Private Oil &amp; Gas/Natural Resources</b>									
Under \$300 Million (n = 7)	28.6%	14.3%	0.0%	0.0%	57.1%	40.6%	59.4%	0.0%	0.0%
Over \$300 Million (n = 14)	50.0%	14.3%	0.0%	0.0%	35.7%	61.3%	36.5%	2.2%	0.0%

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Co-investments are direct investments made into a company alongside a general partner that originates the transaction. Solo investments are direct investments made into a company in which the institutional investor originates and invests in a transaction, which is not associated with a manager in the investor's portfolio.

**Exhibit 22**  
**Portfolio Implementation: Traditional Equities and Bonds**  
 As of June 30, 2014



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Notes: *n* represents the number of institutions that provided the portfolio implementation for each asset class.

**Exhibit 22 (continued)**  
**Portfolio Implementation: Traditional Equities and Bonds**  
 As of June 30, 2014

	Percentage (%) of Respondents					Mean Allocation of Assets for Respondents Using Combination of Strategies			
	Active Managers Only	Passive/ Indexed Only	Derivatives Only	Internally Managed Only	Combination of Strategies	Active Managers	Passive/ Indexed	Derivatives	Internally Managed
<b>US Equity</b>									
Under \$100 Million (n = 15)	20.0%	13.3%	0.0%	0.0%	66.7%	56.9%	41.5%	0.0%	1.6%
\$100 to \$300 Million (n = 22)	45.5%	9.1%	0.0%	0.0%	45.4%	61.5%	37.1%	0.0%	1.4%
Over \$300 Million (n = 14)	57.1%	0.0%	0.0%	0.0%	42.9%	67.1%	32.9%	0.0%	0.0%
<b>Global ex US Equity - Dev Mkts</b>									
Under \$100 Million (n = 15)	66.7%	13.3%	0.0%	0.0%	20.0%	52.3%	47.7%	0.0%	0.0%
\$100 to \$300 Million (n = 22)	77.3%	0.0%	0.0%	0.0%	22.7%	57.5%	42.5%	0.0%	0.0%
Over \$300 Million (n = 14)	92.9%	0.0%	0.0%	0.0%	7.1%	96.7%	3.3%	0.0%	0.0%
<b>Global ex US Equity - Emg Mkts</b>									
Under \$100 Million (n = 13)	69.2%	7.7%	0.0%	0.0%	23.1%	61.7%	38.3%	0.0%	0.0%
\$100 to \$300 Million (n = 22)	59.1%	9.1%	0.0%	0.0%	31.8%	65.7%	34.3%	0.0%	0.0%
Over \$300 Million (n = 14)	78.6%	7.1%	0.0%	0.0%	14.3%	78.3%	21.7%	0.0%	0.0%
<b>US Bonds</b>									
Under \$100 Million (n = 13)	53.8%	15.4%	0.0%	0.0%	30.8%	48.7%	45.3%	0.0%	6.1%
\$100 to \$300 Million (n = 21)	66.7%	19.0%	0.0%	0.0%	14.3%	61.3%	36.3%	0.0%	2.4%
Over \$300 Million (n = 12)	58.3%	41.7%	0.0%	0.0%	0.0%	--	--	--	--

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

### Net Flow Rate

Traditionally, endowment health has been evaluated in terms of investment performance and endowment spending or payout rate. A key objective has been to achieve real investment returns that exceed the average annual payout rate over the long term. In the chart below, median data are displayed for a group of seven participants that provided returns, long-term investment portfolio (LTIP) market values, and spending rates over the last five years. Using median investment performance and starting with an initial investment of \$100 in 2009, the portfolio would have grown to \$161 in real dollars by the end of fiscal year 2014. After deducting the annual endowment spending policy distribution from real investment performance, the investment would have grown to just \$125. If the LTIP market value tracked this path, its purchasing power would have increased by 25% from five years prior. This approach omits an important part of the picture—the LTIP is also driven by inflows that come in as gifts, and other funds designated for long-term investment. The combination of

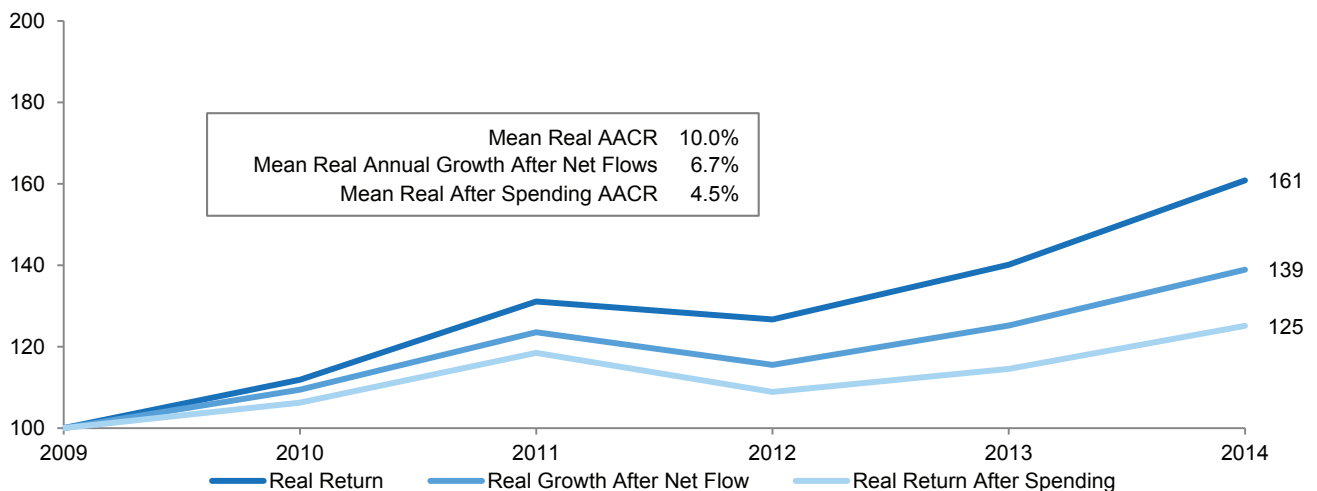
the total inflows and outflows for the LTIP constitutes the net flow rate. In the same chart, the actual value of the investment, which incorporates both real investment performance and net flows, is tracked by the middle line and grew by nearly 39% over the five-year period. Because of the steady inflow from gifts and other additions that most institutions experienced, the actual growth in the portfolio was higher than growth based on returns after spending only. Since maintaining the purchasing power of existing endowment gifts is a key objective in endowment management, the traditional return after spending statistic should not be dismissed. However, this statistic can understate the actual extent of asset growth.

By incorporating real investment performance with the overall net flow rate, an institution can better evaluate the trajectory of the LTIP's role in the institution's business model.<sup>1</sup>

<sup>1</sup> For a more in-depth discussion on this topic please see Ann Bennett Spence et al., "The Missing Metric for Endowment Growth: Net Flow Rate," Cambridge Associates Research Note, November 2014.

### Cumulative Dollar Growth After Inflation, Net Flows, and Spending

Years Ended June 30 • Base Year 2009 = \$100 • Data for 7 Cultural and Environmental Institutions



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: The mean real annual growth after net flows represents the actual growth in the long-term investment portfolio's market value adjusted for inflation.

For the 15 participants that provided both additions to and withdrawals from their portfolio in fiscal year 2014, the mean net flow rate was negative (-2.7%), meaning the amount of withdrawals from the portfolio surpassed the amount of additions for the majority of respondents (Exhibit 23). However, mean real investment performance (13.9%) was more than high enough to offset the net flow rate in fiscal year 2014. Each participant reported real investment performance that surpassed its net flow rate, resulting in real net asset growth for the LTIP.

**Inflows.** The average gift flow rate for institutions in this study was 2.6% in fiscal year 2014 (Exhibit 24). After accounting for other types of inflows,<sup>2</sup> total additions to the LTIP averaged 2.7%, indicating that gifts accounted for nearly all additions to the portfolio. An institution's gift flow rate is a relative number and should not be confused with the absolute dollar value of the gifts it receives. For the eight institutions that provided data for both years, only half reported an increase in gifts dollars for fiscal year 2014 over the previous year's level.

**Outflows.** Total withdrawals as a percentage of the beginning market value of the LTIP averaged 5.4% for all institutions (Exhibit 24). The majority of withdrawals consisted of distributions determined by the endowment spending rule. This average effective spending rate was 5.0%. Beyond the endowment spending rule distributions, some institutions report recurring annual appropriations and/or one-time appropriations to cover administrative costs, investment oversight costs, and other types of expenses. Thus, average recurring annual appropriations and one-time appropriations were 0.1% and 0.3%, respectively.

<sup>2</sup> Other types of inflows can include reinvested operating surpluses, capital campaign funds, proceeds from non-portfolio asset sales, and other various types of additions.

### Spending Policies

The majority (75%) of responding institutions continue to use a market value-based policy, which dictates spending a percentage of a moving average of endowment market values (Exhibit 25). The majority of institutions (85%) citing this rule type use a prespecified target rate while the remaining institutions allow some discretion by setting a prespecified percentage range within which the target spending rate may fall. For the purposes of analyzing target spending rates, the midpoint is used for institutions that specified a discretionary range.

A target spending rate of 5% was used by 63% of institutions with a market value-based policy. The remaining institutions were split evenly between those that use a target rate below 5% and those that use a rate above 5% (Exhibit 26). Four institutions made a change to their target spending rate in fiscal year 2014 (Exhibit 27). Three of these institutions lowered their target rate, with the decreases ranging from 0.1 ppt to 1 ppt. The other institution that reported a change raised its target rate by 0.5 ppt.

Institutions employ a variety of smoothing periods to determine the average endowment market value used in the spending calculation. Smoothing periods range from one to five years, and the time interval (i.e., monthly, quarterly, or annual market values) can vary (Exhibit 28). The most common unit of time measurement is 12 quarters (used by 56% of those with a market value-based policy that provided their unit of time measurement).

Despite the smoothed average market value component, there is a risk that the policy calculation would dictate a spending cut during prolonged periods of endowment value declines. Cutting endowment spending can be difficult during market downturns, as they often coincide with an economic environment where other

revenue sources of the institution are at risk of weakening. This may be particularly problematic for institutions with high fixed costs. A floor that prevents spending from falling below the prior year's dollar amount would ease budgetary concerns during these periods, but at the cost of reducing the likelihood that purchasing power will be preserved over the long term. Using a cap along with a floor, however, can better balance the impact on future generations by limiting spending increases when endowment growth is particularly strong. Only one institution that reported a market value–based policy uses a floor and/or a cap to further contain spending during volatile periods (Exhibit 26). An additional four institutions are allowed to set a rate within a discretionary range of percentages and have more flexibility to maintain the level of spending in down markets and contain spending increases when endowment growth rates are high.

Constant growth spending policies increase the prior year's spending amount by a measure of inflation and/or a prespecified percentage. Two respondents use a constant growth spending policy. One of these respondents uses a prespecified growth rate while the other uses an inflation-index growth rate plus a prespecified percentage (Exhibit 29).

