



# Competitive Compensation Analysis

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## **Oregon State Treasury**

**September 8, 2009**

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## Overview

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- The Oregon State Treasury (OST) asked McLagan to:
  - Complete a comprehensive competitive pay level analysis for its Investment positions.
- The scope of the review encompassed:
  - Providing management:
    - Our observations about current market pay trends at public funds.
    - Detailed information about incentive pay programs at other public funds.
  - Identifying competitive pay rates (base salary plus incentives) for about 16 employees.
  - Completing pay comparisons versus:
    - A select group of other large/leading public funds (i.e., large funds with a similar investment approach and/or complexity as OST).
    - All private sector firms that participate in our annual pay survey.
    - Blended or weighted average mixes of public and private sector data. In 2006, OST endorsed a blended group weighted 50% to large public funds and 50% to private sector firms as its primary pay comparator group.

## Competitive Pay Level Analysis

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- McLagan's approach to completing this review involved three steps:
  - 1. Confirmed job matches for each position.** We worked with staff to confirm appropriate survey position matches for each incumbent. This allowed us to properly match OST's current staff to peers in other organizations.
  - 2. Collected and summarized competitive pay data.** Once the survey matches were confirmed, we assembled data for a comparator group consisting of:
    - 17 Public Funds: Listed in [Appendix 2](#), these funds are similar in size (i.e., over \$40B in AUM) and investment approach to OST.
    - 240 private sector investment firms that participated in our annual pay survey covering investment professional positions (see [Appendix 3](#)).
    - Various blended or weighted average mixes of public and private sector data.
  - 3. Present a high level summary of our findings to OST's management.**

## Overall Findings – Summary

## Competitive Pay Level Analysis

- Summarized below, we found that, on an aggregate basis, OST's:
  - 2008 actual total pay (salary + cash incentives) falls below the median versus the large/leading public funds comparator group and well below the private sector.
  - 2009 salaries fall below the median versus other large/leading public funds and private sector firms.
  - 2009 maximum total cash opportunities (salary + maximum bonus opportunity) fall well below the median versus large public funds.

OST vs. Market Actuals						
	vs. 25th Percentile		vs. 50th Percentile		vs. 75th Percentile	
	2008 T.Cash	2009 Salary	2008 T.Cash	2009 Salary	2008 T.Cash	2009 Salary
<b>vs. Large/Leading Public Funds</b>	23%	10%	-16%	-10%	-40%	-20%
<b>vs. Private Sector Firms</b>	-35%	-7%	-56%	-22%	-74%	-35%
<b>vs. 50% PF/50% Private Sector Blend</b>	-15%	1%	-42%	-16%	-64%	-28%

OST vs. 2009 Public Fund Peer Group Maximum Total Pay Opportunity			
	vs. 25th %tile	vs. 50th Percentile	vs. 75th Percentile
	Max. Total Cash	Max. Total Cash	Max. Total Cash
<b>vs. Public Funds Peer Group (Maximum Total Cash)</b>	27%	-29%	-46%

Detailed Findings – By *Position versus Large Public Funds*

## Competitive Pay Level Analysis—2008 Total Cash

- The chart below shows competitive total pay level information (i.e., salary plus cash incentives) by position versus the select public comparator group.
- In aggregate, OST's pay levels fall below the median versus other large public funds.
- Pay levels are well below the median for more senior level positions (e.g., CIO, Investment Director and Senior Portfolio Manager). Pay levels for the Portfolio Manager position are more competitive.

2008 Total Cash (Salary + Incentive)

OST vs. Large/Leading Public Funds											
Position (Average)	Competitive Market										
	OST	Low Quartile			Median		High Quartile		% vs. Market Median		
	Current	T. Cash	Difference	T. Cash	Difference	T. Cash	Difference	Low	Median	High	
	(\$000s)	(\$000s)		(\$000s)		(\$000s)					
Executive (1)	\$301.1	\$298.0	1%	\$413.0	-27%	\$569.8	-47%				
Investment Directors (4)	215.3	163.4	32%	254.1	-15%	393.4	-45%				
Senior Portfolio Managers (4)	175.5	137.9	27%	208.2	-16%	275.0	-36%				
Portfolio Managers (3)	131.1	108.4	21%	136.7	-4%	172.5	-24%				
Support Roles (0)	NA	NA	NA	NA	NA	NA	NA				
TOTAL (12)*	\$2,258	\$1,828	23%	\$2,672	-16%	\$3,761	-40%				

\*Totals include only those incumbents where a full set of OST and competitive market data is available.

Detailed Findings – By *Position versus Private Sector Firms*

## Competitive Pay Level Analysis—2008 Total Cash

- The chart below shows competitive total pay level information (i.e., salary plus cash incentives) by position versus the private sector firms.
- In aggregate, and by position, OST's pay levels fall well below the median versus the private sector.

## 2008 Total Cash (Salary + Incentive)

OST vs. Private Sector Firms										
Position (Average)	OST Current (\$000s)	Competitive Market						% vs. Market Median		
		Low Quartile		Median		High Quartile				
		T. Cash (\$000s)	Difference	T. Cash (\$000s)	Difference	T. Cash (\$000s)	Difference	Low	Median	High
Executive (1)	\$301.1	\$534.9	-44%	\$787.0	-62%	\$1,950.0	-85%			
Investment Directors (4)	215.3	390.5	-45%	613.8	-65%	1,045.3	-79%			
Senior Portfolio Managers (4)	175.5	228.0	-23%	316.4	-45%	486.2	-64%			
Portfolio Managers (3)	131.1	153.3	-14%	202.3	-35%	267.9	-51%			
Support Roles (1)	47.5	70.0	-32%	89.5	-47%	120.0	-60%			
<b>TOTAL (13)*</b>	<b>\$2,305</b>	<b>\$3,538</b>	<b>-35%</b>	<b>\$5,204</b>	<b>-56%</b>	<b>\$8,999</b>	<b>-74%</b>			

\*Totals include only those incumbents where a full set of OST and competitive market data is available.

## Detailed Findings – By Position versus 50/50 Blended Median

## Competitive Pay Level Analysis—2008 Total Cash

- The chart below shows competitive total pay level information (i.e., salary plus cash incentives) by position versus a blended peer group weighted:
  - ◇ 50% to large public funds
  - ◇ 50% to private sector firms.
- In aggregate, and by position, OST's pay levels fall well below the median versus the blended comparator group.

