

An Examination of State Pension Performance: 2006 to 2015

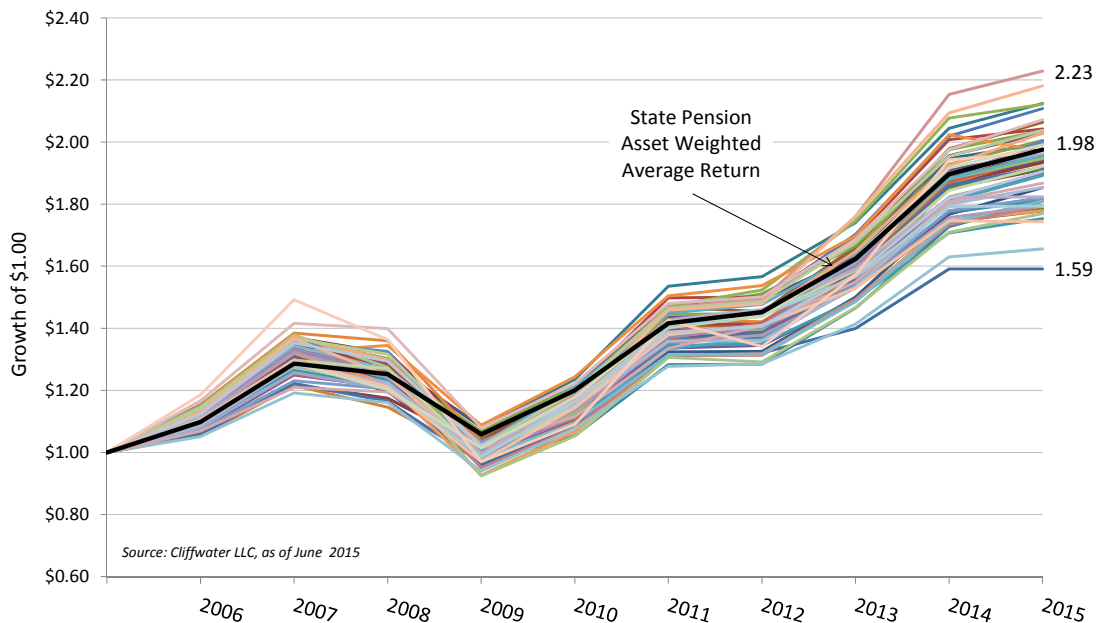
September 6, 2016

Most state pensions are under intense public scrutiny due to budgetary pressures from large and growing contributions necessary to correct underfunding. The causes and cures for pension underfunding are multidimensional and often contested. This report focuses on the management of state pension assets, an important but not well understood aspect of pension funding.

While capital markets largely drove returns for state pensions, we find a wide range of 10-year return outcomes among state pensions, most of which is attributable to implementation (fund/manager selection) rather than differences in asset allocation. We find that fund/manager selection by state pensions, in aggregate, has been accretive to return over the study period.

We conclude that the role of investments in helping solve pension underfunding will largely be determined by the future health of the capital markets, particularly for equity securities. We show that, overall, state pensions continue to take advantage of what the capital markets offer in returns, and the importance of individual state policy and manager decisions that can significantly contribute to return outcomes.

Exhibit 1: 10-Year Cumulative State Pension Returns: FY2006 to FY2015



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Study Data

We draw our findings from data and descriptive narrative provided in the Comprehensive Annual Financial Reports (“CAFRs”) published by state pension systems. We select this data source because, unlike commonly used commercial universes, it is a closed group with no selection biases, and represents results for large institutional investors. At the same time, our data shares two weaknesses found in other universe comparisons.

First, state pensions are not consistent in their reporting of fees. Most of the performance measurement industry still reports returns before investment fees, and consequently some fraction of returns presented in this report is before fees. This is certainly true for public stock and bond asset classes, where approximately one-quarter of states report returns net-of-fees, one-quarter report gross-of-fees, and one-half make no mention of whether returns are net or gross. Our strong suspicion is that where the treatment of fees is not reported, returns are gross-of-fees.

An exception is alternative investments (private real assets, real estate, private equity, and hedge funds) where returns are almost always reported net-of-fees. This is because either they are based on cash flows where fees are already netted or, in the case of hedge funds, performance is calculated on Net Asset Value (“NAV”) from the fund administrator where fees are always deducted.

As a consequence of the industry’s inconsistency in the netting of fees, our results should be viewed as a mix of net and gross returns where traditional asset classes generally, but not always, will be reported gross-of-fees and alternative asset classes almost always reported net-of-fees.

Key Findings:

1. State pensions collectively earned a **6.8% median** annualized return¹ over the **10 years ended June 30, 2015**, but underperformed their 8.0% median actuarial interest rate assumption for the same period.
2. **Two-thirds of state pension returns exceeded a 6.5% return for a passive 65/35 mix** of stock and bond index funds.²
3. The 6.8% median state pension return fell within a **wide 4.8% to 8.4% range** of individual state returns, with the **top performing state plan outperforming the bottom performing state plan by a cumulative 63.8% over 10 years**, demonstrating the potential for significant financial consequences underlying investment policy and implementation decisions.
4. State pension returns were volatile year to year, with **a median standard deviation of return equal to 12.7%**. Standard deviations for individual state pensions ranged from a low of 9.9% to a high of 15.6%. By comparison, standard deviations for global equities and U.S. bonds were 18.7% and 3.5%, respectively.
5. **We find that differences in 10-year state pension returns had only a small relationship to risk taking**, as measured by standard deviation, with a 0.14 correlation and accounting for only 0.3% of the 3.6% range in 10 year state pension returns.³ This implies that 3.3% of the 3.6% 10 year return range was attributable to implementation decisions of individual state pensions.
6. **Aggregate asset allocation remained unchanged** from the prior year, with state pension assets averaging 50% to public equities, 26% to fixed income (including

¹ Average and asset-weighted 10-year state pension returns were both 6.7%.