The great advantage of a constant growth policy is the predictable spending stream from the endowment to the institution; however, constant growth policies have notable shortcomings. Increasing spending during prolonged periods of asset declines risks permanent impairment of the endowment. Conversely, some endowment constituencies might protest if they perceive the fund as grossly under-spending in periods when it earns exceptional returns. In practice, institutions with constant growth spending policies mitigate these concerns and moderate spending by imposing

a spending cap and floor based on a percentage of market value, or a moving average of market values (Exhibit 29).

Hybrid spending policies are used by five institutions. This policy type blends the predictable spending element of a constant growth policy with the asset preservation principle of a market value–based policy and allows an institution to set the appropriate mix that best meets its needs. Hybrid spending policies essentially have the effect of spending a prespecified percentage of an exponentially weighted average market value. The rule is expressed as a weighted average of a constant growth rule and a percentage-of-market-value (or average market value over a period of time) rule, with the greater weighting usually applied to the constant growth component. For the five institutions using a hybrid spending rule, the weighting assigned to the constant growth portion ranges from 70% to 80%. Inputs to the calculation of both the constant growth and market value–based components are shown in Exhibit 29.

Two institutions indicated that they are considering making changes to their spending rule for fiscal year 2015. Both institutions use a market value–based spending rule and are considering altering the mechanics of their rule. One is considering lowering its target rate while the other is considering implementing a discretionary range within which the target spending rate may fall.

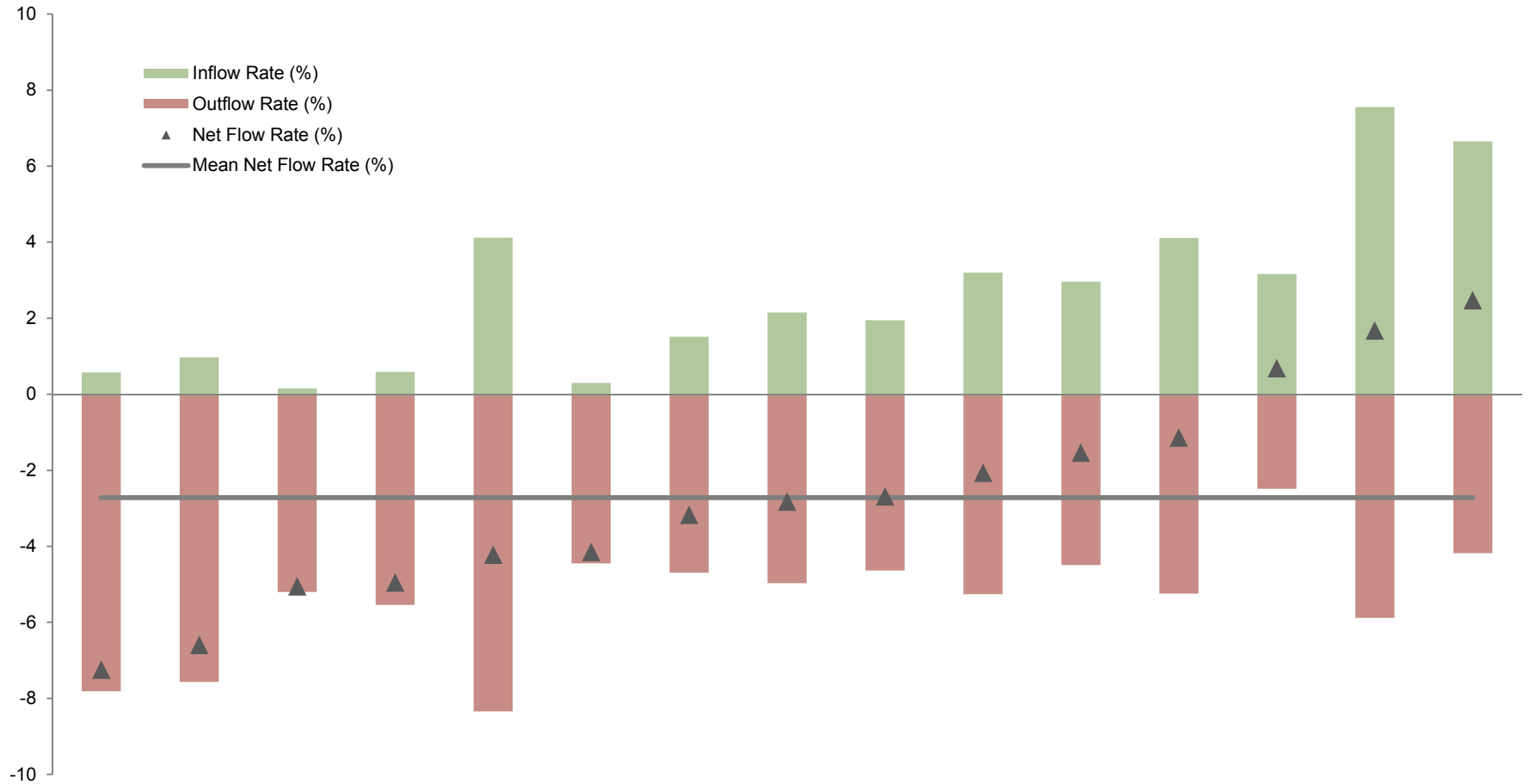
### LTIP Support of Operations

For the 15 institutions that provided data, support from the LTIP as a percentage of the organization's total operating expenses averaged 40.7% in fiscal year 2014 (Exhibit 30). The extent of support varied widely, from one institution relying on the investment portfolio to cover just over 13% of expenses to another institution at the other end of the spectrum that relies almost fully (91%) on the portfolio payout. ■



**Exhibit 23**  
**Net Flow Rate Comparison**

Fiscal Year 2014 • Net Flow Rate for 15 Cultural & Environmental Institutions



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
Note: See Exhibit 38 for a listing of the net flow rates for these 15 institutions.

**Exhibit 24**  
**Additions to and Withdrawals from the Long-Term Investment Portfolio**  
 Fiscal Year 2014

**Additions (n = 15)**

Responding Institutions	Endowment Gifts			Other Additions	Total Additions
	Restricted	Unrestricted	<i>Total Gifts</i>		
Mean	1.6	1.0	2.6	0.0	2.7
5th Percentile	4.6	4.2	6.9	0.1	6.9
25th Percentile	2.5	1.0	3.6	0.0	3.7
Median	0.8	0.2	2.0	0.0	2.2
75th Percentile	0.5	0.0	0.8	0.0	0.8
95th Percentile	0.0	0.0	0.2	0.0	0.3

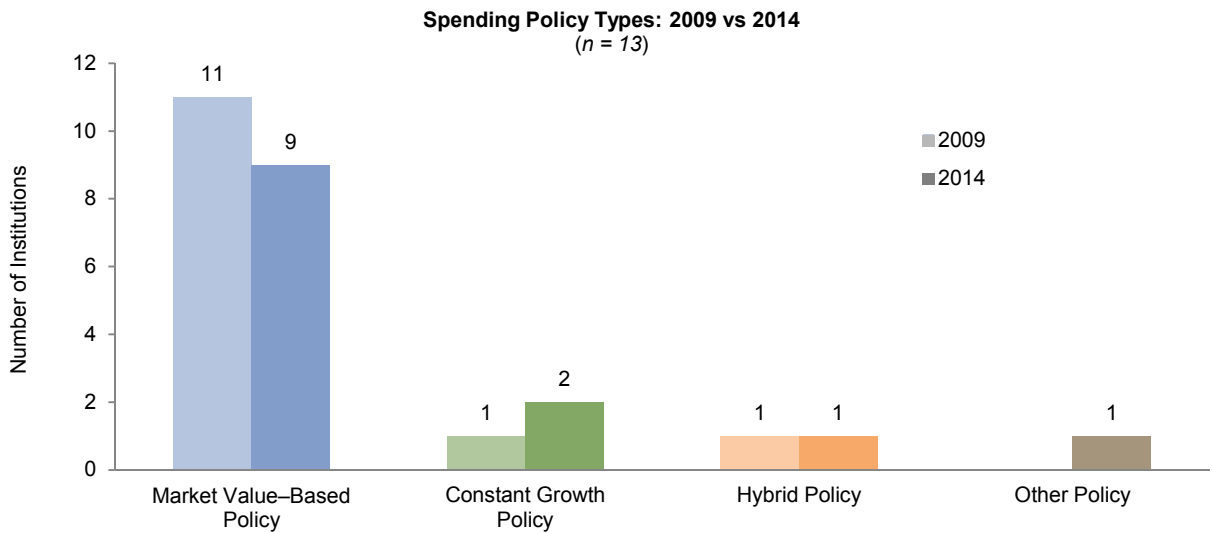
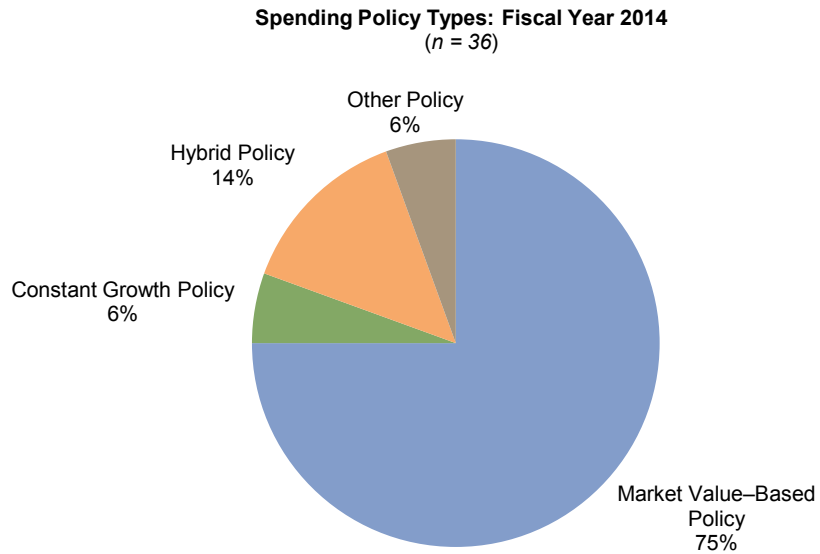
**Withdrawals (n = 15)**

Responding Institutions	Endowment Spending Policy Distribution	Withdrawals Not Included in Endowment Spending Distribution		Total Withdrawals
		Recurring Annual Appropriations	Special / One-Time Appropriations	
Mean	5.0	0.1	0.3	5.4
5th Percentile	6.5	0.3	2.0	8.0
25th Percentile	5.4	0.2	0.1	5.7
Median	4.8	0.0	0.0	5.2
75th Percentile	4.5	0.0	0.0	4.6
95th Percentile	3.7	0.0	0.0	3.7

Source: Cultural and environmental data as reported to Cambridge Associates LLC.