2008 Total Cash (Salary + Incentive)

OST vs. 50% Public Funds/50% Private Sector Firms										
Position (Average)	Competitive Market							% vs. Market Median		
	OST	Low Quartile		Median		High Quartile				
	Current (\$000s)	T. Cash (\$000s)	Difference	T. Cash (\$000s)	Difference	T. Cash (\$000s)	Difference	Low	Median	High
Executive (1)	\$301.1	\$416.5	-28%	\$600.0	-50%	\$1,259.9	-76%			
Investment Directors (4)	215.3	276.9	-22%	433.9	-50%	719.3	-70%			
Senior Portfolio Managers (4)	175.5	182.9	-4%	262.3	-33%	380.6	-54%			
Portfolio Managers (3)	131.1	130.8	0%	169.5	-23%	220.2	-40%			
Support Roles (0)	NA	NA	NA	NA	NA	NA	NA			
TOTAL (12)*	\$2,258	\$2,648	-15%	\$3,893	-42%	\$6,320	-64%			

\*Totals include only those incumbents where a full set of OST and competitive market data is available.

## Detailed Findings – By Position versus Large Public Funds

## Competitive Pay Level Analysis—2009 Salary

- The chart below shows competitive total salary level information by position versus other large public funds.
- In aggregate, OST's pay levels are somewhat below the median versus large public funds, especially for the CIO and Research Analyst positions.
- Salary levels for other positions are more competitive.

## 2009 Salary

OST vs. Large/Leading Public Funds										
Position (Average)	Competitive Market									
	OST	Low Quartile		Median		High Quartile		% vs. Market Median		
	Salary (\$000s)	Salary (\$000s)	Difference	Salary (\$000s)	Difference	Salary (\$000s)	Difference	Low	Median	High
Executive (1)	\$265.5	\$309.0	-14%	\$350.0	-24%	\$372.8	-29%			
Investment Directors (4)	200.8	167.8	20%	210.2	-4%	233.4	-14%			
Senior Portfolio Managers (4)	151.7	135.6	12%	167.5	-9%	192.3	-21%			
Portfolio Managers (3)	122.1	108.2	13%	129.6	-6%	148.6	-18%			
Research Analyst (1)	116.0	119.0	-3%	155.3	-25%	168.5	-31%			
Support Roles (0)	NA	NA	NA	NA	NA	NA	NA			
TOTAL (13)*	\$2,158	\$1,966	10%	\$2,405	-10%	\$2,690	-20%			

\*Totals include only those incumbents where a full set of OST and competitive market data is available.

Detailed Findings – By *Position versus Private Sector Firms*

## Competitive Pay Level Analysis—2009 Salary

- The chart below shows competitive salary level information by position versus the private sector firms.
- In aggregate, and by position, OST's salary levels fall well below the median versus the private sector.

## 2009 Salary

OST vs. Private Sector Firms										
Position (Average)	Competitive Market							% vs. Market Median		
	OST	Low Quartile		Median		High Quartile				
	Salary	Salary	Difference	Salary	Difference	Salary	Difference	Low	Median	High
Executive (1)	\$265.5	\$336.3	-21%	\$400.0	-34%	\$497.4	-47%			
Investment Directors (4)	200.8	221.0	-9%	261.0	-23%	321.5	-38%			
Senior Portfolio Managers (4)	151.7	149.0	2%	177.4	-15%	210.5	-28%			
Portfolio Managers (3)	122.1	119.2	2%	146.1	-16%	172.3	-29%			
Research Analyst (1)	116.0	145.0	-20%	160.0	-27%	175.0	-34%			
Support Roles (1)	53.9	65.0	-17%	76.0	-29%	88.8	-39%			
TOTAL (14)*	\$2,212	\$2,384	-7%	\$2,828	-22%	\$3,406	-35%			

\*Totals include only those incumbents where a full set of OST and competitive market data is available.

Detailed Findings – By Position versus 50/50 Blended Median

# Competitive Pay Level Analysis—2009 Salary

- The chart below shows competitive salary level information by position versus a blended peer group weighted:
  - ◇ 50% to large public funds
  - ◇ 50% to private sector firms.
- In aggregate, and by position, OST’s salary levels fall well below the median versus the blended comparator group.

2009 Salary

OST vs. 50% Public Funds/50% Private Sector Firms								
Position (Average)	Competitive Market							
	OST	Low Quartile		Median		High Quartile		% vs. Market Median
	Salary	Salary	Difference	Salary	Difference	Salary	Difference	
	(\$000s)	(\$000s)		(\$000s)		(\$000s)		Low Median High
Executive (1)	\$265.5	\$322.7	-18%	\$375.0	-29%	\$435.1	-39%	
Investment Directors (4)	200.8	194.4	3%	235.6	-15%	277.5	-28%	
Senior Portfolio Managers (4)	151.7	142.3	7%	172.5	-12%	201.4	-25%	
Portfolio Managers (3)	122.1	113.7	7%	137.9	-11%	160.5	-24%	
Research Analyst (1)	116.0	132.0	-12%	157.7	-26%	171.8	-32%	
Support Roles (0)	NA	NA	NA	NA	NA	NA	NA	
TOTAL (13)*	\$2,158	\$2,142	1%	\$2,579	-16%	\$3,004	-28%	

\*Totals include only those incumbents where a full set of OST and competitive market data is available.

Detailed Findings – By Position Level versus Large Public Funds

# Competitive Pay Level Analysis—2009 Maximum Pay

- The chart below shows competitive total pay opportunities data (i.e., salary plus maximum cash incentives) by position versus other large public funds.
- In aggregate, OST’s pay opportunities are well below the median versus other large/leading public funds. This is mainly due to lower salaries and incentive opportunities for each position. Appendix 1 provides detailed information about incentive pay levels as a percentage of salary for leading public funds and OST’s pay comparator group.