² A mix of 65% global stocks represented by the MSCI ACWI Index and 35% bonds represented by the Barclays Aggregate Bond Index.

³ The same is true if risk is measured by equity beta.

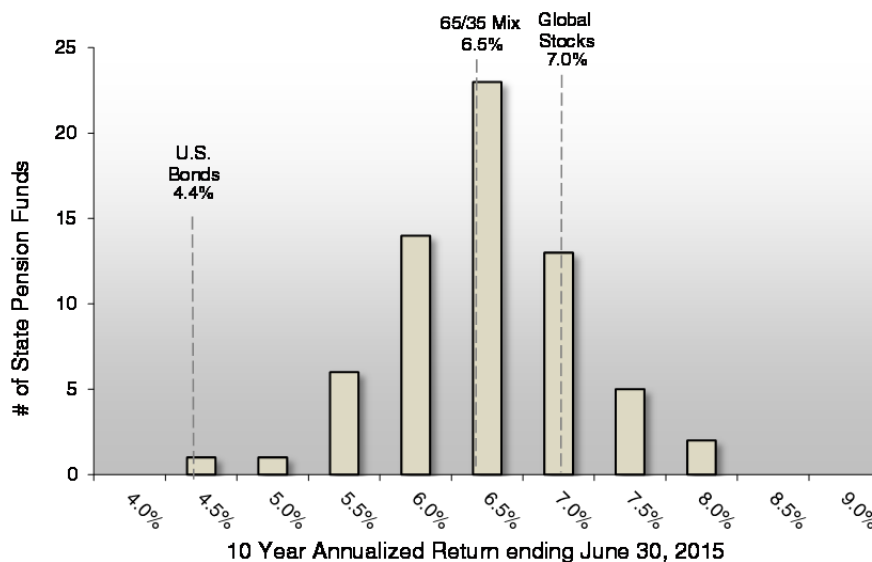
cash), and 24% to alternative investments. The last two fiscal years reflect stability in asset allocation that had seen public equity allocations decline from 61% in 2006.

7. **Private equity continues its history of providing the highest asset class returns**, with an 11.9% median return over the 10-year study period.
8. **State pension real estate returns vary widely over the 10-year study period** with a 6.6% median return falling below the 6.8% median state pension total fund return. Differences in how state pensions allocate within real estate explain the wide 5.8% range in individual state pension real estate outcomes over the 10-year study period and should be an area of greater attention by allocators.
9. **Risk-adjusted returns for state pensions were largely neutral with respect to hedge fund allocations.** State pensions with hedge fund allocations experienced, on average, lower return and lower risk over the 10 year period.
10. State pensions **outperform professionally managed defined contribution plan returns** by 0.8% annually over the last 10 years.

10-Year State Pension Performance

Exhibit 2 shows the distribution of 10 year annualized returns for 64 state pension systems reporting returns through June 30, 2015, which represents their fiscal year-end.⁴

Exhibit 2: Ten Year State Pension Performance



Source: Cliffwater LLC, as of June 2015

Returns range from 4.8% to 8.4% with a 6.8% median return. Also shown in Exhibit 2 is the return that would have been earned from a passive 65/35 “buy and hold” mix of stocks and bonds. Importantly, most state pensions were able to earn higher returns through diversification into alternatives and other forms of active management.

Exhibit 3 displays the percentile distribution of state pension returns over the 10 year period. While the differences might to some appear small, they represent a very large dollar value when compounded over 10 years. For example, a \$17 billion state pension – the current median asset

⁴ Twenty-eight state-wide funds are excluded because their fiscal years do not end on June 30.

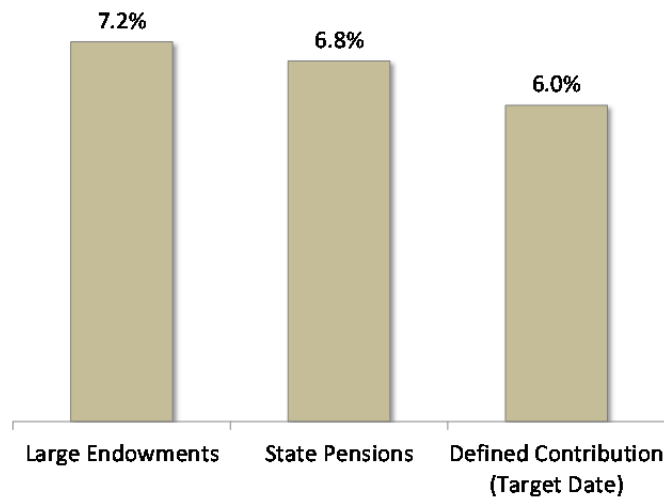
size – would grow to \$29 billion by earning 8.4% annually for 10 years but only \$21 billion by earning 4.8%.⁵ This \$8 billion difference represents the potential upside/downside from investment decisions made by staff, advisors, and trustees, in addition to the broader stock/bond allocation decision.