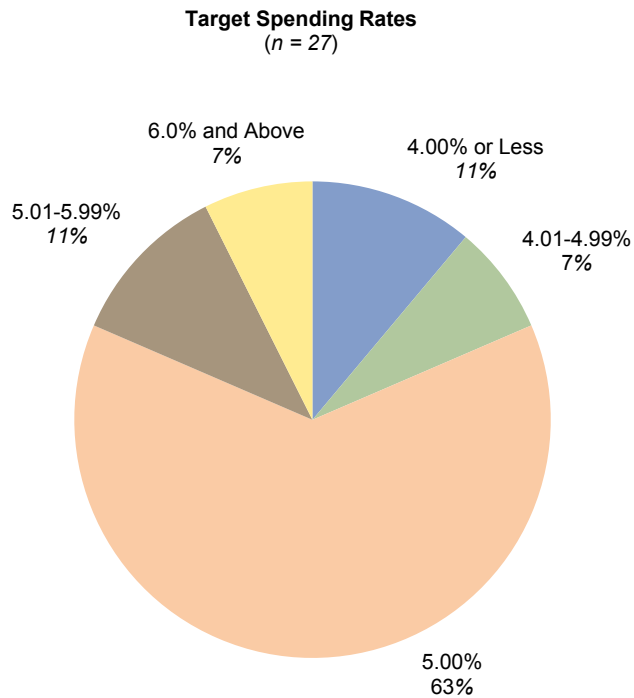
Notes: Figures are calculated as a percentage of the beginning fiscal year market value of the long-term investment portfolio (LTIP). Investment manager fees are not included in the withdrawals section.

**Exhibit 25**  
**Spending Policy Types**  
 Fiscal Year 2014



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Notes: Pie chart represents the 36 institutions that provided a spending policy in 2014. Bar graph represents the 13 institutions that provided a spending policy in both 2009 and 2014. Market value-based spending policies base spending on a prespecified percentage of a moving average of market values. Constant growth policies increase prior year's spending by a prespecified percentage. Hybrid policies are those that incorporate a weighted average of a constant growth rule and a percentage of market value rule. Other policies are those that cannot be classified as market value-based, constant growth, or hybrid policies.

**Exhibit 26**  
**Target Spending Rates for Market Value–Based Spending Policies**  
 Fiscal Year 2014



Collars, Caps & Floors

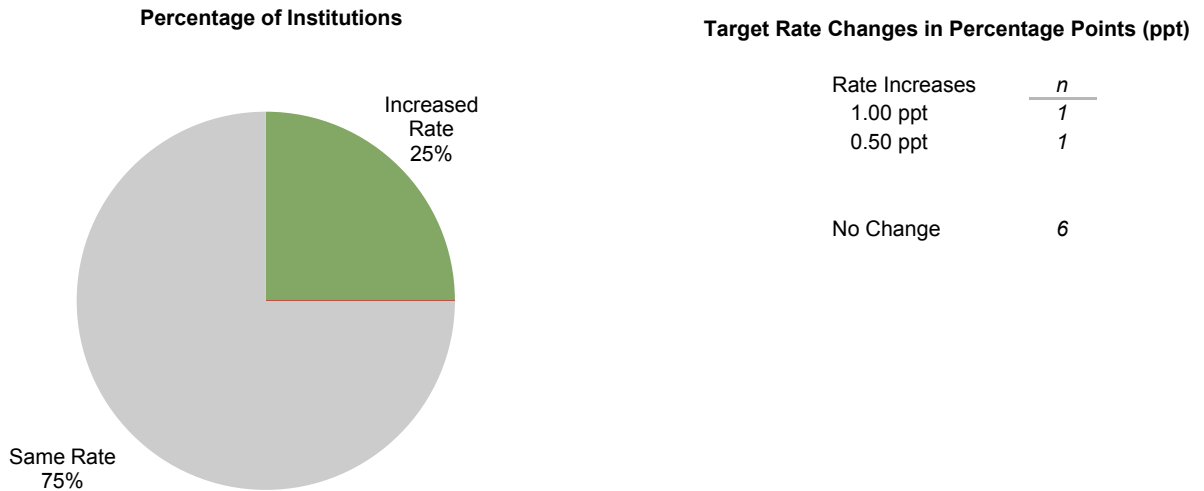
Caps Only

103% of prior year's payout (n=1)

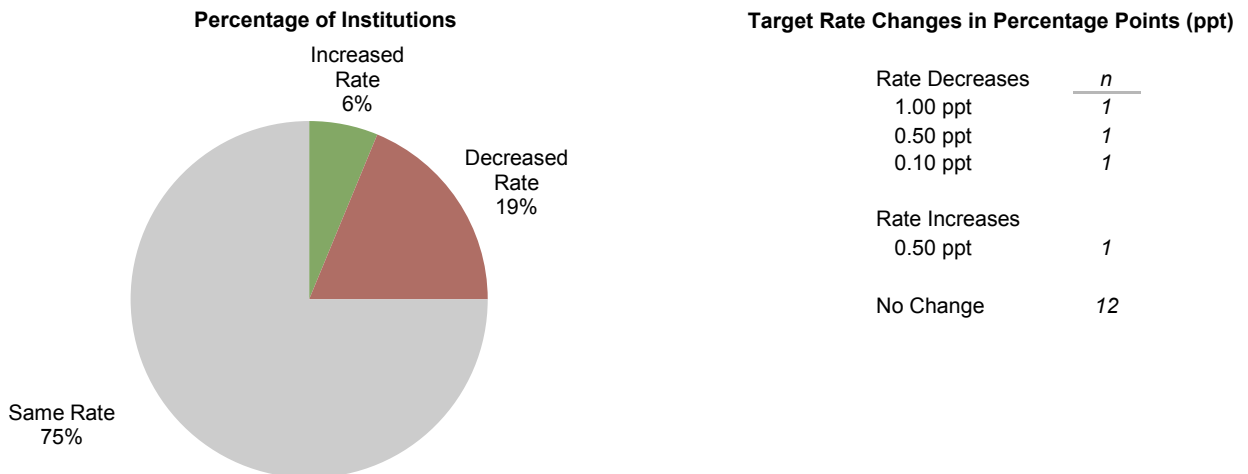
Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Notes: Market value–based spending policies base spending on a prespecified percentage of a moving average of market values. Graph reflects data for the 27 institutions that provided detailed data on their target spending rate. If a range was provided, the target spending rate was calculated using the midpoint of the range.

**Exhibit 27**  
**Changes in Target Spending Rates**  
 Fiscal Year 2014 Versus Fiscal Years 2009 and 2013

**How Many Institutions Have Different Target Spending Rates in 2014 Compared to 2009?**  
 (n = 8)

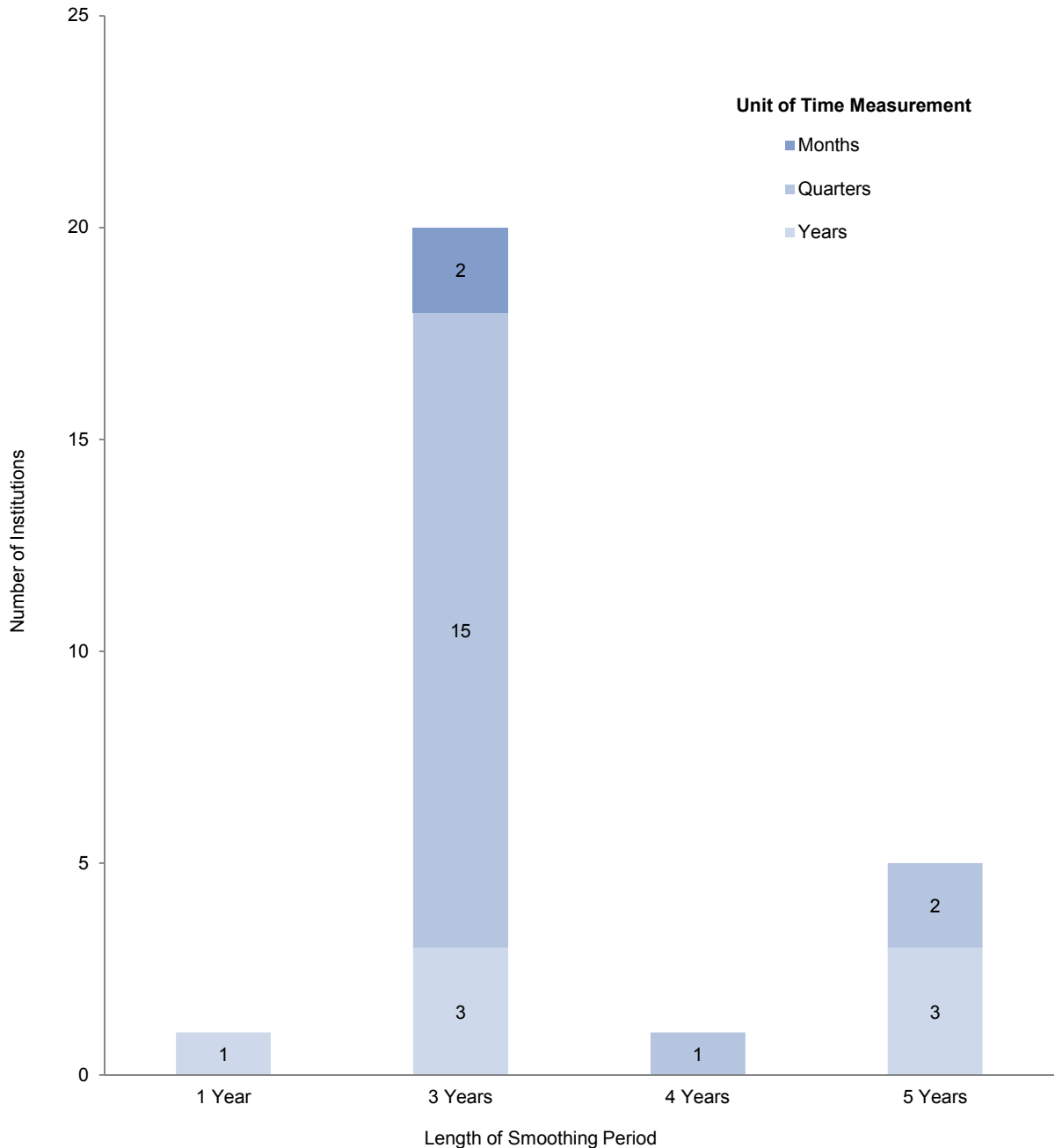


**How Many Institutions Have Different Target Spending Rates in 2014 compared to 2013?**  
 (n = 16)



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Notes: Market value-based spending policies base spending on a prespecified percentage of a moving average of market values. Graphs reflect data for the institutions using a market value-based spending policy that provided the target rate used in their spending calculation for fiscal year 2009 or 2013. If a range was provided, the target spending rate was calculated using the midpoint of the range.

**Exhibit 28**  
**Smoothing Periods for Market Value–Based Spending Policies**  
 Fiscal Year 2014



Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Market value–based spending policies base spending on a prespecified percentage of a moving average of market values. Unit of time measurement indicates whether spending is calculated using monthly, quarterly, or yearly market values. Graph reflects data for the 27 institutions using a market value–based spending policy that provided the unit of time measurement in their spending calculation.