2009 Maximum Total Cash (Salary + Maximum Bonus Opportunity)

OST vs. Public Funds Peer Group (Maximum Total Cash )										
Position (Average)	Competitive Market							% vs. Market Median		
	2009 OST	Low Quartile		Median		High Quartile				
	Max. T. Cash	Max. T.Cash	Diff.	Max. T.Cash	Diff.	Max. T.Cash	Diff.	Low	Median	High
	(\$000s)	(\$000s)				(\$000s)				
Executive (1)	\$345.2	\$437.5	-21%	\$561.0	-38%	\$720.0	-52%			
Investment Directors (4)	261.0	182.8	43%	354.0	-26%	504.3	-48%			
Senior Portfolio Managers (4)	197.2	136.9	44%	297.5	-34%	368.9	-47%			
Portfolio Managers (3)	158.7	108.5	46%	181.4	-13%	223.2	-29%			
Research Analyst (1)	150.8	165.9	-9%	217.5	-31%	268.7	-44%			
Support Roles (0)	125.4	NA	NA	148.8	-16%	NA	NA			
<b>TOTAL (13)*</b>	<b>\$2,805</b>	<b>\$2,207</b>	<b>27%</b>	<b>\$3,929</b>	<b>-29%</b>	<b>\$5,151</b>	<b>-46%</b>			

\*Totals include only those incumbents where a full set of OST and competitive market data is available.

## Next Steps

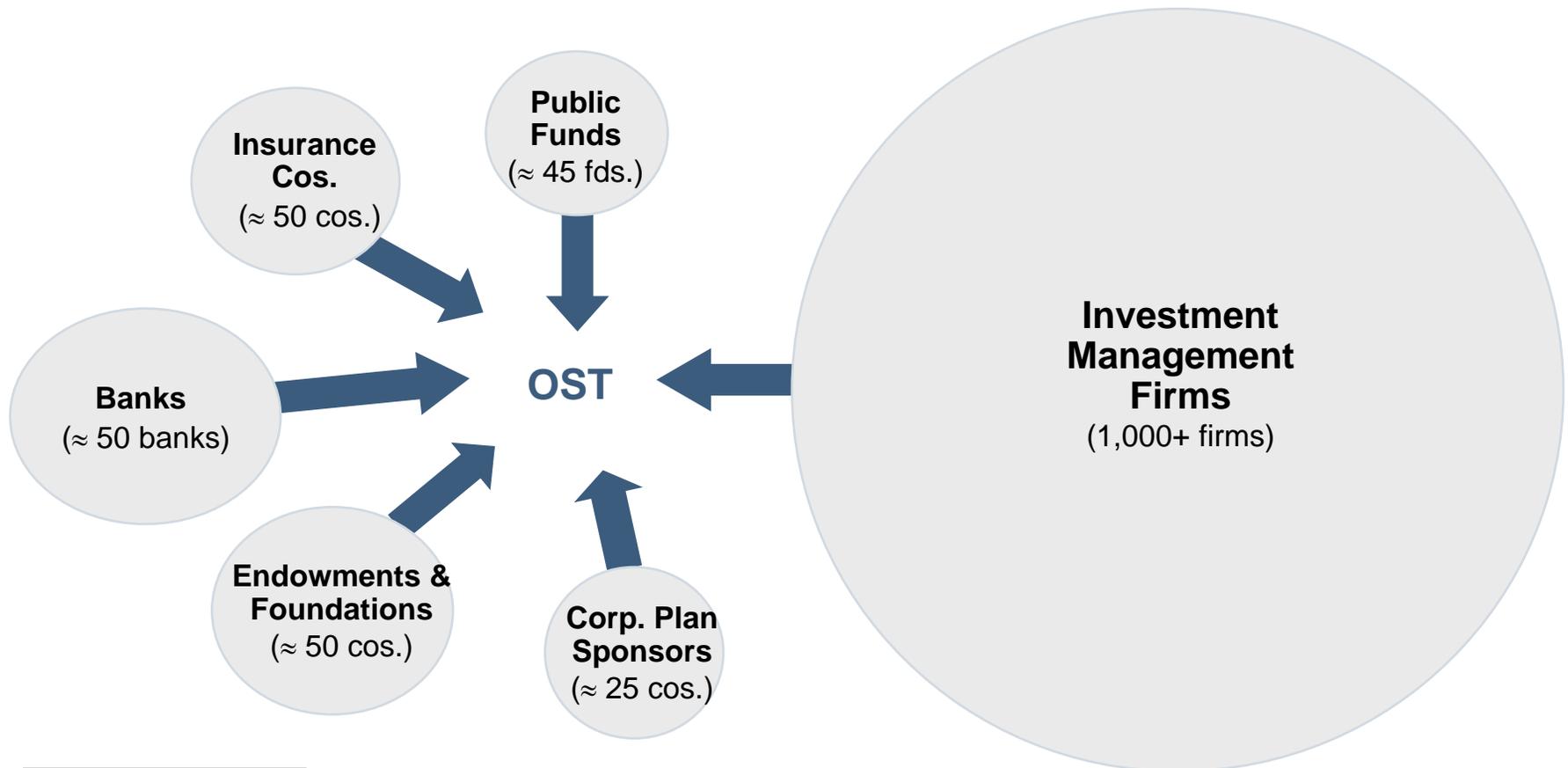
## Pay Program Considerations

Steps	Considerations
<ul style="list-style-type: none"> <li>▪ Review competitive pay level analysis/results</li> </ul>	<ul style="list-style-type: none"> <li>▪ Results reflect the OST-endorsed comparator group focusing on pay levels weighted 50% to other large public funds and 50% to private sector firms.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Maintain/change current salary levels</li> </ul>	<ul style="list-style-type: none"> <li>▪ Based on the analysis, salary levels for most positions are below the competitive market. Salary level adjustments should be separately assessed on an individual basis and as market conditions allow.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Maintain/change incentive pay opportunities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Versus other large public funds, 2009 maximum pay opportunities are well below the market competitive median.</li> <li>▪ Changes to incentive opportunities, if any, should be considered: <ul style="list-style-type: none"> <li>– In accordance with OST’s investment philosophy/approach going forward (i.e., as we understand it, in an effort to take advantage of market opportunities and manage costs, over time, OST will likely manage more of its assets internally).</li> <li>– To bring OST’s total pay opportunities in-line with the competitive market. However, higher incentive pay could be earned only if staff delivers value to OST.</li> </ul> </li> </ul>