Exhibit 3: Quartile Ten Year State Pension Returns
(Ended June 30, 2015)

	Return	Growth of \$1.00
Highest	8.35%	\$2.23
First Quartile Return	7.13%	\$1.99
Median Return	6.84%	\$1.94
Third Quartile Return	6.18%	\$1.82
Lowest	4.75%	\$1.59
Asset Weighted	6.74%	\$1.92

Exhibit 4 compares state pension returns over the last 10 years with two other types of long term capital: large endowments⁶ and professionally managed defined contribution plans (e.g. target date funds⁷).

Exhibit 4: Median Ten Year Returns by Fund Type
(Ended June 30, 2015)



Larger endowments continue to outperform state pensions, with a median return of 7.2% over the past 10 years. Likely reasons for the 0.4% difference with state pensions are their higher allocation to alternative investments and possibly superior access to favorable investments and managers, though we have no data to support that possibility. We note that the difference in returns has been shrinking in recent years.

On the other hand, state pensions outperformed defined contribution plans over our 10 year study period, measured by the median performance of 57 target date funds. This positive difference supports a public policy view that defined benefit plans provide a lower cost (higher return) path to retirement security when compared to defined contribution plans. We do not have data on

⁵ We assume a net 2.7% payout rate, equal to the average state pension experience over the last 10 years.
⁶ Our sample consists of 78 endowments with assets greater than \$1 billion and totaling \$310 billion in assets. (Source: NACUBO/Commonfund)
⁷ Our sample consists of 57 target date funds with 10 year track records totaling \$331 billion in assets and spanning 2020/25/30/35/40/45/50 target retirement dates. (Source: eVestment)

self-directed defined contribution performance but other studies suggest that average investor returns are very low due to the “buy high, sell low” behavior of retail investors.^{8, 9}

Return and Risk

General stock and bond movements drive state pension performance for any individual fiscal year, as illustrated in Exhibit 5.

Exhibit 5: State Pension Return Distributions for Years 2006 to 2015, And 10-Year Annualized Returns

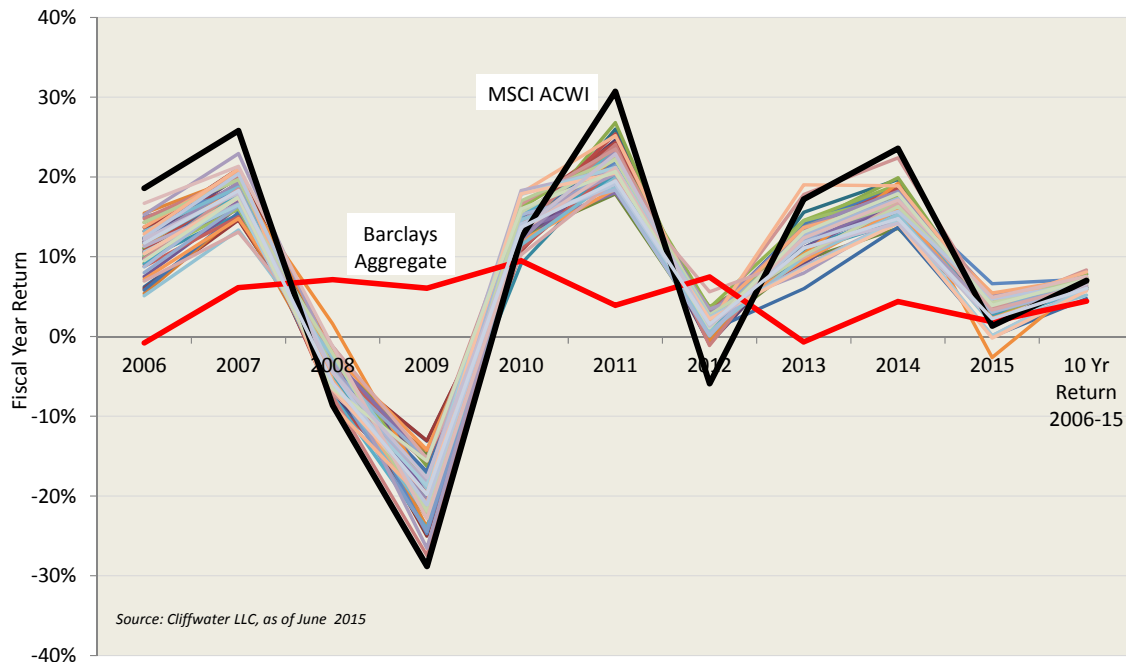


Exhibit 5 plots fiscal year-to-year returns for each of the 64 state pensions, ending with 10-year annualized return. Each line represents one state pension. Also shown are fiscal year returns for global stocks (MSCI ACWI Index) and U.S. bonds (Barclays Aggregate Bond Index).

Exhibit 5 illustrates the importance of stock price movements on individual fiscal year state pension returns and also suggests that most of the volatility in state pension assets is equity related. Also impressive is the high short term correlation among individual state pension returns.

Ten year returns are plotted at the far right in Exhibit 5. The ups and downs of individual years are offset to achieve longer term returns more in line with expectations. Notice also that while state pension returns for individual years appear well bounded and largely explained by general stock and bond returns, over a longer 10 year period differences in state pension returns are less impacted by differences in overall risk-taking.