**Exhibit 29**  
**Characteristics of Constant Growth and Hybrid Spending Policies**  
 Fiscal Year 2014

**Constant Growth Spending Policies**

Institution	Growth Measure	Collars, Caps & Floors
A	3.0%	4.5%–5.5% of 3-year average market value
B	CPI-U + 1.0%	3.0%–6.0% of 12/31 market value of previous calendar year

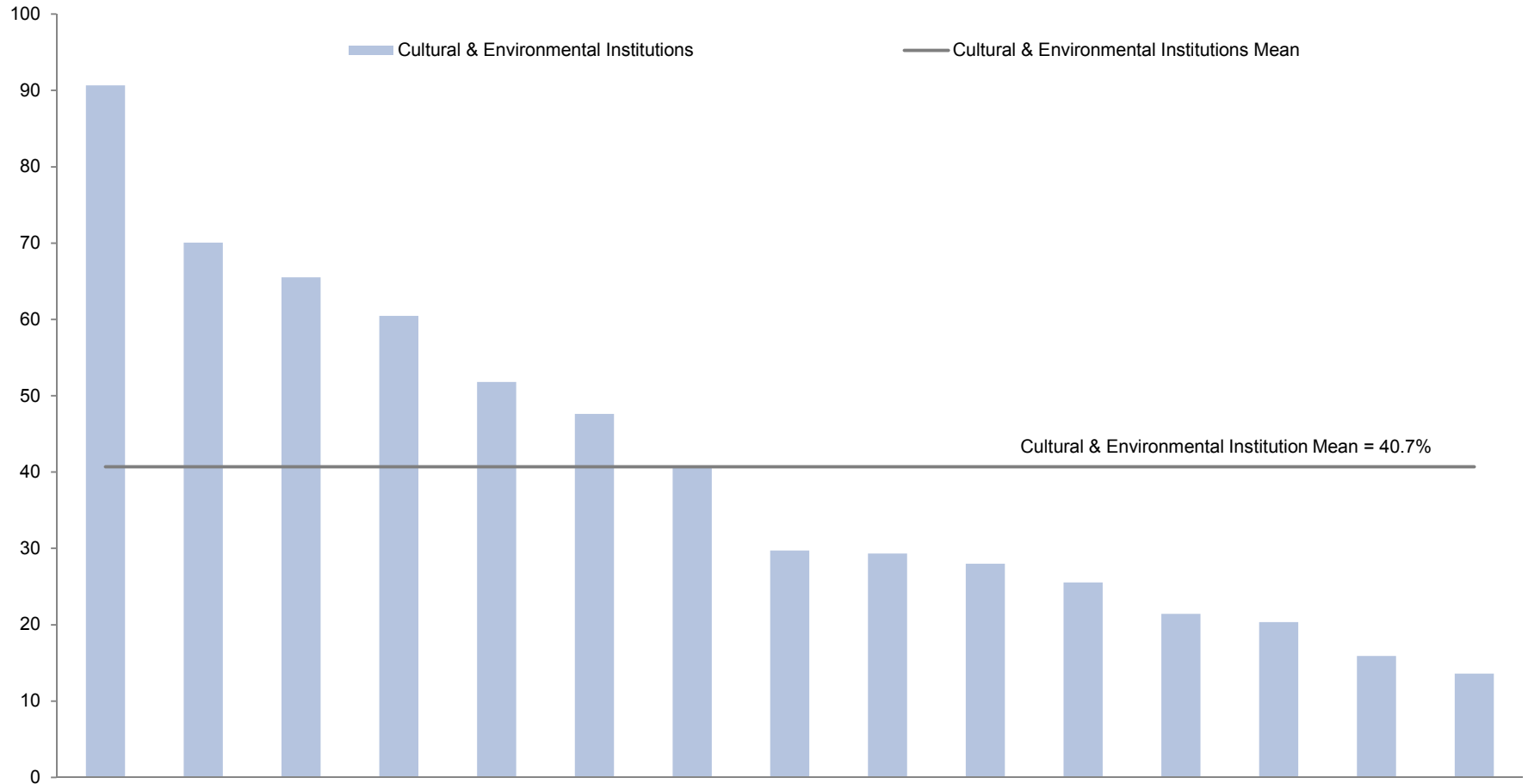
**Hybrid Spending Policies**

Institution	Weighting	Constant Growth Component	Market Value–Based Component	Collars, Caps & Floors
D	75%: Constant Growth 25%: Market Value–Based	CPI-U	5.0% of 12/31 MV of prior fiscal year	4.0%–6.0% of current MV
E	80%: Constant Growth 20%: Market Value–Based	CPI-U	4.5% of prior year-end MV	3.0%–6.0% of prior year-end MV
F	70%: Constant Growth 30%: Market Value–Based	60% ECI + 40% CPI-U	5.0% of 36-month average MV	—
G	70%: Constant Growth 30%: Market Value–Based	CPI-U	5.0% of 12/31 MV	—
H	80%: Constant Growth 20%: Market Value–Based	CPI-U	5.0% of 12/31 MV	4.75%–5.75% of 12/31 MV

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Constant growth policies increase prior year's spending by a prespecified percentage. Hybrid policies essentially have the effect of spending a prespecified percentage of an exponentially weighted average market value (MV). The rule is expressed as a weighted average of a constant growth policy and a percentage of market value policy. Data for this exhibit are provided on a blind-coded basis.

**Exhibit 30**  
**Long-Term Investment Portfolio (LTIP) Support of Operations**  
 Fiscal Year 2014 • LTIP Support Ratio for 15 Cultural & Environmental Institutions



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



The following eight exhibits show data on total return, asset allocation, and net flow rate by institution code. Aggregate data on these topics was presented in the earlier sections Investment Portfolio Returns, Portfolio Asset Allocation, and Additions to and Withdrawals from the LTIP. ■

**Exhibit 31**  
**Total Return by Institution Organized by Private Investment Performance Methodology**  
 12 Months Ended June 30, 2014 • Percent (%)

Code	Private Investment Allocation	Nominal	Real	Nominal After Spending	Real After Spending
<i>Current Basis</i>					
2	18.4	17.2	14.8	—	—
4	15.2	14.2	11.9	—	—
6	9.8	17.8	15.4	—	—
7	15.8	15.4	13.1	9.4	7.2
8	9.2	15.6	13.2	—	—
10	19.6	18.7	16.3	15.4	13.0
11	7.9	15.0	12.6	—	—
13	30.1	15.1	12.7	—	—
14	5.6	14.6	12.3	—	—
19	26.2	17.3	14.9	—	—
20	2.9	14.7	12.4	7.5	5.3
23 <sup>^</sup>	5.6	16.9	14.5	7.9	5.7
25	23.6	16.7	14.4	—	—
26	16.8	15.7	13.4	—	—
28	10.9	17.8	15.4	12.5	10.3
30	16.9	19.7	17.3	—	—
31	2.0	17.9	15.5	12.3	10.0
32	4.8	14.5	12.1	—	—
34	1.5	13.9	11.6	13.9	11.6
35	6.5	18.5	16.0	—	—
36	4.8	15.8	13.5	—	—
37	4.2	16.2	13.9	—	—
38	19.1	15.8	13.4	10.0	7.8
39	8.8	21.6	19.2	—	—
40	13.6	18.3	15.9	12.2	10.0
44	9.9	17.5	15.1	—	—
45	12.1	17.3	14.9	—	—
46	8.2	16.0	13.6	—	—
47	10.7	15.7	13.4	10.7	8.4
50	1.7	14.6	12.2	—	—
<i>All Institutions</i>					
High	37.9	21.6	19.2	16.3	13.9
Low	0.0	13.0	10.7	7.5	5.3
Mean	8.3	16.3	13.9	11.1	8.8
Median	5.6	16.1	13.7	11.1	8.9
<i>n</i>	53	53	53	18	18

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Please see Exhibit 7, Performance Reporting Methodologies, for more information on these reporting methodologies. Private investment allocation includes 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. Real returns are adjusted for inflation as measured by the Consumer Price Index. After-spending returns use the effective spending rates in the calculation. Effective spending rates are fiscal year 2014 spending as a percentage of beginning (July 1, 2013) market value.

<sup>^</sup> Private investment performance is reported on a current basis with estimated valuations.

## Exhibit 31 (continued)

**Total Return by Institution Organized by Private Investment Performance Methodology**

12 Months Ended June 30, 2014 • Percent (%)

Code	Private Investment Allocation	Nominal	Real	Nominal After Spending	Real After Spending
<i>Current Basis (continued)</i>					
51	1.7	16.6	14.2	11.6	9.4
52	7.9	15.9	13.6	—	—
<i>Lagged Basis</i>					
9	23.5	14.6	12.3	—	—
15	23.5	17.7	15.3	12.1	9.8
17	37.9	17.7	15.3	—	—
<i>Private Investment Allocation Less Than 1.0%</i>					
1	0.0	16.3	13.9	16.3	13.9
3	0.0	17.6	15.2	—	—
5	0.0	16.1	13.7	—	—
12	0.0	14.6	12.2	—	—
16	0.0	17.4	15.0	—	—
18	0.7	14.2	11.9	9.3	7.1
21	0.0	16.5	14.1	7.9	5.7
22	0.0	16.1	13.7	—	—
24	0.0	14.3	12.0	—	—
27	0.0	14.6	12.3	—	—
29	0.0	17.2	14.8	12.0	9.7
33	0.0	16.0	13.7	—	—
41	0.0	18.6	16.2	—	—
42	0.0	16.6	14.2	—	—
43	0.0	13.0	10.7	—	—
48	0.0	14.1	11.7	7.7	5.5
49	0.9	14.9	12.5	10.3	8.1
53	0.0	16.0	13.6	—	—
<i>All Institutions</i>					
High	37.9	21.6	19.2	16.3	13.9
Low	0.0	13.0	10.7	7.5	5.3
Mean	8.3	16.3	13.9	11.1	8.8
Median	5.6	16.1	13.7	11.1	8.9
<i>n</i>	53	53	53	18	18

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Please see Exhibit 7, Performance Reporting Methodologies, for more information on these reporting methodologies. Private investment allocation includes 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. Real returns are adjusted for inflation as measured by the Consumer Price Index. After-spending returns use the effective spending rates in the calculation. Effective spending rates are fiscal year 2014 spending as a percentage of beginning (July 1, 2013) market value.