# Current Market Trends

## For its Investment-related Positions, OST Competes with a Broad Range of Firms

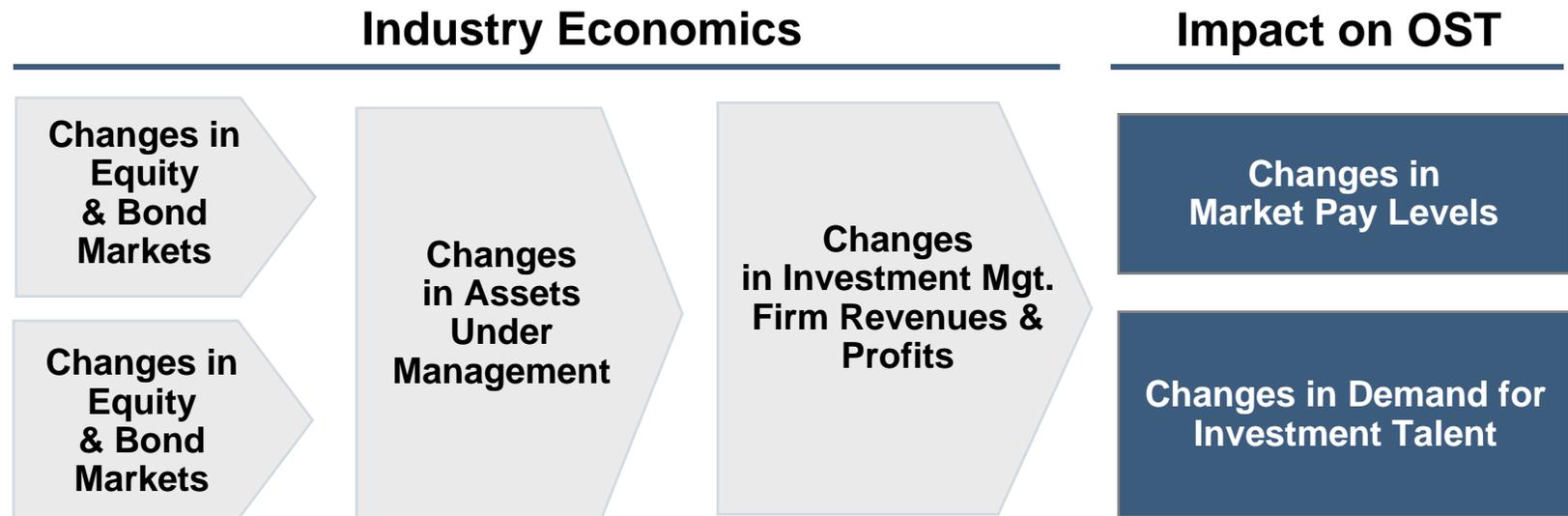
- Measured by potential “job openings,” the labor market for investment talent is dominated by investment management firms, not other public funds.



Note: Excludes real estate, hedge funds (HF), private equity (PE) funds, fund of funds (PE & HF), family offices, etc.

## Industry Economics Drive Industry Pay

- In the private sector, asset management industry economics drive pay levels and demand for investment talent.
- While not an investment management company, OST competes with the private sector for investment talent and, as a result, is impacted by industry economics.



**Note:** As shown on the next page, in the private sector, the financial market meltdown had a significant impact on pay in 2008.

Private Sector\* Pay Levels: Year-over-Year Pay Comparisons

# Select Investment Positions – 2008 Median Total Cash



While private sector pay is down significantly, as noted earlier, public sector pay (including OST) is significantly below pay levels at private sector firms.

Cash incentives as a percentage of base salary.

NOTE: The figures to the left exclude long-term incentives (e.g., restricted stock, stock options, etc.)

\*Based on 240 private sector investment organizations that participated in our most recent pay survey.

# Implications for Public Funds

## Private Sector Investment Firms

Lots of change in a short period of time....

- 2007: Supported by record asset levels and profits, pay hit new high watermarks.
- 2008: Markets melt, revenues decline, margins shrink, firms begin downsizing, bonus pay declines dramatically (35+%).
- 2009: Markets fall early in the year, but have now begun to recover. First and/or second round staff cuts at the beginning of the year. Industry pay will likely be down somewhat again.

## Implications Public Funds

1. Lots of good talent is available, but top talent is always in demand.
2. The price of new investment talent has gone down. However, as shown earlier, private sector pay levels are still much higher.
3. People proposition at public funds is compelling for existing and potential investment talent, for example:
  - Focus on managing investments
  - Life-style
  - To a certain extent, security.
4. However, due to steep investment losses and budgets cuts, scrutiny on pay (especially incentive pay) and staffing/resources has been intense.

## Incentive Pay Plans at Public Funds

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### **Why did Boards agree to pay incentives in the first place?**

- Historically, public funds could not compete with the private sector to attract top investment talent.
- To address this issue, many public funds began offering incentive pay to attract and retain high-caliber investment talent.
- Boards recognized that high-performing staff could, among other things:
  - Generate above-benchmark (i.e., value-added) performance, and
  - More efficiently implement/monitor its investment program and minimize costs.

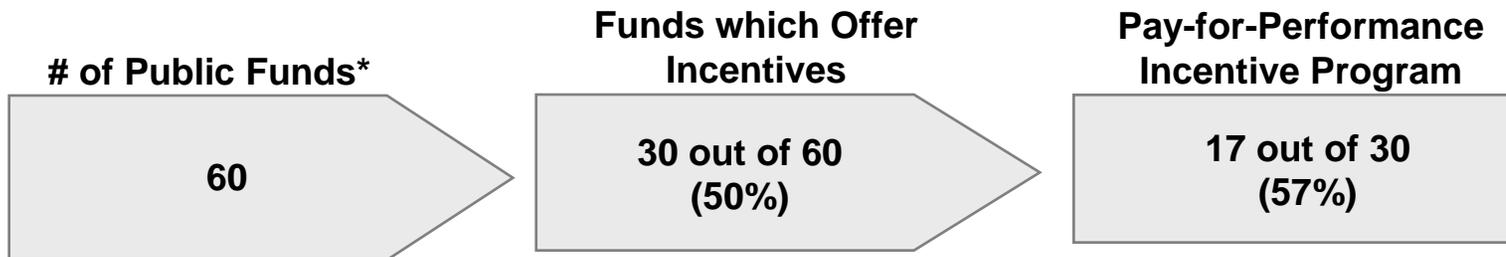
### **For the most part, incentive plans have been a win-win for all....**

- For beneficiaries and taxpayers: virtually all excess value generated by staff has been retained by the fund (i.e., >99%).
- For boards: incentive plans have helped attract and retain high-caliber staff and ensure continuity/stability.
- For staff: incentive pay opportunities, coupled with potential pension and other employee benefits, make the economic trade-offs of a public sector career more palatable.