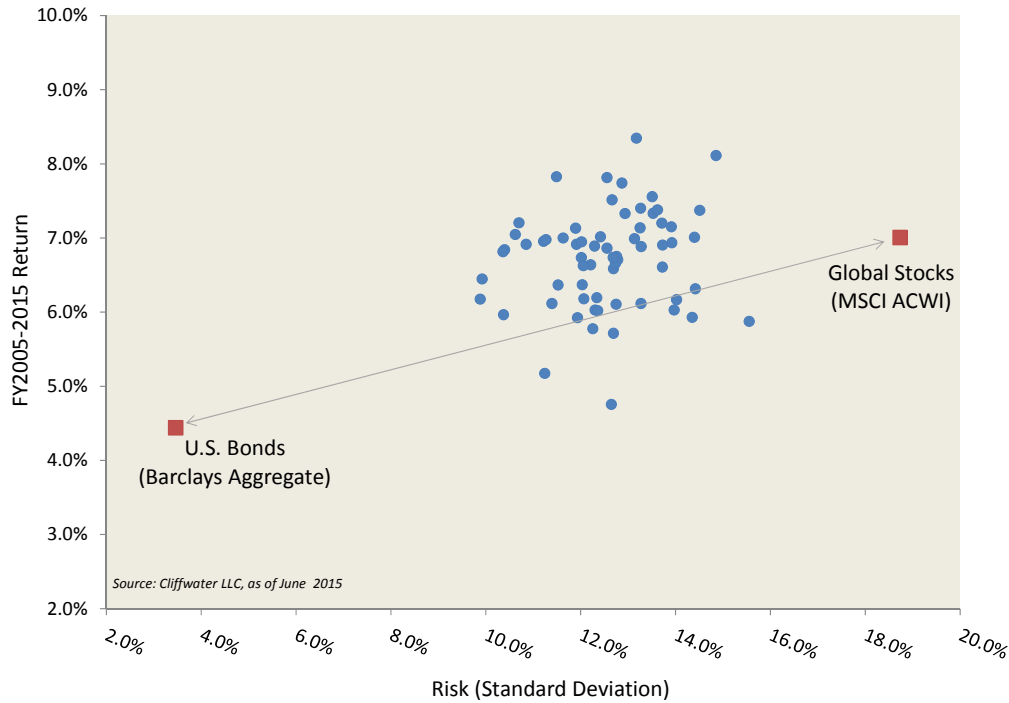
Exhibit 6 focuses only on 10 year state pension returns and their differences. Each dot in Exhibit 6 represents the annualized return and risk (standard deviation) of a state pension for the 10 year study period.¹⁰ As in Exhibit 5, there are 64 state pensions represented.

⁸ Dalbar 2013 Quantitative Analysis of Investor Behavior (QAIB)

⁹ See, for example, Stephen L. Nesbitt, “Buy High, Sell Low: Timing Errors in Mutual Fund Allocations,” in *Journal of Portfolio Management*, Fall 1995.

¹⁰ Standard deviation is calculated based upon 10 fiscal year returns.

Exhibit 6: State Pension Return and Risk, FY2006 to FY2015



Individual state pension return and risk is fairly tightly clustered, particularly in relation to the stock and bond indices, also plotted in Exhibit 6. This is consistent with the yearly return pattern in Exhibit 5 and suggests that those responsible for state pensions share investment philosophies that have more in common than not. For example, while differences exist on allocations to international stocks, alternatives, and high yield bonds, etc., no state pension appears to have broken convention and implemented truly differentiated high or low risk portfolios. However, Exhibit 6 does reveal significant differences in 10 year outcomes that are not attributable to the level of portfolio risk, at least not risk measured by standard deviation. In fact, the correlation between state pension return and risk is only 0.14 for the 10 year study period.

Risk-taking has an important impact on the overall absolute level of state fund returns and individual fiscal year returns, but has a much smaller role in explaining differences among state pension returns over longer 10 year periods.

Asset Allocation

Most pension boards and staffs are fully aware of the investment challenges ahead and began gradually shifting their asset allocation strategies. The increased use of alternative investments – including private equity, private real estate, hedge funds, and real assets – has been the most pronounced change over the last 10 years. But, as Exhibit 7 shows, state pension allocations to alternatives began to level off in 2012 at 24% of total assets.¹¹

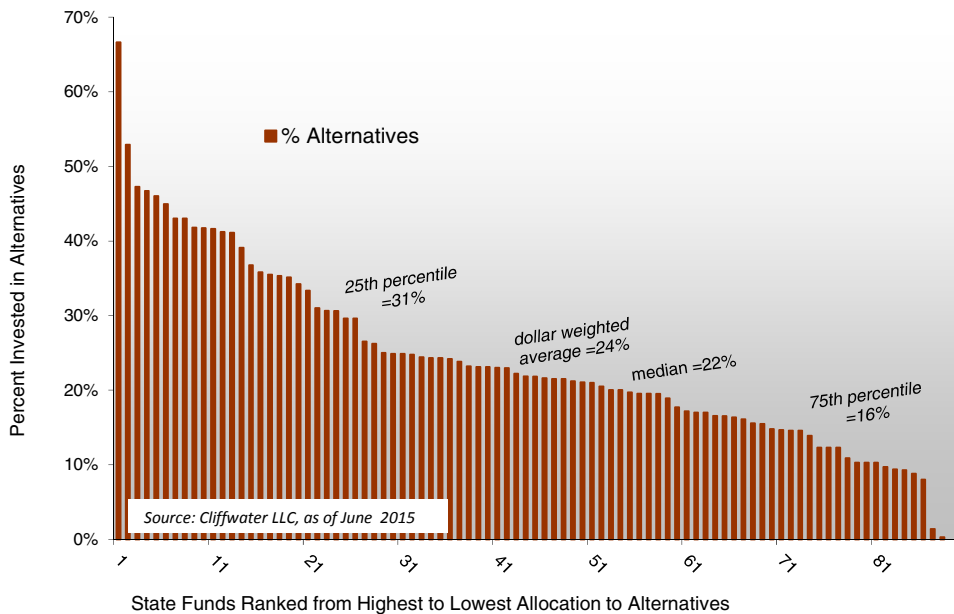
¹¹ Asset allocation data is based upon an expanded list of 93 state pension systems, including those whose fiscal 2015 end is not June 30.

