



Investment Program

RETIREMENT PLANS' TOTAL EXPENSE RATIO

Office of Retirement Services

Investment Policy Statement on Investment Fees

“The Plan will seek alignment of interests when negotiating fees while pursuing the best net of fees performance results. Investment costs shall be monitored, controlled, and whenever possible negotiated to ensure cost effectiveness. The Board shall give consideration to the impact of administrative expenses, external management fees and performance fees when establishing the asset mix policy of the Plan. The Board will be provided reports on investment costs of the Plan at least annually.”

Understanding Total Expense Ratio

- Complex topic
- Declining return expectations → Increased focus
 - $\text{Net returns} = \text{Gross returns} - \text{Total expense ratio}$
- A function of asset allocation and asset class structuring
 - Higher complexity = higher fees
- ORS comprehensive annual fee reporting started 2015
 - Includes embedded or unobserved fees/expenses (e.g., fees not reported on statements)
 - Few public plans have comprehensive fee reporting (CalPERS, CalSTRS, LACERA, OCERS)
 - No public-sector standard methodology for comprehensive fee reporting
- Complies with California Government Code §7514.7

Understanding Total Expense Ratio

Net returns = Gross returns – Total expense ratio

Fee type	Description	Examples
Management fees	Fees paid to investment management firms	
Incentive fees	Performance-based fees paid to investment management firms	
Operating expenses	Costs of administering individual investment vehicles	Audit, tax, legal, custodian
Other expenses	Costs incurred at the plan level	Staff salaries and benefits, consultants, third party vendors

Calendar Year 2017

Plan	Management Fees	Incentive Fees	Operating Expenses	Mgmt, Incent, and Op Exp	Average Balance	Fee Ratio
Federated Pension	16.2	8.0	2.4	26.6	2,102	1.26%
Police & Fire Pension	28.8	14.6	4.6	48.1	3,425	1.40%
Federated Health Care	0.7	0.0	0.0	0.8	228	0.34%
Police & Fire Health Care	0.3	-	0.0	0.3	112	0.26%
All 4 ORS Plans	\$46.0	\$22.6	\$7.0	\$75.7	\$5,866	1.29%

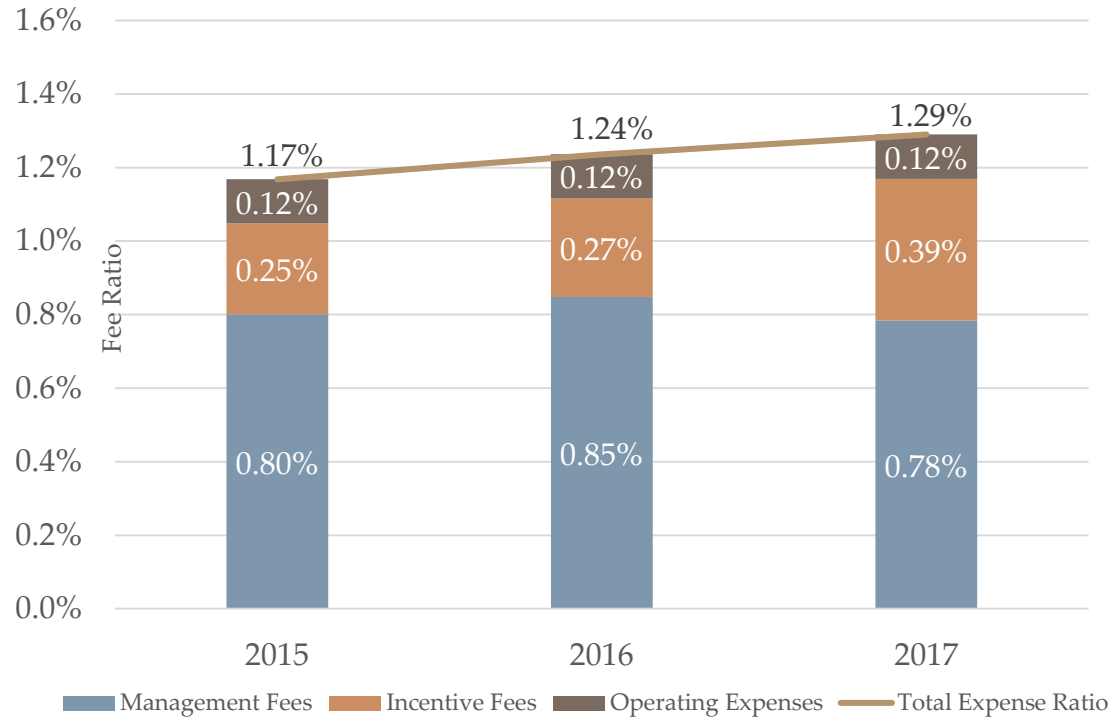
*Source: ORS 2017 Fee Report
Values shown are in \$ millions*