## Investment Staff Incentive Plans

# Incentive Pay Practices at Public Funds

- 50% of the public funds that participate in our *PFDE* survey offer some type of incentive to staff. Seventeen of these funds offer an incentive program to some or all staff which is based on a pay-for-performance approach.
- Public funds that pay incentives, but do not have a pay for performance program, typically award incentives based on a subjective assessment of individual performance.



- In terms of plan design and mechanics, pay for performance incentive programs at public funds are similar:
  - Staff are assigned minimum, target and/or maximum incentive opportunities expressed as a percentage of annual base salary.
  - Performance measurement typically focuses on relative investment results versus a Fund's policy benchmark.
  - Performance is measured over multi-year time periods (e.g., three to five years).
- In response to the current economic climate, some public funds (about half of the 17 funds) now link or plan to link the payment of incentive awards to absolute Fund performance.

\*Based on 60 public funds that participated in our 2008 annual pay survey for investment staff.

## Investment Staff Incentive Plans

## Should Incentive Plans Focus on Relative Results?

Arguments for...	Arguments against...
<ul style="list-style-type: none"> <li>▪ Focusing primarily on <i>near-term</i> absolute returns is inconsistent with the Fund's long-term objectives.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Incentives should not be earned when performance is negative and members/beneficiaries lose money.</li> </ul>
<ul style="list-style-type: none"> <li>▪ If staff consistently out-perform and the Fund cannot pay them, competitors will "take them out."</li> </ul>	<ul style="list-style-type: none"> <li>▪ Staff pay should be linked to actual dollars made by the Fund. (In a down market, this promotes behavior inconsistent with the Fund's asset allocation guidelines).</li> </ul>
<ul style="list-style-type: none"> <li>▪ When relative performance is strong, the Fund makes more or loses less than the market, so everyone wins.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Reflects staff accountability for maximizing returns consistent with Board-defined asset allocation policy. (Asset allocation has the greatest impact on absolute returns).</li> </ul>	

- Investment staff are primarily responsible for meeting or exceeding the Fund's investment objectives. Therefore, linking incentive pay to relative results is appropriate.
- However, what happens when pension assets are being crushed?

# Modify or Eliminate the Incentive Plan?

**#1**  
**Change**  
**incentive targets**  
**to reflect current**  
**market pay**  
**levels.**

**#2**  
**Adjust incentive**  
**targets/payouts**  
**based on**  
**absolute results**

**#3**  
**Eliminate**  
**incentive pay**

## Considerations

- Industry economics directly impact pay levels at public funds.
- Private sector firms have been forced to cut pay and downsize staff.
- The asking price for talent has gone down, but top talent is always in demand.
- Review pay levels at competing organizations and, as appropriate, re-establish target pay levels.
  
- When absolute performance is especially poor, bonus payouts could potentially be:
  - Reduced (subject to OST's then current competitive position), and/or
  - Partially deferred until markets improve.
- Conversely, when absolute performance is especially strong, adjust payouts upward. Gives and gets should be aligned.
  
- May appease beneficiaries, politicians and the press, but incentive pay systems linked to investment and business performance are an industry norm and are unlikely to go away.
- May be difficult to attract and retain high caliber investment staff, especially when markets improve.

## Our Suggestions

# Modify the Incentive Plan's Design Features

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- Pension funds facing severe funding shortages will be best served if they continue to offer incentive pay plans as a way to attract and keep high top-caliber investment talent.
- However, incentive plans should be modified in light of today's economic and political realities. We suggest that OST consider the following:
  - **Continue to reward relative performance:** Incentive pay should reflect investment staffs' primary responsibilities.
  - **Adjust payouts based on absolute performance.** When fund performance is especially poor, incentive payouts (which are based on good relative performance) could potentially be deferred.
  - **Apply any changes to the Fund's incentive plan prospectively, not retrospectively:** Changing incentive plan design features, target or actual payouts mid-year will foster potentially irreparable damage and distrust between staff and the system.
  - **Communicate and educate key stakeholders:** For better or worse, investment professionals live in a world where bonuses are the norm. Educate key stakeholders about how important incentive pay programs are in attracting and retaining high-caliber investment professionals.
- The following pages provide detailed information about the incentive plans at 9 of the 11 public funds in OST's peer group that sponsor a pay for performance incentive program.

# Public Fund Incentive Pay Programs

# Overall Pay for Performance Incentive Plan Design

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## Eligibility:

- Generally, most plans only cover employees deemed to be investment professionals (i.e., only 1 of the 9 Funds cover non-investment staff).
- Many incentive pay plans require individuals to achieve a “Satisfactory” or “Meets Requirements” performance evaluation in order to be eligible for any incentive award.
- For new or transferred individuals, most Funds pro-rate awards based on time of service in the covered positions.

## Typical Plan Mechanics:

- Eligible investment staff are assigned minimum, target and/or maximum incentive opportunities expressed as a percentage of annual base salary.
- Incentive opportunities are allocated to quantitative and/or qualitative plan components.
- The quantitative component represents most of the total incentive opportunity and links pay to relative investment performance, where:
  - Performance is measured over multi-year time periods (e.g., three to five years).
  - Measurement focuses on actual results versus policy benchmarks (in most cases) or peer groups (in more limited instances).
- The qualitative component focuses on non-investment related contributions (e.g., leadership, personal development, etc.), with payouts determined on a discretionary basis.
- Final awards equal the sum of all performance-adjusted plan components.

## Incentive Opportunities/Levels

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- Incentive opportunities are generally expressed as a percentage of each individual's annual base salary, where:
  - Most Funds apply the incentive percentage to the annual base salary in effect as of the beginning of the performance year (e.g., the annual gross salary in effect as of January 1<sup>st</sup> for plans operating on a calendar year basis).
  - A few Funds apply the incentive percentage to the actual earned salary for the entire incentive plan period.
- Incentives are expressed in either target or maximum terms:
  - Under **target** plans (used by 3 Funds), individuals are assigned target incentive amounts that define the level of pay that can be earned at “expected” performance. Depending on performance, actual awards can be greater, less than, or equal to the target.
  - Under **maximum** plans (used by 6 Funds), individuals are assigned maximum incentives that define the level of pay that can be earned at truly superior levels of performance. Depending on performance, actual payouts equal a portion of the maximum amount.