Exhibit 7: Changes to Overall State Pension Asset Allocation (asset-weighted)

	2006	2011	2012	2013	2014	YoY	
						2015	Change
Public Equities	61%	51%	49%	50%	51%	50%	-1%
Fixed Income	26%	25%	25%	22%	23%	23%	0%
Alternatives	10%	21%	24%	25%	24%	24%	0%
Cash	2%	3%	2%	3%	2%	3%	1%
Total	100%	100%	100%	100%	100%	100%	

Individual state pension allocations to alternatives vary widely, as shown in Exhibit 8, which orders alternatives allocations from highest to lowest across the 93 state pension plans.

Exhibit 8: Distribution of 2015 Alternative Allocations among State Pensions



The median allocation to alternatives equaled 22% as of June 30, 2015. The dollar-weighted average allocation equaled 24% of total assets.

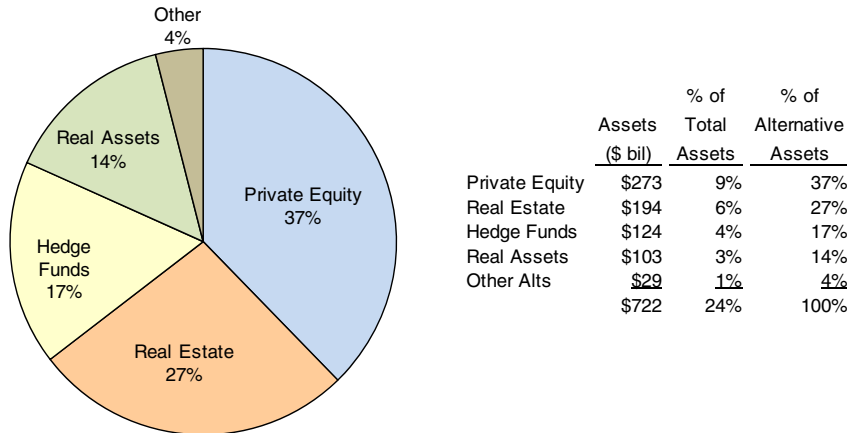
Alternatives allocations ranged from 0% for two of the 93 state pension systems reporting, to a high of 67%.¹² There is also considerable difference in allocations among systems ranking in the middle 50%. The 75th percentile allocation to alternatives equaled 16% of assets, up from 15% last year. The 25th percentile allocation equaled 31% of assets, the same as last year.

In a few instances the difference in allocations is due to statutory restrictions. Some state pensions only recently were given the latitude to invest in alternatives. This includes the Georgia pension systems, which reported no allocation to alternatives. Those state pensions with higher alternative allocations can also differ in how they invest. Some, like Michigan, Oregon, and Washington, invest primarily in private equity and real estate. Others, like Missouri, Utah, and South Carolina, tilt their alternatives allocations toward hedge funds. These differences in the composition of alternatives could be caused by a number of factors, including the intended role of alternatives within the overall asset allocation plan or staff/consultant expertise.

¹² Georgia Teachers and Oklahoma PERS have no alternative investments while Missouri State Employees (MOSERS) reports a 67% allocation to alternatives.

Exhibit 9 shows the average composition of alternatives for state pensions across private equity, real estate, hedge funds, real assets, and other alternatives. Private equity is the largest alternative asset class, representing 37% of total alternatives. Real estate is second at 27% of alternatives. Hedge funds and real assets follow, equaling 17% and 14%, respectively, of the alternatives pie.