**Exhibit 32****Nominal and Real Total Return by Institution**

Average Annual Compound Returns for Periods Ended June 30, 2014 • Percent (%)

Code	1 Year		3 Years		5 Years		10 Years	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
1	16.3	13.9	6.4	4.4	—	—	—	—
2	17.2	14.8	10.5	8.5	12.6	10.4	—	—
3	17.6	15.2	9.1	7.1	11.1	8.9	5.6	3.3
4	14.2	11.9	8.0	6.1	10.9	8.8	8.4	5.9
5	16.1	13.7	9.4	7.4	—	—	—	—
6	17.8	15.4	9.3	7.3	12.5	10.3	7.4	4.9
7	15.4	13.1	8.1	6.2	11.1	8.9	7.2	4.7
8	15.6	13.2	7.9	5.9	11.5	9.3	7.6	5.2
9	14.6	12.3	8.4	6.4	11.3	9.1	7.2	4.8
10	18.7	16.3	8.9	7.0	12.9	10.7	7.3	4.8
11	15.0	12.6	7.3	5.4	10.6	8.4	5.5	3.1
12	14.6	12.2	7.3	5.4	11.0	8.8	5.9	3.5
13	15.1	12.7	9.1	7.2	11.9	9.7	9.1	6.6
14	14.6	12.3	7.8	5.9	10.6	8.4	6.6	4.1
15	17.7	15.3	10.2	8.2	13.2	11.0	7.4	4.9
16	17.4	15.0	9.5	7.5	13.2	11.0	6.6	4.1
17	17.7	15.3	10.7	8.7	13.4	11.1	8.4	5.9
18	14.2	11.9	7.3	5.3	10.8	8.6	6.0	3.6
19	17.3	14.9	10.5	8.5	13.1	10.8	9.0	6.5
20	14.7	12.4	6.7	4.8	9.3	7.2	3.5	1.1
21	16.5	14.1	8.6	6.6	11.4	9.2	6.6	4.2
22	16.1	13.7	7.8	5.9	11.4	9.2	6.4	4.0
23	16.9	14.5	8.1	6.1	11.0	8.8	6.7	4.3
24	14.3	12.0	6.1	4.2	9.8	7.6	4.3	2.0
25	16.7	14.4	8.1	6.1	11.3	9.1	6.9	4.5
26	15.7	13.4	9.2	7.3	11.6	9.4	7.0	4.6
27	14.6	12.3	7.2	5.3	10.0	7.8	5.2	2.8
28	17.8	15.4	10.1	8.1	12.2	10.0	7.8	5.3
29	17.2	14.8	8.4	6.5	11.8	9.6	5.3	2.9
30	19.7	17.3	10.0	8.0	13.1	10.9	8.8	6.3
31	17.9	15.5	9.3	7.4	12.4	10.2	8.2	5.8
32	14.5	12.1	7.9	5.9	11.1	8.9	—	—
33	16.0	13.7	8.8	6.9	11.2	9.0	6.7	4.3
34	13.9	11.6	6.1	4.2	—	—	—	—
35	18.5	16.0	10.6	8.6	12.0	9.8	7.8	5.4
36	15.8	13.5	7.7	5.8	10.8	8.6	6.8	4.4
37	16.2	13.9	7.7	5.7	11.2	9.0	4.7	2.4
38	15.8	13.4	9.3	7.3	13.0	10.8	8.5	6.1
39	21.6	19.2	11.4	9.4	14.5	12.2	8.0	5.6
40	18.3	15.9	9.9	7.9	13.0	10.8	7.0	4.6
Mean	16.3	13.9	8.5	6.6	11.6	9.4	7.1	4.7
Median	16.1	13.7	8.6	6.6	11.6	9.4	7.2	4.8
n	53	53	53	53	50	50	46	46

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Real returns are adjusted for inflation as measured by the Consumer Price Index.

**Exhibit 32 (continued)****Nominal and Real Total Return by Institution**

Average Annual Compound Returns for Periods Ended June 30, 2014 • Percent (%)

Code	1 Year		3 Years		5 Years		10 Years	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
41	18.6	16.2	8.9	6.9	12.3	10.0	6.4	4.0
42	16.6	14.2	8.9	6.9	12.4	10.2	8.0	5.6
43	13.0	10.7	7.3	5.4	6.6	4.5	—	—
44	17.5	15.1	9.5	7.5	12.6	10.4	7.7	5.3
45	17.3	14.9	8.9	7.0	12.4	10.2	8.4	6.0
46	16.0	13.6	7.9	5.9	12.0	9.8	7.4	5.0
47	15.7	13.4	7.7	5.7	9.8	7.7	6.7	4.3
48	14.1	11.7	6.9	5.0	10.3	8.1	5.8	3.4
49	14.9	12.5	8.5	6.5	11.7	9.5	8.0	5.5
50	14.6	12.2	6.8	4.9	9.5	7.3	—	—
51	16.6	14.2	9.7	7.7	13.1	10.9	7.7	5.3
52	15.9	13.6	8.7	6.8	11.7	9.5	7.9	5.4
53	16.0	13.6	8.7	6.8	12.0	9.8	10.0	7.5

Mean	16.3	13.9	8.5	6.6	11.6	9.4	7.1	4.7
Median	16.1	13.7	8.6	6.6	11.6	9.4	7.2	4.8
<i>n</i>	53	53	53	53	50	50	46	46

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Real returns are adjusted for inflation as measured by the Consumer Price Index.

**Exhibit 33****Nominal and Real Total Return After Spending by Institution**

Average Annual Compound Returns for Periods Ended June 30, 2014 • Percent (%)

Code	1 Year		3 Years		5 Years		10 Years	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
1	16.3	13.9	6.4	4.4	—	—	—	—
2	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—
7	9.4	7.2	2.5	0.6	5.4	3.3	—	—
8	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—
10	15.4	13.0	5.7	3.8	9.5	7.3	—	—
11	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	—	—
15	12.1	9.8	5.0	3.1	7.4	5.2	2.0	-0.3
16	—	—	—	—	—	—	—	—
17	—	—	—	—	—	—	—	—
18	9.3	7.1	2.6	0.7	—	—	—	—
19	—	—	—	—	—	—	—	—
20	7.5	5.3	—	—	—	—	—	—
21	7.9	5.7	0.9	-1.0	3.5	1.5	—	—
22	—	—	—	—	—	—	—	—
23	7.9	5.7	-0.6	-2.4	3.1	1.1	-1.0	-3.2
24	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—
26	—	—	—	—	—	—	—	—
27	—	—	—	—	—	—	—	—
28	12.5	10.3	5.0	3.1	—	—	—	—
29	12.0	9.7	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—
31	12.3	10.0	4.3	2.4	7.0	4.9	—	—
32	—	—	—	—	—	—	—	—
33	—	—	—	—	—	—	—	—
34	13.9	11.6	—	—	—	—	—	—
35	—	—	—	—	—	—	—	—
36	—	—	—	—	—	—	—	—
37	—	—	—	—	—	—	—	—
38	10.0	7.8	3.9	2.0	6.9	4.8	—	—
39	—	—	—	—	—	—	—	—
40	12.2	10.0	4.4	2.5	7.1	5.0	1.8	-0.5
Mean	11.1	8.8	3.6	1.7	6.3	4.2	1.6	-0.7
Median	11.1	8.9	4.1	2.3	7.0	4.9	1.9	-0.4
n	18	18	14	14	11	11	4	4

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Real returns are adjusted for inflation as measured by the Consumer Price Index.

**Exhibit 33 (continued)****Nominal and Real Total Return After Spending by Institution**

Average Annual Compound Returns for Periods Ended June 30, 2014 • Percent (%)

Code	1 Year		3 Years		5 Years		10 Years	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
41	—	—	—	—	—	—	—	—
42	—	—	—	—	—	—	—	—
43	—	—	—	—	—	—	—	—
44	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—
46	—	—	—	—	—	—	—	—
47	10.7	8.4	—	—	—	—	—	—
48	7.7	5.5	1.5	-0.3	4.7	2.6	—	—
49	10.3	8.1	4.0	2.1	7.0	4.9	3.5	1.2
50	—	—	—	—	—	—	—	—
51	11.6	9.4	4.8	2.9	7.9	5.8	—	—
52	—	—	—	—	—	—	—	—
53	—	—	—	—	—	—	—	—

Mean	11.1	8.8	3.6	1.7	6.3	4.2	1.6	-0.7
Median	11.1	8.9	4.1	2.3	7.0	4.9	1.9	-0.4
<i>n</i>	18	18	14	14	11	11	4	4

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Real returns are adjusted for inflation as measured by the Consumer Price Index.

**Exhibit 34**  
**Nominal Total Return, Standard Deviation, and Sharpe Ratio by Institution**  
 Years Ended June 30, 2014

Code	5 Years (n=50)			10 Years (n=45)		
	AACR (%)	Standard Dev (%)	Sharpe Ratio	AACR (%)	Standard Dev (%)	Sharpe Ratio
1	—	—	—	—	—	—
2	12.6	8.1	1.52	—	—	—
3	11.1	10.6	1.04	5.6	11.0	0.41
4	10.9	8.9	1.21	8.4	10.8	0.66
5	—	—	—	—	—	—
6	12.5	10.6	1.17	7.4	11.8	0.53
7	11.1	8.4	1.30	7.2	9.8	0.59
8	11.5	9.2	1.23	7.6	11.7	0.55
9	11.3	8.2	1.35	7.2	9.9	0.59
10	12.9	10.8	1.18	7.3	12.8	0.49
11	10.6	8.2	1.27	5.5	10.9	0.40
12	11.0	10.8	1.02	5.9	12.9	0.39
13	11.9	7.3	1.59	9.1	9.8	0.78
14	10.6	8.8	1.19	6.6	9.7	0.54
15	13.2	9.6	1.35	7.4	11.6	0.54
16	13.2	12.4	1.07	6.6	13.4	0.42
17	13.4	6.2	2.08	8.4	9.3	0.74
18	10.8	10.0	1.08	6.0	11.6	0.42
19	13.1	8.3	1.53	9.0	9.9	0.76
20	9.3	9.1	1.03	3.5	10.9	0.22
21	11.4	9.4	1.20	6.6	11.0	0.49
22	11.4	11.6	0.98	6.4	12.6	0.43
23	11.0	10.7	1.03	6.7	10.6	0.52
24	9.8	10.3	0.95	4.3	12.3	0.27
25	11.3	8.4	1.31	—	—	—
26	11.6	8.1	1.39	7.0	10.0	0.57
27	10.0	9.0	1.10	5.2	10.9	0.37
28	12.2	10.0	1.21	7.8	11.9	0.56
29	11.8	12.0	0.99	5.3	13.0	0.34
30	13.1	9.5	1.34	8.8	11.5	0.65
31	12.4	10.2	1.19	8.2	11.9	0.59
32	11.1	8.9	1.22	—	—	—
33	11.2	10.0	1.12	6.7	11.1	0.50
34	—	—	—	—	—	—
35	12.0	9.9	1.20	7.8	10.9	0.60
5th Percentile	13.2	11.4	1.52	8.9	13.2	0.73
25th Percentile	12.5	10.5	1.29	8.0	12.1	0.59
75th Percentile	11.0	8.8	1.08	6.4	10.8	0.43
95th Percentile	9.6	7.6	0.99	4.8	9.8	0.30
Mean	11.6	9.6	1.21	7.1	11.5	0.52
Median	11.6	9.5	1.20	7.2	11.6	0.54
70% Wilshire 5000 / 30% Barclays Govt/Credit	15.2	10.6	1.40	7.7	11.5	0.56
70% MSCI ACWI / 30% Barclays Govt/Credit	12.2	11.2	1.09	7.5	12.6	0.51

Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data provided by Barclays, MSCI Inc., Thomson Reuters Datastream, and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties.

Note: Analysis includes only institutions that provided underlying quarterly returns, and excludes those that only provided annual returns.