## Plan Design Features at Public Funds

# Incentive Opportunities

- For incentive-paying funds, incentive opportunities vary from Fund to Fund and are typically greater at larger/more complex funds (i.e., large Funds with higher allocations to alternative investments and manage a portion of the Fund’s assets internally).

Chief Investment Officer Incentive Opportunity		Maximum	
	Minimum	Target	Maximum
Fund A	0%	-	8%
Fund C	0%		25%
Fund F	0%	30%	60%
Fund G	0%	50%	75%
Fund H	0%		80%
Fund I	0%		80%
Fund J	0%		95%
Fund K	0%	60%	120%
Fund L	0%		125%
25th Percentile	0%		60%
50th Percentile	0%		80%
75th Percentile	0%		95%
Average	0%	-	74%
OST	0%	-	30%

- As an example for the CIO position,. incentive maximums as a % of salary are defined for 9 Funds.
- Generally, target ranges equate to expected levels of performance (both quantitative and qualitative). Such targets are defined for 3 of the 9 funds.
- CIO maximum incentive opportunities range from 8% to 125% of base salary.
- The median maximum incentive opportunity is 80% of base salary.
- The average maximum incentive opportunity is 74% of base salary.

## Plan Design Features at Public Funds Incentive Weightings

- Once incentive opportunities/levels are defined, incentive weightings are often used to allocate or apportion such opportunities across multiple performance components.
- As shown below, incentive weightings focus on quantitative measures and emphasize each positions' primary job responsibilities.

Incentive Weightings by Position								
Position (Average)	# of Funds	Quantitative					Qualitative	Total
		Total Fund	Asset Class	Portfolio	Other	Sub-Total		
Chief Investment Officer	9	75%	11%	0%	1%	87%	13%	100%
Investment Director	6	34%	53%	8%	2%	97%	3%	100%
Portfolio Manager	6	34%	25%	32%	0%	92%	8%	100%

- CIO incentives focus on Total Fund results.
- Investment Director incentives focus on Asset Class results.
- PM incentives focus on asset class and portfolio results.

## Quantitative Components

- Quantitative plan components are used to establish formula-based linkages between pay and relative investment performance.
- As the below chart shows, Funds' measure investment performance several ways for incentive purposes:
  - **Basis Points versus Benchmark:** 8 of the 9 Funds measure all or most of the quantitative plan component based on results versus pre-defined benchmarks (e.g., basis point spreads).
  - **Peer Group Rankings:** None of the Funds determine quantitative component payouts based on Total Fund and Asset Class rankings versus a public fund peer group. As we understand it, OST use peer group rankings to determine incentive awards.
  - **Risk-Adjusted Performance:** One Fund links quantitative payouts, at least in part, to risk-adjusted investment performance (e.g., tracking error, etc.). Generally, these measures define how much of the excess value, if any, can be attributed to the investment decision making process as opposed to "luck."

Performance Evaluation Approaches	
Measure	# of Funds
Basis Points versus Benchmark	8
Peer Group Rankings	0
Basis Points vs. Benchmark and Risk-Adjusted Performance	1
<b>TOTAL</b>	<b>9</b>

Plan Design Features at Public Funds

# Quantitative Components: Performance-Award Scales

- To earn any portion of their Total Fund quantitative plan component, 8 of the 9 Funds (89%) require at least benchmark performance.

	Performance Award Scale (bps of excess performance)			Measurement Criteria	
	Minimum	Target	Maximum	Benchmark	Gross or Net of Fees?
Fund A	-40	-10	20	Policy Index Actual Returns	Net
Fund B	3	8	20	Policy Index Actual Returns	Net
Fund C	0	NA	40	Policy Index Actual Returns	Net
Fund D	0	NA	48	Policy Index Actual Returns	Net
Fund E	0	25	50	Policy Index Actual Returns	Net
Fund F	25	NA	50	Policy Index Target Returns	Net
Fund G	0	30	60	Policy Index Actual Returns	Net
Fund H	0	NA	60	Policy Index Actual Returns	Net
Fund I	0	NA	60	Policy Index Actual Returns	Gross

Directional Estimates*				
Performance required to earn any portion of Total Fund incentive component:				
	Minimum	Target	Maximum	Benchmark
Net-of-Fees	0	25	50	Policy Index Actual Returns
Gross-of-Fees	0	45	70	Policy Index Actual Returns

\*Assumes 20 bp average cost of external management)

When assessing Total Fund returns for incentive purposes:

- 8 of the 9 Funds (89%) focus on performance versus a policy benchmark (1 of these Funds measure a portion of the incentive on a risk-adjusted basis, e.g., using tracking error.).
- One of the 9 Funds (11%) focus on performance versus a fixed or semi-fixed absolute standard (e.g., +8%)
- 8 of the 9 Funds (89%) measure performance net-of-fees. Generally, net of fees is defined as gross returns less external investment manager costs.

## Plan Design Features at Public Funds

## Quantitative Components: Performance-Year Weights

- Payouts under the quantitative plan components are typically determined based on long-term investment performance.
- The specific approaches for measuring long-term investment performance vary by Fund.
- At the Total Fund level, the below chart shows that:
  - Six (67%) of the 9 Funds use a single time period (e.g., three or five-year returns).
  - The other 3 (33%) Funds focus on multiple time periods.

Performance-Year Weights				
Weightings applied to:		# of Funds	Total	%
Single Year	3-Year	5	6	67%
	5-year	1		
Multi-Year:	1 and 5 Year	1	3	33%
	1, 3, 5 Year	1		
	3 and 5 Year	1		
Total		9		100%

**NOTE:** The above chart focuses on performance-year weights at the Total Fund level. In some Funds, performance-year weights may vary by asset class and/or portfolio depending on the investment strategy and/or objectives. Typically, public markets strategies will focus on near-term (e.g., one-year) and long-term (e.g., three to five-years) results while private markets strategies will focus on long-term results (e.g., five-years or greater).