Exhibit 9: State Pension Allocations to Alternative Assets, Fiscal 2015



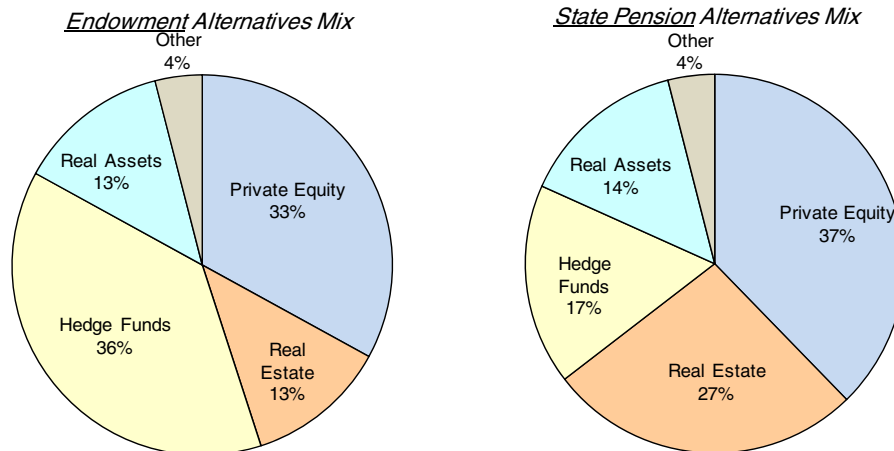
Source: Cliffwater LLC, as of June 2015

Comparison to Endowments

State pensions have been shifting their asset allocation toward what is referred to as the “endowment model.” Endowments have historically had higher allocations to alternatives. In contrast to the 24% average state pension allocation to alternatives, endowments reported an average alternatives allocation equal to 51% of assets on June 30, 2015.¹³

The composition of alternatives within state pensions also differs from endowments, as shown in Exhibit 10. Hedge funds represent a much larger 36% fraction of the endowment alternative asset pie compared to 17% for state pensions. Offsetting the lower allocation to hedge funds for state pensions is a much higher allocation to real estate. Real estate represents 27% of alternative allocations for state pensions versus 13% for large endowments.

Exhibit 10: Composition of Alternative Investments for Fiscal 2015



Source: Cliffwater LLC, as of June 2015

¹³ Source: NACUBO/Commonfund

The higher endowment allocation to alternatives likely explains their better performance over the last decade compared to state pensions. Another factor could be access to superior performing asset managers, though we have no data to support that possibility.

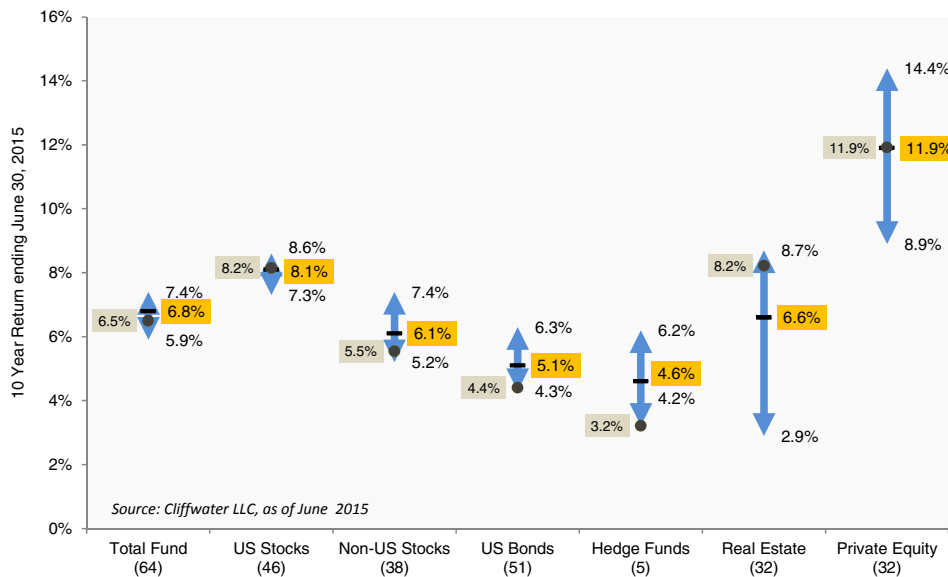
State Pension Performance within Asset Classes

Exhibit 11 reports the distribution of 10 year asset class returns for state pensions with fiscal years ended June 30, 2015.

Six major asset classes are represented together with total fund returns, matching those shown in Exhibit 2. Not all 64 state pensions that reported 10 year total fund returns ended June 30, 2015 also reported all asset class returns. We display the number of state funds represented in each asset class distribution below the asset class labels along the horizontal axis. We believe that the omission of states that either do not have June 30 fiscal year-ends or those who do not report asset class returns – either because they did not invest for the entire 10 year period or chose not to report – does not materially detract from our findings.

The arrows in Exhibit 11 display the range of individual state pension returns from low (the 95th percentile return) to high (the 5th percentile return) along with their values. Median returns are shown in gold on the right with a dash mark depicting where in the arrow the value falls. Commonly used benchmark returns – see Exhibit 12 for a listing – are identified as dots, with values shown in gray to the left.¹⁴

Exhibit 11: 5th to 95th Percentile Distribution of State Fund Returns (10 Years ended June 30, 2015)



The return distribution for U.S. stocks is narrow, reflecting the wide use of indexing by state pensions and the active risk diversification brought by using multiple managers which individually are also diversified. The wider spread of returns for U.S. bonds and non-U.S. stocks is principally due to differing sub-allocations to high yield bonds and emerging markets, respectively.

Ten year private equity and real estate returns are widely distributed. This suggests that implementation is much more important for alternative investments, and results can vary significantly from benchmark returns. The median return for real estate (6.6%) and especially

¹⁴ We use the 10 year return for a 65%/35% mix of global stocks (MSCI ACWI) and U.S. bonds (Barclays Aggregate Bond Index)

private equity (11.9%) reflect attractive 10 year outcomes. However, differences in implementation (portfolio structure and manager selection) proved to be very important for individual state pension returns in both of these asset classes.