## Exhibit 34 (continued)

**Nominal Total Return, Standard Deviation, and Sharpe Ratio by Institution**

Years Ended June 30, 2014

Code	5 Years (n=50)			10 Years (n=45)		
	AACR (%)	Standard Dev (%)	Sharpe Ratio	AACR (%)	Standard Dev (%)	Sharpe Ratio
36	10.8	10.4	1.04	6.8	11.4	0.49
37	11.2	10.9	1.03	4.7	13.2	0.30
38	13.0	9.1	1.39	8.5	10.8	0.67
39	14.5	11.0	1.29	8.0	12.1	0.57
40	13.0	10.2	1.25	7.0	12.4	0.48
41	12.3	11.0	1.11	6.4	11.9	0.45
42	12.4	10.5	1.17	8.0	11.8	0.58
43	6.6	7.1	0.92	—	—	—
44	12.6	10.5	1.19	7.7	11.8	0.56
45	12.4	10.2	1.20	8.4	11.9	0.61
46	12.0	9.9	1.20	7.4	12.2	0.52
47	9.8	8.2	1.18	6.7	10.2	0.53
48	10.3	8.9	1.15	5.8	11.6	0.41
49	11.7	9.5	1.22	8.0	11.6	0.59
50	9.5	8.9	1.06	—	—	—
51	13.1	10.9	1.19	7.7	12.4	0.54
52	11.7	8.3	1.38	7.9	10.3	0.63
53	12.0	9.1	1.29	10.0	16.3	0.57
5th Percentile	13.2	11.4	1.52	8.9	13.2	0.73
25th Percentile	12.5	10.5	1.29	8.0	12.1	0.59
75th Percentile	11.0	8.8	1.08	6.4	10.8	0.43
95th Percentile	9.6	7.6	0.99	4.8	9.8	0.30
Mean	11.6	9.6	1.21	7.1	11.5	0.52
Median	11.6	9.5	1.20	7.2	11.6	0.54
70% Wilshire 5000 / 30% Barclays Govt/Credit	15.2	10.6	1.40	7.7	11.5	0.56
70% MSCI ACWI / 30% Barclays Govt/Credit	12.2	11.2	1.09	7.5	12.6	0.51

Sources: Cultural and environmental institutions data as reported to Cambridge Associates LLC. Index data provided by Barclays, MSCI Inc., Thomson Reuters Datastream, and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties.

Note: Analysis includes only institutions that provided underlying quarterly returns, and excludes those that only provided annual returns.

**Exhibit 35**  
**Calculation of Net Returns by Institution**  
 As of June 30, 2014

Code	Asset-Based Mgmt Fees	Performance-Based Mgmt Fees	Custody Fees	Consulting Fees	Staff Salaries	Travel Expenses	Legal Expenses	Accounting Expenses	Costs Associated with IC Meetings	Rents/Space Costs	Other
1	x	x									
2	x	x									
3	x	x									
4	x	x									
5	x	x									
6	x	x									
7	x	x									
8	x	x									
9	x	x	x	x	x	x	x	x	x	x	
10	x	x									
11	x	x									
12	x	x									
13											
14	x	x									
15	x	x	x	x	x	x		x	x		x
16	x	x									
17	x	x					x				
18	x	x									
19	x	x									
20	x	x									
21	x	x									
22	x	x									
23	x	x									
24	x	x									
25	x	x									
26	x	x									
27	x	x									
28	x	x									
29	x	x									
30	x	x									
31	x	x									
32	x	x									
33	x	x									
34	x	x									
35	x	x									
36	x	x									
37	x	x									
38	x	x									
39	x	x									
40	x	x									
41	x	x									
42	x	x									
43	x	x									
44	x	x									
45	x	x									

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Institution 13 did not indicate which fee categories are netted out of its total return.

**Exhibit 35 (continued)**  
**Calculation of Net Returns by Institution**  
 As of June 30, 2014

Code	Asset- Based Mgmt Fees	Performance- Based Mgmt Fees	Custody Fees	Consulting Fees	Staff Salaries	Travel Expenses	Legal Expenses	Accounting Expenses	Costs Associated with IC Meetings	Rents/ Space Costs	Other
46	x	x									
47	x	x									
48	x	x									
49	x	x									
50	x	x									
51	x	x									
52	x	x									
53	x	x									

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.  
 Note: Institution 13 did not indicate which fee categories are netted out of its total return.

**Exhibit 36**  
**Detailed Asset Allocation by Institution**

As of June 30, 2014 • Percent (%)

Code	Traditional Equity			Bonds				Hedge Funds		Distressed Securities	
	US	Global ex US		US	Global ex US		HY	Long/ Short	Abs Ret (ex Distr)	HF Structure	Priv Eq Structure
		Dev Mkt	Emg Mkt		Dev Mkt	Emg Mkt					
1	24.8	16.1	10.7	5.5	3.9	2.3	0.0	8.1	12.3	0.8	0.0
2	17.7	22.5	4.8	6.5	1.1	1.9	0.0	11.1	3.6	1.2	0.3
3	29.5	22.5	4.7	18.8	0.0	3.8	0.0	5.8	2.9	1.3	0.0
4	13.1	17.1	9.6	0.0	0.0	2.1	0.0	7.6	14.3	1.6	3.8
5	22.1	19.0	8.4	7.5	2.1	0.0	0.0	21.4	8.3	0.0	0.0
6	25.2	24.1	6.7	6.9	0.0	4.3	0.0	6.8	5.8	2.5	1.7
7	20.6	16.5	5.0	11.7	1.5	1.3	0.6	7.7	15.3	0.9	0.7
8	13.6	13.8	4.1	4.9	0.4	0.2	0.0	7.8	24.9	3.6	1.1
9	11.0	17.3	12.0	6.0	0.0	0.0	0.0	4.4	16.1	3.7	1.7
10	20.2	14.3	10.0	5.4	1.2	0.5	0.0	7.6	8.3	3.9	2.6
11	24.8	13.1	6.0	17.3	0.0	0.0	0.0	7.4	10.2	4.6	0.0
12	23.6	19.9	5.5	10.5	0.0	0.0	0.0	10.6	10.4	2.7	0.0
13	22.4	12.7	2.3	3.6	1.2	0.0	0.0	5.6	9.8	5.4	0.0
14	27.2	7.8	10.8	2.5	3.6	7.1	0.0	11.8	13.7	0.2	0.8
15	46.2	11.2	5.8	4.6	0.0	0.0	0.0	0.0	2.1	0.0	0.6
16	35.2	30.5	0.0	18.8	2.3	0.9	0.0	0.0	0.0	0.0	0.0
17	13.7	9.3	7.9	9.5	0.0	0.0	0.0	15.5	0.0	2.3	5.5
18	18.9	19.9	8.0	16.0	0.0	0.0	0.0	13.6	12.2	0.0	0.7
19	17.4	19.7	4.5	9.5	0.0	0.0	0.0	9.6	7.1	2.1	2.0
20	17.7	17.2	9.5	11.3	3.5	0.7	0.0	7.0	12.9	1.9	2.9
21	32.8	13.6	3.6	10.6	2.0	0.8	0.0	10.8	7.5	2.9	0.0
22	26.0	23.7	10.8	5.8	1.8	2.2	0.0	8.3	4.7	2.5	0.0
23	17.6	21.1	12.1	13.4	1.9	0.4	0.0	6.7	9.0	2.3	0.0
24	21.0	21.9	7.4	10.9	2.2	1.4	4.3	17.1	5.1	2.3	0.0
25	15.4	11.6	7.0	3.5	0.9	0.7	0.0	8.8	21.0	0.8	2.5
26	18.9	17.0	11.1	6.6	1.2	0.3	0.0	9.2	10.5	4.8	4.7
27	21.2	18.9	7.9	9.7	3.5	1.0	0.0	18.3	5.7	1.6	0.0
28	40.0	14.9	4.7	0.0	0.0	0.0	0.0	10.8	13.4	0.0	1.2
29	25.3	16.2	9.8	10.1	0.3	0.1	0.0	14.1	4.8	1.6	0.0
30	21.6	16.3	6.6	8.0	1.8	0.5	0.0	8.9	8.6	3.0	7.6
31	21.0	20.2	8.6	9.6	1.6	1.9	0.0	8.4	6.2	2.6	2.0
32	17.4	16.3	7.5	14.4	0.0	1.8	0.0	11.3	10.2	3.9	3.8
33	30.2	18.3	0.8	14.5	0.0	0.0	5.0	12.0	5.6	2.7	0.0
34	19.6	18.5	8.8	13.7	0.0	3.1	0.0	10.2	12.4	3.3	0.9
35	32.6	15.3	7.2	4.9	1.6	0.3	0.0	16.0	5.8	3.7	2.9
36	20.5	18.5	8.3	10.9	0.8	0.7	0.3	9.3	9.9	1.2	0.0
37	20.2	19.0	8.1	11.3	0.0	0.0	2.9	13.5	6.2	2.1	0.0
38	18.4	12.3	11.1	6.2	0.0	0.0	0.0	4.9	17.5	6.6	0.0
39	29.6	17.7	5.6	2.5	0.0	1.6	2.4	10.9	15.8	2.0	0.3
40	19.8	16.2	9.3	5.0	1.4	1.3	1.8	9.1	10.5	1.3	4.2
High	46.2	30.5	12.1	18.8	3.9	7.1	5.0	22.9	28.2	6.6	7.6
Mean	23.2	17.5	7.4	8.7	1.0	1.0	0.6	9.4	10.3	2.1	1.1
Median	21.0	17.3	7.6	8.0	0.4	0.5	0.0	9.1	9.9	2.1	0.3
Low	11.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

n = 53

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

**Exhibit 36 (continued)**  
**Detailed Asset Allocation by Institution**

As of June 30, 2014 • Percent (%)