## Qualitative Component

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- Payouts under the qualitative incentive component are based on either:
  - Management’s discretion – the CIO’s and/or Executive Director’s holistic assessment of the individual’s overall contribution, including results versus individual objectives, contributions to Fund-specific initiatives, and overall “citizenship”.
  - More formulaic - achievement of specific pre-set and weighted objectives.
- In most plans, the criteria used to determine the qualitative component vary by position (i.e., a greater emphasis on leadership and management skills for more senior managers) and by individual development needs and/or goals.
- Several Funds indicated that eligibility for any incentive awards in a given plan year is contingent upon an individual receiving at least a “satisfactory” or “meets expectations” rating on their individual qualitative performance evaluation.

## Plan Design Features at Public Funds

# Determining Payouts

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### Year End Payouts:

- Typically, after year-end, payouts are determined based on quantitative and qualitative performance and are paid as soon as practical.

### Cash Deferrals:

- Until recently, cash deferrals were a minority practice at public funds (i.e., only one of the 9 Funds had deferral provisions in their incentive program).
- As a result of the current economic climate, several other funds have begun to explore the possibility of reducing or deferring the payment of earned incentives when the Fund's absolute performance is poor. For example:
  - In one of the 13 Funds, earlier this year the Board of Trustees adopted a provision that eliminates the payment of any incentives in a year when the absolute returns of the Fund are negative.
  - Two other Funds are considering (but have not yet officially adopted) a provision to provide the Board discretion to defer the payment of incentives in any year when absolute performance is negative. In both Funds, the deferred incentive award would not be paid until the one-year Total Fund performance return is positive.
  - Lastly, in one other Fund, the most recent performance year incentive awards were deferred until a certain asset level threshold was achieved for the Fund.

# Competitive Bonus Analysis – By Role

	2008 Actual Bonus -- Median							
	OST		Leading Public Funds		Private Sector Firms		50%/50% Blend	
	Actual	% of Salary	Actual	% of Salary	Actual	% of Salary	Actual	% of Salary
	(\$000s)		(\$000s)		(\$000s)		(\$000s)	
Chief Investment Officer	\$56.1	23%	\$83.0	25%	\$387.0	97%	\$235.0	64%
Head of Area (avg. 4 employees)	30.0	16%	51.7	25%	358.2	138%	204.9	89%
Sr. Portfolio Manager (avg. 4 employees)	33.8	24%	56.0	36%	139.9	77%	97.9	59%
Portfolio Manager (avg. 3 employees)	16.6	15%	16.0	13%	61.3	43%	38.7	29%

The table to the right shows median actual incentive levels and incentive levels as a percentage of base salary for each comparator group.

	2009 Median Maximum Bonus			
	OST		Leading Public Funds	
	Maximum	% of Salary	Maximum	% of Salary
	(\$000s)		(\$000s)	
Chief Investment Officer	\$79.7	30%	\$211.0	60%
Head of Area (avg. 4 employees)	60.2	30%	143.8	68%
Sr. Portfolio Manager (avg. 4 employees)	45.5	30%	130.0	77%
Portfolio Manager (avg. 3 employees)	36.6	30%	51.8	40%
Sr. Research Analyst	34.8	30%	62.2	40%

The table to the left shows median maximum incentive levels and maximum incentive levels as a percentage of base salary for large/leading public funds.

## Comparator Group Public Funds

Public Funds Comparator Group	AUM (12/31/2008) (\$billions)
California Public Employees' Retirement System	\$183.3
California State Teachers' Retirement System	128.7
Florida State Board of Administration	126.9
Division of Investment Services, State of Georgia	54.6
Michigan State Retirement Systems	44.5
Minnesota State Board of Investment	41.2
New York State & Local Retirement System	121.2
New York State Teachers' Retirement System	74.5
New Jersey Division of Investments	62.8
North Carolina Retirement System	60.2
Ohio Public Employees' Retirement System	59.3
State Teachers Retirement System of Ohio	52.5
Pennsylvania Public School Employees Retirement System	45.3
Teacher Retirement System of Texas	80.6
Virginia Retirement System	41.8
Washington State Investment Board	67.6
State of Wisconsin Investment Board	67.8
<i>Low Quartile</i>	\$52.5
<b>Median</b>	<b>62.8</b>
<i>High Quartile</i>	80.6
Oregon State Treasury	<b>\$60.3</b>

11 out of the 17 (65%) large/leading public funds cover staff under an incentive pay program. 2 of these funds cover top management only under the plan. (i.e. ED and/or CIO)

## Comparator Group Private Sector Firms

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300 North Capital, LLC	Babson Capital Management LLC	Columbia Management Group, LLC
40/86 Advisors, Inc. (Conseco)	Barclays Global Investors, N.A.	Copper Rock Capital Partners, LLC
Aberdeen Asset Management, Inc.	Baring Asset Management, Inc.	Country Insurance & Financial Services
Acadian Asset Management, LLC	Baron Capital Group & Subsidiaries, Inc.	CUNA Mutual Group
Adams Express Company, The	Batterymarch Financial Management, Inc.	Declaration Management & Research LLC
Advantus Capital Management, Inc.	BB&T Asset Management, Inc.	Delaware Investments
Aegon USA Realty Advisors, Inc.	BBVA Compass	Deutsche Asset Management
Aetna, Inc.	BlackRock Financial Management, Inc.	Diamond Hill Capital Management, Inc.
AEW Capital Management	William Blair & Company, L.L.C.	Dimensional Fund Advisors Inc.
AIG Investments	BNP Paribas Asset Management Inc.	Dreyfus Corporation
Alcatel-Lucent Investment Management Corporation	BNY Mellon Asset Management	Driehaus Capital Management LLC
Alcentra	Boston Company Asset Management, LLC, The	DuPont Capital Management
Fred Alger Management, Inc.	Brandes Investment Partners, L.P.	Dwight Asset Management, LLC
AllianceBernstein L.P.	Brandywine Global Investment Management, LLC	Eaton Vance Management
Allianz of America, Inc.	Bridgeway Capital Management, Inc.	ELCA Board of Pensions
Allianz Life Insurance of North America	Bridgewater Associates, Inc.	Epoch Investment Partners, Inc.
Allianz Global Investors	Brown Advisory Holdings Incorporated	Erie Insurance Group
Allstate Investments, LLC	Brown Brothers Harriman & Co.	Evergreen Inv Mgmt. Co. LLC (Wachovia)
American Century Investments	Capital Group Companies, Inc., The	Fidelity Investments
American Family Insurance	Calamos Investments	FAF Advisors, Inc. (US Bancorp)
Analytic Investments, LLC	California Institute of Technology	Federated Investors, Inc.
Aronson+Johnson+Ortiz, LP	Capital One	Fifth Third Asset Management
Artio Global Management LLC	Capital Growth Management	First Quadrant Corporation
Ashfield Capital Partners, LLC	Casey Family Programs	Fischer, Francis Trees & Watts, Inc.
Assurant, Inc.	Charles Stewart Mott Foundation	The Ford Foundation
Aviva Investors	Christian Brothers Investment Services, Inc.	Fortis Investment Management USA, Inc.
AXA Equitable	Church Pension Group Services Corporation	Fort Washington Investment Advisors
AXA Investment Managers	Cigna Investment Management, LLC	Franklin Templeton Investments
AXA Rosenberg Investment Management Ltd.	ClearBridge Advisors	Frost National Bank