We add the distribution of reported 10 year hedge fund returns for the first time, though the total number of state pensions reporting is low. The return distribution is wide, like real estate and private equity, showing the importance of implementation. The 4.6% median return for the asset class fell below the 5.1% median return for U.S. bonds, but did outperform the 3.2% HFRI Fund-of-Funds Index return and the 4.4% Barclays Aggregate Bond Index return.

These findings suggest that those responsible for investing state fund assets need to recognize that investment strategy and selection within alternative asset classes is as important as the amounts allocated to these asset classes. Unlike publicly traded stocks and bonds where implementation/selection risk can be minimized by investing in a low cost and diversified index fund, alternative asset classes offer no investible index and deliver higher or lower returns depending upon the ability to select the best managers and strategies.

Performance versus Benchmarks

The capacity to earn excess returns in traditional asset classes has been a challenge for investors for many years, including state pension funds. Exhibit 12 subtracts commonly used benchmark returns from asset class total returns reported in Exhibit 11. These return differences measure the success state pensions have had in adding value within asset classes over standard industry-wide benchmark index returns.

Exhibit 12: Distribution of Excess Returns for 10 Years ended June 30, 2015

	U.S. Stocks	Non-U.S. Stocks	Fixed Income	Hedge Funds	Real Estate	Private Equity
Top Decile	0.4%	1.9%	1.9%	2.5%	0.5%	2.5%
1st Quartile	0.2%	1.3%	1.2%	1.7%	-0.4%	0.9%
Median	-0.1%	0.6%	0.7%	1.4%	-1.7%	0.0%
3rd Quartile	-0.4%	0.1%	0.3%	1.0%	-3.1%	-1.4%
Bottom Decile	-0.9%	-0.4%	-0.1%	1.0%	-5.3%	-3.0%
Benchmarks:	US Stocks:	Russell 3000 Index				
	Non-US Stocks:	MSCI ACWI ex US Index				
	Fixed Income:	Barclays Aggregate Index				
	Hedge Funds:	HFRI Fund-of-Funds Index				
	Real Estate:	NCREIF Property Index				
	Private Equity:	Cambridge Private Equity				

State pensions showed mixed results in their ability to exceed U.S. stock benchmark returns over the 10-year study period. Median excess returns centered near zero, with asymmetrical upside and downside excess returns. These results suggest that traditional (i.e. long only) active management within publicly traded U.S. stocks should be reconsidered by state pensions before embracing the often time-consuming process typically associated with selecting active managers in these more efficient asset classes.

Fixed income excess returns were attractive over the 10 year period, especially when juxtaposed to U.S. stock excess returns. Credit risk and duration risk relative to the Barclays Aggregate Bond Index were both rewarded over the 10 years, explaining much of the positive fixed income excess return achieved by state funds. This outcome can prove to be short lived if credit spreads widen and/or interest rates rise. Our findings suggest that producing excess return within fixed

income will be heavily influenced by the manager's assessment of the timing and direction of changes in credit spreads and interest rates, both of which have been unpredictable.

Private Real Estate

Real estate experienced little growth – measured as a percentage of total pension assets – over the past 20 years, largely due to two developments: a severe drawdown in commercial real estate property values in the early and mid-1990s, and distress in the commercial and residential real estate sectors in 2008-2010. These experiences changed the general perception of real estate from a low risk, buy & hold, and inflation sensitive asset class, often viewed as a fixed income alternative, to a risky investment requiring greater management expertise, similar to private equity.

Those pension plans that have remained committed to private real estate experienced returns between public stocks and bonds, as reported in Exhibit 11. Yet there is a considerable range in reported 10 year real estate returns for state pensions, with eight state pensions reporting returns below the 5.1% median return for fixed income. The median real estate return for the 32 reporting state funds was 6.6%, which fell just below the 6.8% state pension median return for the 10 year time period.

The NCREIF Property Index is the most common performance benchmark for private real estate, comprised of over 7,000 institutional commercial properties representing over \$300 billion in assets. The Index returned 8.2% over the 10 year period, outperforming the 6.6% median state pension real estate return. It is worth noting that the NCREIF Property Index does not incorporate management fees, which explains some, but hardly the entire 1.6% deficit.

Exhibit 13 shows state pensions that reported the best 10 year annualized real estate returns. Each have significant real estate allocations and reported returns near or above the NCREIF Property Index, reflecting strong strategy execution.

Exhibit 13: Top Performing Real Estate Allocations for 10 Years ended June 30, 2015

	<u>10 Year Return</u>
Ohio STRS	10.9%
Hawaii ERS	9.9%
NY State Teachers RS (NY)	9.0%
Washington State Inv Board	8.8%
Mass PRIT/PRIM	8.6%
Maryland State RPS	8.5%
Wisconsin RS (SWIB) Core	8.2%
Florida Retirement System I	8.1%
New Mexico ERB	7.7%
Kansas PERS	7.6%

Private Equity

Public pension systems have a long history of investing in private equity, dating back to the early 1980s. Investors view private equity as a substitute for public equity, with the promise of higher return from superior GP skill in financing and direct operating management of companies. In exchange for GP alpha, investors give up the liquidity of public stocks.

The 32 reporting state pensions reporting private equity returns in our most recent study earned a median annual return equal to 11.9% over the 10 years ended June 30, 2015, well in excess of the 8.1% annual return for publicly traded stocks (Russell 3000 Index). These 10-year returns

are particularly instructive because questions surrounding year-to-year valuations go away for the most part over this extended period. Our past studies have shown that private equity has delivered returns over the last three decades averaging 3% annually in excess of public equity benchmarks.