Plan	Investment Staff Salary and Benefits	Consultants	Custodian	Other Third Party Vendors	Total Other Costs	Fee Ratio
All 4 ORS Plans	\$1.4	\$1.5	\$0.8	\$1.0	\$4.7	0.08%

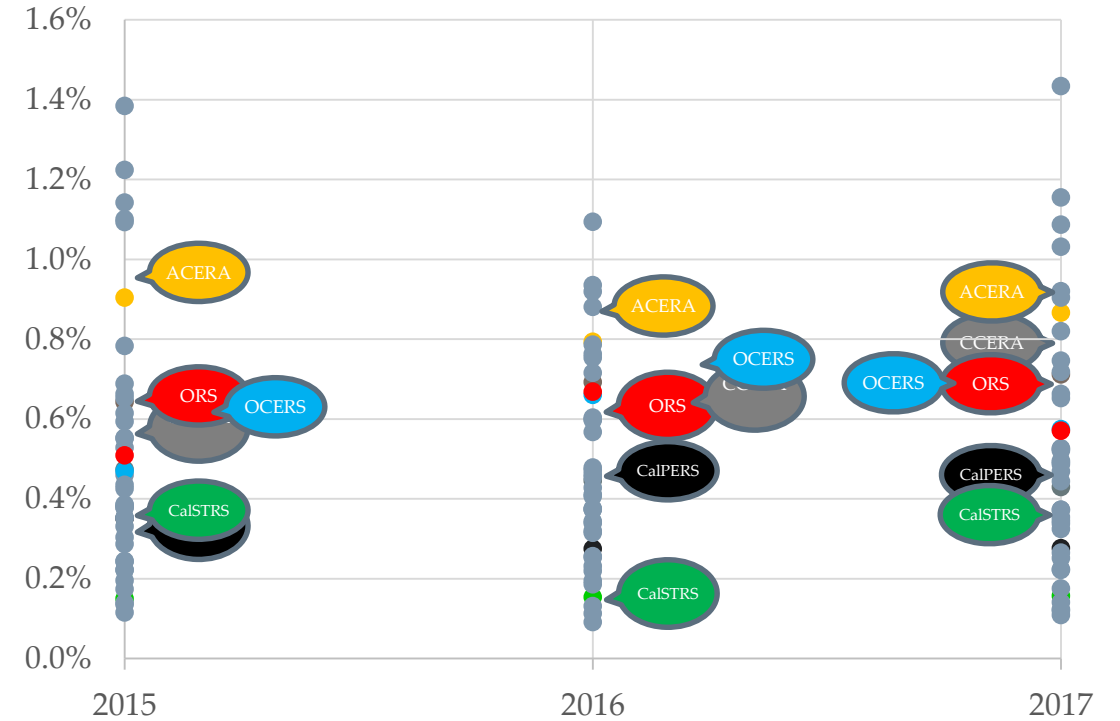
*Source: ORS 2017 Fee Report
Values shown are in \$ millions*

Calendar 2017 Return	11.6%
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Total Expense Ratio (Comprehensive)



Peer Comparison (CAFR data)



-2.0% (2015)	6.4% (2016)	11.6% (2017)	Plan Return	-1.0% (2015)	-0.7% (2016)	7.9% (2017)
ORS Annual Fee Reports			Source	Public Plans Database (from CAFRs)		
Calendar year basis			Time Periods	Fiscal year basis		
All 4 ORS plans aggregated (Federated and Police & Fire pension and health care trusts)			Data points	43 U.S. Public Plans \$3-10 billion, CA Public Plans All 4 ORS plans aggregated		