Code	Priv Equity & Venture Cap			Real Assets & Inflation-Linked Bonds							Cash & Equiv	Other
	Non-Ven	Ven	Other	Real Estate		Inf-Link	Private	Public				
	Priv Eq	Cap	Priv Inv	Private	Public	Comm	Bonds	O&G/NR	Timber	Engy/NR		
1	0.0	0.0	0.0	0.0	0.0	2.4	1.9	0.0	0.0	9.6	1.4	0.0
2	9.2	4.4	0.0	0.0	0.6	0.6	0.8	4.4	0.0	3.1	6.1	0.0
3	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	8.1	0.0	0.0
4	4.3	1.9	0.2	1.4	1.1	0.0	0.0	2.3	1.4	8.9	9.4	0.0
5	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	6.7	2.2	0.0
6	1.8	1.4	3.6	1.4	0.0	0.9	0.7	0.0	0.0	2.0	4.4	0.0
7	2.7	2.8	3.1	2.4	0.0	0.0	0.0	1.8	2.2	0.0	3.1	0.0
8	1.7	1.5	0.3	3.1	0.0	3.4	0.0	1.5	0.0	4.1	4.0	6.1
9	4.7	8.1	0.7	4.3	2.6	2.0	0.0	4.0	0.0	0.0	1.4	0.0
10	6.0	5.1	1.8	1.5	0.0	2.6	0.7	2.7	0.0	1.9	3.7	0.0
11	4.8	1.7	1.5	0.0	0.0	2.1	1.7	0.0	0.0	4.8	0.0	0.0
12	0.0	0.0	0.0	0.0	3.5	2.1	1.7	0.0	0.0	4.9	4.6	0.0
13	14.8	2.0	0.0	9.5	0.0	0.0	0.0	3.9	0.0	2.2	4.7	0.0
14	2.2	0.7	0.0	1.9	0.0	1.3	0.8	0.0	0.0	2.2	5.4	0.0
15	12.9	1.4	0.4	1.7	1.1	0.0	0.0	6.5	0.0	0.0	5.3	0.0
16	0.0	0.0	0.0	0.0	2.8	0.0	1.9	0.0	0.0	6.0	1.6	0.0
17	8.5	6.5	0.0	7.6	0.0	0.0	0.0	8.9	0.8	0.0	3.9	0.0
18	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	6.3	2.1	0.0
19	4.9	5.9	7.9	1.9	0.0	0.9	1.4	3.5	0.0	1.2	0.4	0.0
20	0.0	0.0	0.0	0.0	0.0	2.8	2.3	0.0	0.0	6.4	4.1	0.0
21	0.0	0.0	0.0	0.0	0.0	3.8	5.1	0.0	0.0	3.9	2.5	0.0
22	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	5.9	4.5	0.0
23	1.6	0.0	2.9	0.9	0.0	0.0	0.0	0.2	0.0	6.7	2.3	0.7
24	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	3.8	0.0
25	6.1	2.9	3.7	3.5	0.0	0.1	0.0	4.7	0.2	3.2	3.3	0.0
26	2.1	2.7	0.5	1.2	0.0	0.5	0.4	5.6	0.0	1.2	1.4	0.0
27	0.0	0.0	0.0	0.0	0.0	6.0	2.8	0.0	0.0	3.4	0.1	0.0
28	3.6	0.2	1.1	1.4	0.0	0.0	0.0	3.4	0.0	0.0	5.3	0.0
29	0.0	0.0	0.0	0.0	1.4	3.1	3.1	0.0	0.0	6.4	3.5	0.0
30	2.1	1.3	0.2	0.8	0.0	0.0	0.0	4.5	0.4	7.5	0.1	0.0
31	0.0	0.0	0.0	0.0	0.0	2.4	1.2	0.0	0.0	10.8	1.2	2.4
32	0.8	0.0	0.0	0.0	0.0	1.9	1.6	0.2	0.0	5.1	4.0	0.0
33	0.0	0.0	0.0	0.0	0.0	2.4	2.0	0.0	0.0	5.6	0.9	0.0
34	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	7.2	1.7	0.0
35	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.5	0.0
36	1.7	1.6	0.0	0.8	3.8	1.5	1.2	0.6	0.0	6.1	2.3	0.0
37	2.3	0.8	1.1	0.0	0.0	0.8	0.7	0.0	0.0	7.0	3.9	0.0
38	6.6	0.7	0.1	9.9	0.0	0.0	0.0	1.8	0.0	2.2	1.7	0.0
39	3.8	0.8	1.3	0.7	0.0	0.0	0.0	2.0	0.0	1.6	1.4	0.0
40	0.9	0.7	1.9	4.1	0.0	0.0	0.0	1.7	0.0	4.3	6.3	0.0
High	14.8	8.1	7.9	9.9	4.0	8.6	8.6	8.9	2.2	10.8	12.3	6.1
Mean	2.5	1.2	0.8	1.3	0.6	1.4	0.9	1.4	0.1	4.1	3.4	0.2
Median	1.6	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	4.3	3.1	0.0
Low	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

n = 53

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

**Exhibit 36 (continued)**  
**Detailed Asset Allocation by Institution**

As of June 30, 2014 • Percent (%)

Code	Traditional Equity			Bonds				Hedge Funds		Distressed Securities	
	US	Global ex US		US	Global ex US		HY	Long/ Short	Abs Ret (ex Distr)	HF Structure	Priv Eq Structure
		Dev Mkt	Emg Mkt		Dev Mkt	Emg Mkt					
41	45.5	23.3	7.0	15.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	34.7	20.0	7.4	16.7	0.0	0.0	3.4	10.0	0.0	0.0	0.0
43	21.4	20.5	6.9	10.0	0.8	1.8	3.8	8.3	16.8	0.0	0.0
44	25.1	17.1	9.3	8.0	0.0	0.0	0.0	13.2	7.1	2.1	1.4
45	14.5	16.8	8.4	5.1	3.2	0.4	0.1	7.4	16.1	2.1	0.5
46	20.5	18.0	10.8	9.8	0.0	0.0	0.0	3.9	17.9	3.1	0.0
47	21.1	10.1	9.9	6.3	2.4	2.8	4.1	15.2	7.3	0.8	3.2
48	16.5	19.2	7.2	9.2	0.8	0.4	0.0	11.9	12.4	2.7	0.0
49	14.8	10.1	7.6	1.9	0.0	0.0	0.0	22.9	28.2	0.0	0.7
50	20.2	19.9	7.8	4.9	2.3	0.6	0.0	14.9	10.5	1.5	0.0
51	37.1	20.6	11.5	11.8	0.0	3.7	2.1	0.0	3.5	4.6	0.0
52	20.0	25.3	3.3	5.8	0.0	1.5	0.0	4.1	20.0	2.2	0.7
53	21.7	14.4	4.6	7.3	0.3	0.1	2.2	0.0	25.4	0.0	0.0

High	46.2	30.5	12.1	18.8	3.9	7.1	5.0	22.9	28.2	6.6	7.6
Mean	23.2	17.5	7.4	8.7	1.0	1.0	0.6	9.4	10.3	2.1	1.1
Median	21.0	17.3	7.6	8.0	0.4	0.5	0.0	9.1	9.9	2.1	0.3
Low	11.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
n = 53											

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

**Exhibit 36 (continued)**  
**Detailed Asset Allocation by Institution**  
 As of June 30, 2014 • Percent (%)

Code	Priv Equity & Venture Cap			Real Assets & Inflation-Linked Bonds							Cash & Equiv	Other
	Non-Ven	Ven	Other	Real Estate		Comm	Infl-Link Bonds	Private O&G/NR	Timber	Public Engy/NR		
	Priv Eq	Cap	Priv Inv	Private	Public							
41	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.3	0.0
42	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	5.0	0.0	0.0
43	0.0	0.0	0.0	0.0	0.0	2.4	2.1	0.0	0.0	3.0	2.3	0.0
44	4.6	2.3	0.0	1.4	2.3	1.1	0.9	0.4	0.0	2.8	0.2	0.6
45	2.6	1.7	2.8	0.0	2.0	0.1	0.1	4.6	0.0	7.2	4.5	0.0
46	5.9	0.0	0.5	0.3	0.0	0.0	0.0	1.4	0.0	5.0	2.9	0.0
47	4.0	0.0	0.0	3.2	0.0	0.7	0.6	0.3	0.0	4.9	2.9	0.0
48	0.0	0.0	0.0	0.0	0.0	4.3	0.7	0.0	0.0	6.9	7.9	0.0
49	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	4.4	9.2	0.0
50	0.0	0.0	0.0	1.7	0.0	2.9	2.9	0.0	0.0	4.2	5.7	0.0
51	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0
52	1.2	4.4	0.1	0.1	2.6	0.0	0.0	1.0	0.5	0.0	7.3	0.0
53	0.0	0.0	0.0	0.0	0.0	1.0	8.6	0.0	0.0	2.2	12.3	0.0

High	14.8	8.1	7.9	9.9	4.0	8.6	8.6	8.9	2.2	10.8	12.3	6.1
Mean	2.5	1.2	0.8	1.3	0.6	1.4	0.9	1.4	0.1	4.1	3.4	0.2
Median	1.6	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	4.3	3.1	0.0
Low	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>n</i>	53											

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

**Exhibit 37**  
**Target Asset Allocation by Institution**

As of June 30, 2014 • Percent (%)

Code	Traditional Equity				Hedge Funds	Priv Equity & Ven Cap	Bonds & Cash	Real Assets & Infl-Link Bonds	Other
	Total	US	Global ex US						
			Dev Mkts	Emg Mkts					
1	51.5	25.5	16.5	9.5	21.0	0.0	12.5	15.0	0.0
2	45.0	22.5	—	—	15.0	15.0	15.0	10.0	0.0
3	55.0	28.0	22.0	5.0	10.0	0.0	25.0	10.0	0.0
4	40.0	15.0	10.0	15.0	18.0	15.0	12.0	15.0	0.0
5	54.0	26.0	20.0	8.0	26.0	0.0	12.0	8.0	0.0
6	49.0	24.0	20.0	5.0	15.0	10.0	20.0	6.0	0.0
7	40.0	22.0	12.0	6.0	25.0	5.0	20.0	10.0	0.0
8	36.0	16.0	11.0	9.0	35.0	7.5	9.0	12.5	0.0
9	40.0	—	28.0	12.0	28.0	12.0	8.0	12.0	0.0
10	44.0	—	—	9.0	20.0	12.0	13.0	11.0	0.0
11	—	—	—	—	—	—	—	—	—
12	50.0	22.0	20.0	8.0	20.0	0.0	15.0	15.0	0.0
13	—	—	—	—	—	—	—	—	—
14	40.0	20.0	—	—	25.0	5.0	15.0	15.0	0.0
15	40.0	25.0	10.0	5.0	10.0	15.0	10.0	15.0	10.0
16	65.0	35.0	—	—	0.0	0.0	25.0	10.0	0.0
17	—	—	—	—	—	—	—	—	—
18	45.0	—	—	—	25.0	0.0	20.0	10.0	0.0
19	40.0	17.5	17.5	5.0	18.0	15.0	15.0	12.0	0.0
20	40.0	15.0	15.0	10.0	20.0	0.0	17.5	17.5	5.0
21	45.0	30.0	—	—	20.0	0.0	20.0	15.0	0.0
22	60.0	25.0	25.0	10.0	15.0	0.0	15.0	10.0	0.0
23	45.0	17.5	17.5	10.0	10.0	5.0	15.0	5.0	20.0
24	45.0	22.5	17.5	5.0	18.0	10.0	15.0	12.0	0.0
25	34.0	13.0	13.0	8.0	25.0	10.0	13.0	18.0	0.0
26	—	—	—	—	—	—	—	—	—
27	47.0	22.0	17.0	8.0	27.0	0.0	14.0	12.0	0.0
28	—	—	—	—	—	—	—	—	—
29	50.0	24.0	16.0	10.0	20.0	0.0	15.0	15.0	0.0
30	40.0	20.0	—	—	20.0	15.0	15.0	10.0	0.0
31	46.0	17.5	20.0	8.5	19.0	0.0	15.0	15.0	5.0
32	40.0	16.5	12.5	7.5	25.0	0.0	15.0	12.0	8.0
33	50.0	21.0	20.0	6.0	20.0	0.0	20.0	10.0	0.0
34	—	—	—	—	—	—	—	—	—
35	40.0	24.0	—	—	35.0	5.0	15.0	5.0	0.0

**All Institutions**

High	70.0	—	—	—	45.0	15.0	25.0	18.0	20.0
Mean	46.1	—	—	—	20.3	5.1	15.8	11.4	1.3
Median	45.0	—	—	—	20.0	4.5	15.0	10.5	0.0
Low	30.0	—	—	—	0.0	0.0	8.0	0.0	0.0

n = 42

**Institutions with Policy Target to Category**

Mean	46.1	22.1	16.7	8.3	21.3	9.8	15.8	11.7	8.8
n	42	38	31	34	40	22	42	41	6

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Real assets category includes targets to both public and private assets. Other category includes target allocations to distressed securities, opportunistic investing, tactical asset allocation, and other special situations.