State pensions have used a variety of benchmarks to evaluate private equity performance. Most use a public stock index as a benchmark, like the S&P 500 or Russell 3000, and add another 3% to 5% on top. The 11.9% median 10 year private equity return was 3.7% above the 8.2% annualized return for the Russell 3000 index over the same period.

Exhibit 14 provides private equity performance for the 10 state pensions reporting the highest 10 year returns for the period ended June 30, 2015.

Exhibit 14: Top Performing Private Equity Allocations for 10 Years ended June 30, 2015

	10 Year Return
Mass PRIT/PRIM	16.9%
Texas TRS	15.4%
Iowa PERS	15.0%
Ohio School Employees	14.5%
NY State Teachers (NYSTRS)	13.2%
Alaska TRS	13.2%
Alaska PERS	13.2%
Kansas PERS	13.0%
Maryland State RPS	12.8%
Wisconsin RS (SWIB)	12.8%

Hedge Funds

Hedge funds gained popularity among state pensions after 2008 in an effort to lower asset risk and still earn equity-like returns. Hedge fund allocations grew from less than 1% of total state pension assets in 2006 to 4% in 2015. But more recently that growth has slowed down. Total hedge fund assets equaled \$124 billion for fiscal 2015, up a modest \$5 billion over the prior year.

Our 10 year data on state pension hedge fund returns is limited to only five state plans. Based on that limited data, we find that hedge funds produced returns similar to bonds – 4.6% median versus 4.4% for the Barclays Aggregate Bond Index – over the 10 year study period at about the same level of risk. And on a risk-adjusted basis¹⁵, hedge funds performed the same as total state pension assets.

Five year hedge fund return data is available on 19 state pension plans with fiscal years ending in June. The median hedge fund return for those 19 state pensions was 6.6%, exceeding the 3.4% return on the Barclays Aggregate Bond Index and the 4.1% return on the HFRI Fund-of-Funds Index. Though a shorter time period, we would observe that the shift among state pensions to direct investments in hedge funds from the prior reliance on fund-of-funds has improved actual hedge fund performance.

Total Fund

Finally, in Exhibit 14 we report the state pensions with 10 year returns in the top half of those with fiscal year ends at June 20, 2015, and the state pensions whose risk-adjusted returns fall in the top half.

¹⁵ Return divided by risk (standard deviation)

Exhibit 14: Top 50% State Pension Returns for 10 Years ended June 30, 2015

	10 Year Return		10 Year Return/Risk	
1	Oklahoma Teachers	8.3%	Delaware	0.68
2	South Dakota	8.1%	Iowa PERS	0.67
3	Delaware	7.9%	New Jersey	0.66
4	Minnesota	7.8%	Georgia ERS	0.66
5	West Virginia	7.8%	Georgia TRS	0.66
6	Missouri Local	7.7%	Tennessee	0.65
7	Washington	7.6%	Nevada	0.64
8	Kansas	7.4%	Oklahoma Teachers	0.63
9	LASERS	7.4%	North Carolina	0.62
10	Louisiana TRS	7.4%	Missouri Local	0.62
11	Ohio STRS	7.3%	Kentucky TRS	0.62
12	Iowa PERS	7.2%	Oklahoma PERS	0.62
13	MPERS	7.2%	Idaho	0.60
14	NYSTRS	7.2%	Minnesota	0.60
15	Arkansas PERS	7.2%	West Virginia	0.60
16	New Jersey	7.1%	Arkansas TRS	0.59
17	CalStrs	7.0%	Hawaii	0.58
18	Idaho	7.0%	New Mexico ERB	0.58
19	Kentucky TRS	7.0%	Connecticut Muni	0.57
20	Mass PRIT/PRIM	7.0%	Kansas	0.57
21	MOSERS	7.0%	MOSERS	0.56
22	Oklahoma PERS	7.0%	Louisiana School	0.56
23	Oregon	7.0%	New Hampshire	0.56
24	Hawaii	6.9%	Washington	0.56
25	Arizona	6.9%	LASERS	0.56
26	Iowa Fire & Police	6.9%	Alaska Perm	0.55
27	Mississippi	6.9%	Wisconsin	0.55
28	Nebraska	6.9%	Florida	0.55
29	Nevada	6.9%	South Dakota	0.55
30	New Hampshire	6.9%	Missouri PSRS	0.54
31	New Mexico ERB	6.9%	Ohio STRS	0.54
32	Wisconsin	6.9%	Oregon	0.54
33	Louisiana School	6.9%	NYSTRS	0.54
34	Florida	6.9%	Kentucky ERS	0.54

Conclusion

States overall have been successful stewards of pension assets over our 10 year study period, achieving returns that captured the opportunities presented by global markets, and then some.

However, we find significant differences among individual state pension 10-year returns, mostly unexplained by simple differences in asset allocation or risk-taking. Some state pensions just appear more effective in implementing asset allocation compared to others.

We recommend that fiduciaries overseeing state pensions continue to allocate resources towards maximizing the return potential from its asset classes, paying particular attention to differences in how state pensions implement within asset classes. Unfortunately, the anonymity underlying universe comparisons has made it challenging for fiduciaries to understand why some plans are more successful than others.

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¹⁶ Thanks also to the research assistance provided by Grant Feitshans (Denison University) in preparation of this report.