## Comparator Group Private Sector Firms (continued)

GE Asset Management	Loews Corporation / CNA Financial Corporation	Northrop Grumman Corporation
Genworth Financial	Loomis, Sayles & Company, L.P.	Numeric Investors LLC
Goldman Sachs Asset Management	Lord, Abnett & Co. LLC	Nuveen Investments
Great-West Life Assurance Company	Mairs and Power, Inc.	NWQ Investment Management Company, LLC
Hansberger Global Investors, Inc.	Man Group plc	OneAmerica Financial Partners, Inc.
Harris Investment Management Inc.	Matthews International Capital Management LLC	Oppenheimer Capital LLC
Hartford Investment Management Company	MEAG New York Corporation (Munich RE)	Oppenheimer Funds, Inc.
Harvard Management Company, Inc.	Mellon Capital Management	Pacific Life Insurance Company
Heartland Advisors, Inc.	Mercer Global Investments	David and Lucile Packard Foundation, The
Heitman	MetLife Investments	PanAgora Asset Management, Inc.
Henderson Global Investors (North America) Inc.	MFC Global Investment Management	PartnerReinsurance Capital Markets Corp.
William and Flora Hewlett Foundation, The	MFS Investment Management	Pension Boards - United Church of Christ
Honeywell International Inc.	Mitsubishi UFJ Trust & Banking Corporation (USA)	The Phoenix Companies, Inc.
Howard Hughes Medical Institute	Mizuho Alternative Investments	PIMCO Advisors, L.P.
HSBC Global Asset Management/Halbis Capital Mgmt	Modern Woodmen of America	Pioneer Investment Management, USA
Invesco Plc	Morgan Stanley Investment Management	Pitcairn Financial Group
IBM Retirement Funds	Mutual of Omaha	PNC Financial Services Group, Inc.
ICMA Retirement Corporation	National Railroad Retirement Investment Trust	PPM America, Inc.
ING Investment Management	National Rural Electric Cooperative Association	T. Rowe Price Associates, Inc.
INTECH Investment Management LLC	Nationwide	Principal Global Investors
International Paper	Neuberger Berman LLC	ProFund Advisors LLC / ProShare Advisors LLC
Investment Counselors of Maryland, LLC	New York Life Investment Management LLC	Progressive Corporation
Jacobs Levy Equity Management, Inc.	NFJ Investment Group L.P.	Promark Global Advisors (formerly GM Asset Mgmt)
Janus Capital Group	Nicholas Applegate Capital Management	Prudential Financial
Jennison Associates, LLC	Nikko Asset Management Americas, Inc.	Putnam Investments
JPMorgan Asset Management	Nomura Asset Management U.S.A. Inc.	Pyramis Global Advisors
Kayne Anderson Rudnick Investment Mgmt, LLC	Nomura Corporate Research & Asset Management	Pzena Investment Management, LLC
Liberty Mutual Group	Norges Bank Investment Management	Qwest Asset Management Company
Legal & General Investment Mgmt (America)	Northern Trust Global Investments	RCM Capital Management LLC
Lockheed Martin Investment Mgmt Company	Northwestern Mutual Life Insurance Company	Reich & Tang Asset Management

## Comparator Group Private Sector Firms (continued)

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RidgeWorth Capital Management Inc. (SunTrust)	Thornburg Investment Management	Williams College
RiverSource Investment Advisors, LLC (Ameriprise)	Thrivent Financial for Lutherans	Wilmington Trust Company
Rothschild Asset Management	TIAA-CREF	Winslow Capital Management Inc.
RS Investment Management Co. LLC	Tradewinds Global Investors, LLC	WisdomTree Investments, Inc.
Russell Investments	Travelers Companies, Inc., The	Xerox Corporation
Rydex Investments	Trilogy Global Advisors, LLC	Yale University Investments
SCM Advisors LLC	Trust Company of the West	YMCA Retirement Fund
Sands Capital Management, LLC	Unum	
Santa Barbara Asset Management, LLC	UBS Wealth Management	
Saybrook Capital, LLC	UBS Global Asset Management	
Schroder Investment Management N. A. Inc.	UMB Financial Corporation	
Charles Schwab Investment Management, Inc.	UMWA Health & Retirement Funds	
Security Benefit Corporation	University of California, Office of the Treasurer	
Selective Insurance Company of America	University of Virginia Investment Mgmt Company	
Sentinel Investments (National Life of Vermont)	Urdang Capital Management/Urdang Securities Mgmt	
Sentry Insurance	USAA Investment Management Co.	
Sit Investment Associates, Inc.	USS & Carnegie Pension Fund	
StanCorp Financial Group, Inc.	UTIMCO (University of TX Investment Mgmt Company)	
Standard Life Investments (USA) Limited	Vanguard Group, Inc., The	
Standish Mellon Asset Management	Vaughan Nelson Investment Management, L.P.	
State Farm Mutual Insurance Company	Verizon Investment Management Corp.	
State Street Global Advisors	Victory Capital Management (KeyCorp)	
Stanford Management Company	Virtus Investment Partners, Inc.	
Sumitomo Trust & Banking Co., Ltd., The	Voyageur Asset Management Inc.	
Summit Investment Partners LLC	Waddell & Reed Investment Management Co.	
Sun Life Financial	Wellington Management Company, LLP	
Swiss Re Asset Management	Wentworth, Hauser & Violich Investment Counsel	
Symphony Asset Management LLC	Western Asset Management Company	
Thompson, Siegel & Walmsley, LLC	Westpeak Global Advisors, LP	
Thomson Horstmann & Bryant, Inc.	Westwood Holdings Group, Inc.	