**Exhibit 37 (continued)**  
**Target Asset Allocation by Institution**

As of June 30, 2014 • Percent (%)

Code	Traditional Equity				Hedge Funds	Priv Equity & Ven Cap	Bonds & Cash	Real Assets & Infl-Link Bonds	Other
	Total	US	Global ex US						
			Dev Mkts	Emg Mkts					
36	44.0	19.0	17.5	7.5	20.0	0.0	16.0	15.0	5.0
37	46.0	20.0	18.0	8.0	22.0	4.0	18.0	10.0	0.0
38	43.0	17.0	14.0	12.0	28.0	8.0	8.0	13.0	0.0
39	40.0	20.0	—	5.0	25.0	10.0	15.0	10.0	0.0
40	—	—	—	—	—	—	—	—	—
41	70.0	40.0	22.5	7.5	0.0	0.0	20.0	10.0	0.0
42	60.0	27.0	—	—	10.0	0.0	20.0	10.0	0.0
43	45.0	20.0	18.0	7.0	20.0	0.0	25.0	10.0	0.0
44	49.5	22.0	17.5	10.0	24.0	7.0	10.0	9.5	0.0
45	40.0	10.0	8.0	10.0	20.0	10.0	15.0	15.0	0.0
46	46.0	23.0	13.0	10.0	25.0	9.0	12.0	8.0	0.0
47	40.0	20.0	10.0	10.0	20.0	10.0	15.0	15.0	0.0
48	—	—	—	—	—	—	—	—	—
49	30.0	—	—	5.0	45.0	0.0	15.0	10.0	0.0
50	—	—	—	—	—	—	—	—	—
51	67.0	37.0	18.0	12.0	8.0	0.0	25.0	0.0	0.0
52	—	—	—	—	—	—	—	—	—
53	—	—	—	—	—	—	—	—	—

**All Institutions**

High	70.0	—	—	—	45.0	15.0	25.0	18.0	20.0
Mean	46.1	—	—	—	20.3	5.1	15.8	11.4	1.3
Median	45.0	—	—	—	20.0	4.5	15.0	10.5	0.0
Low	30.0	—	—	—	0.0	0.0	8.0	0.0	0.0
<i>n</i>	42								

**Institutions with Policy Target to Category**

Mean	46.1	22.1	16.7	8.3	21.3	9.8	15.8	11.7	8.8
<i>n</i>	42	38	31	34	40	22	42	41	6

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Notes: Real assets category includes targets to both public and private assets. Other category includes target allocations to distressed securities, opportunistic investing, tactical asset allocation, and other special situations.

**Exhibit 38**  
**Net Flow Rate by Institution**  
 Fiscal Year 2014

Code	Total Inflows	Total Outflows	Net Flow Rate
7	0.6	-5.5	-5.0
15	0.2	-5.2	-5.0
18	0.3	-4.4	-4.1
20	1.0	-7.6	-6.6
21	0.6	-7.8	-7.2
23	4.1	-8.3	-4.2
28	1.5	-4.7	-3.2
29	1.9	-4.6	-2.7
31	2.2	-5.0	-2.8
38	3.2	-5.3	-2.1
40	4.1	-5.2	-1.1
47	3.0	-4.5	-1.5
48	7.6	-5.9	1.7
49	6.7	-4.2	2.5
51	3.2	-2.5	0.7

Mean	2.7	-5.4	-2.7
Median	2.2	-5.2	-2.8
<i>n</i>	15	15	15

Source: Cultural and environmental institutions data as reported to Cambridge Associates LLC.

Note: Net flow rate is the difference between the total additions to and withdrawals from the long-term investment portfolio for the fiscal year and is expressed as a percentage of the beginning fiscal year market value.

### Data Collection and Results

This report includes data for 53 cultural and environmental institutions. All participants provided investment pool data as of June 30. The notation of  $n$  denotes the number of institutions included in each analysis. Total asset allocation figures may not sum to 100% due to rounding.

In Exhibits 4, 5, and 6, bonds include US bonds, global ex US bonds, and high-yield bonds; hedge funds include long/short hedge funds, absolute return hedge funds, and distressed securities invested through a hedge fund vehicle; private equity and venture capital also includes multi-strategy private investment funds-of-funds, and distressed securities invested through a private investment vehicle; public real assets include public real estate, commodities, inflation-linked bonds, and public energy/natural resources; and private real assets include private real estate, private oil & gas/natural resources, and timber.

In Exhibits 12, 14, and 15, bonds include US bonds, global ex US bonds, and high-yield bonds; hedge funds include long/short hedge funds and absolute return hedge funds (ex distressed securities); private equity and venture capital also includes multi-strategy private investment funds-of-funds; and real assets and inflation-linked bonds include public and private real estate, commodities, inflation-linked bonds, private oil & gas/natural resources, timber, and public energy/natural resources.

In Exhibit 20, hedge funds include long/short hedge funds, absolute return hedge funds (ex distressed securities).

### Calculation of the Real Rate of Return

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 the report, the measure used for this purpose is the Consumer Price Index (CPI-U). Note that simply subtracting the CPI-U from the nominal total return does not result in an accurate computation of real total return. The formula is:

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

### Calculation of the Return After Spending

The rate of return after spending for a given investment is calculated by dividing the total return by the spending rate for the time period. The spending rate is the dollar amount of spending for a fiscal year as a percentage of the beginning market value of assets. Note that simply subtracting the spending rate from the total return does not result in an accurate computation of total return after spending. The formula is:

$$\frac{1 + \text{Total Return}}{1 + \text{Spending Rate}} - 1 = \text{Total Return After Spending}$$

### 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.

### **Data Sources**

Index data are provided by Barclays, Bloomberg L.P., BofA Merrill Lynch, Cambridge Associates LLC, Citigroup Global Markets, FTSE International Limited, Hedge Fund Research, Inc., J.P. Morgan Securities, Inc., MSCI Inc., the National Association of Real Estate Investment Trusts, the National Council of Real Estate Investment Fiduciaries, Standard & Poor's, Thomson Reuters Datastream, US Department of Labor - Bureau of Labor Statistics, and Wilshire Associates, Inc. MSCI data provided "as is" without any express or implied warranties. ■

**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).

**Co-Investments:** A direct investment made into a company alongside a general partner that originates the transaction.

**Commodities:** Diversified baskets of fully collateralized, long-only, commodity futures contracts.

**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.

**Effective Spending Rate:** The dollar amount of spending as a percentage of the beginning market value of assets. Spending amount includes the endowment spending policy distribution and other annual appropriations. It does not include investment management fees that are netted out of returns.

**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. These countries generally possess some of the following characteristics: per capita GNP less than \$9,000, recent economic liberalization, debt ratings below investment grade, recent liberalization of the political system, and non-membership in the OECD.

**Emerging Markets Debt:** Debt instruments of emerging market 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.

**Endowment (as defined in FASB SFAS No. 117):** A fund of cash, securities, or other assets established to provide income for the maintenance of a not-for-profit organization. The use of the assets of the fund may be permanently restricted, temporarily restricted, or unrestricted. Donor-restricted gifts and bequests to provide a permanent endowment, which is to provide a permanent source of income, or a term endowment, which is to provide income for a specified period, generally establish endowment funds. The principal of a permanent endowment must be maintained permanently—not used up, expended, or otherwise exhausted—and is classified as permanently restricted net assets. The principal of a term endowment must be maintained for a specified term and is classified as temporarily restricted net assets. An organization's governing board may earmark a portion of its unrestricted net assets as a board-designated endowment (sometimes referred to as funds

functioning as endowment or quasi-endowment funds) to be invested to provide income for a long but unspecified period. The principal of a board-designated endowment, which results from internal designation, is not donor restricted and is classified as unrestricted net assets.

**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 stock-holders 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.

**Externally Managed Assets:** Assets, including pooled assets, managed by individuals or firms outside an institution.

**Fund-of-Funds:** A fund that invests in a collection of underlying funds.

**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 funds-of-funds and secondary market private investments.

**Permanently Restricted Endowment:** Endowments established with donor-imposed restrictions that must be followed in perpetuity. Relevant to private institutions reporting under FASB standards.

**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).

**Single Manager Fund:** A fund in which the fund manager makes the investment decisions for the assets/securities/companies held within the fund.

**Solo Investments:** A direct investment made into a company in which the institutional investor originates and invests in a transaction, which is not associated with a manager in the investor's portfolio.

**Spending Rule:** The guideline an institution uses to determine annual distributions from its endowment (e.g., spend all income, spend 5% of three-year moving average market value, increase spending by 5% each year).

**Temporarily Restricted Endowment:** Endowments established with donor-imposed restrictions that expire after a specific period of time or when some other condition is met. Relevant to private institutions reporting under FASB standards.

**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 rates of return.

**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.

**Unrestricted Endowment:** Funds that do not have restrictions by donors or other parties.

**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. ■

Atlanta Historical Society  
The Vivian Beaumont Theater, Inc.  
Boston Athenaeum  
Boston Symphony Orchestra Inc.  
The Brookings Institution  
California Academy of Sciences  
Chemical Heritage Foundation  
The Children's Museum of Indianapolis  
Conner Prairie Foundation  
Cypress Lawn Endowment Care Trust  
The Edison Institute  
The Evergreens Cemetery  
Fallon Paiute-Shoshone Tribe  
The Frick Collection  
Isabella Stewart Gardner Museum  
George Washington's Mount Vernon  
The J. Paul Getty Trust  
Hagley Museum and Library  
Honolulu Museum of Art  
Houston Museum of Natural Science  
Huntington Library and Art Gallery  
Indianapolis Museum of Art Inc.  
Institute of International Education  
JFK Library Foundation  
Kennedy Center for the Performing Arts  
Linda Hall Library Trusts  
Longwood Gardens, Inc.  
Mashantucket Pequot Tribal Nation Endowment Trust  
Metropolitan Museum of Art  
Minnesota Orchestral Association  
Museum of Fine Arts, Boston  
Museum of Fine Arts, Houston  
Museum of Science, Boston  
National Gallery of Art  
National Trust for Historic Preservation  
National Wildlife Federation  
New York Philharmonic  
The New York Public Library  
New York Public Radio  
Philadelphia Museum of Art  
Ravinia Festival Association  
Scenic Hudson Land Trust Inc.  
The School of American Ballet  
Seattle Art Museum  
Norton Simon Museum of Art  
Smithsonian Institution  
The Trustees of Reservations  
United Negro College Fund  
White House Historical Association - Endowment Trust  
Wildlife Conservation Society  
The Henry Francis duPont Winterthur Museum, Inc.  
WNET  
World Wildlife Fund Inc.