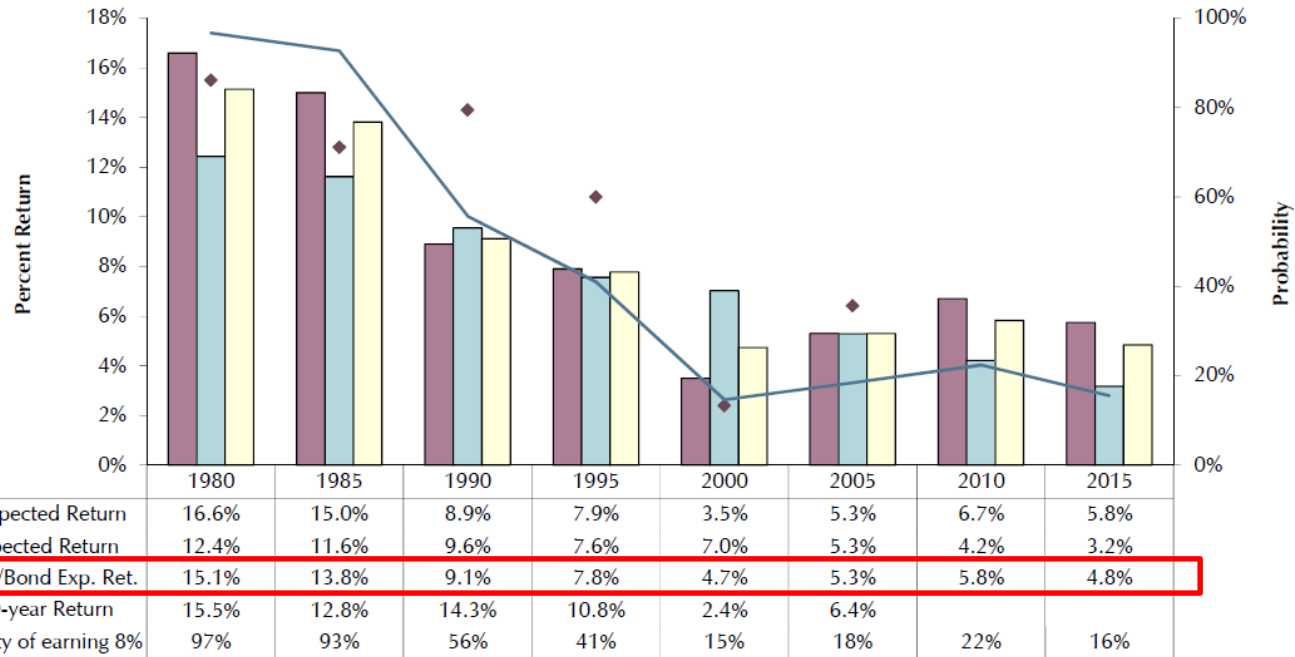
Appendix

Glossary of Terms

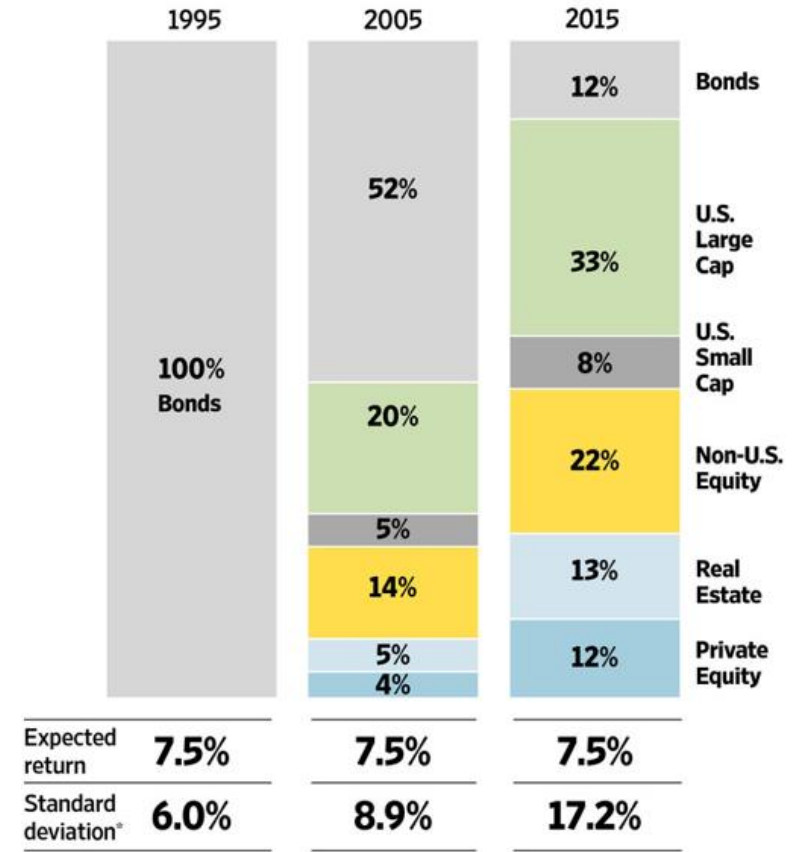
- Active strategies: Funds that attempt to outperform an index
- Asset allocation: Distribution of assets across a number of asset classes that each exhibit a unique combination of risk and expected return. Asset allocation is the most important determinant of long-term plan performance
- Hedged strategies: Investments that generally seek to achieve a return regardless of market direction
- Gross returns: Returns before the deduction of expenses
- Incentive fees: Performance-based fees paid to individual investment management firms. Incentive fees are a form of shared economics. Also known as “carried interest”
- Management fees: Asset-based fees paid to individual investment management firms
- Net returns: Returns after the deduction of management fees, incentive fees, and operating expenses
- Operating expenses: Costs of administering individual investment vehicles (not the retirement plans)
- Other expenses: Costs incurred at the plan level (staff, consultants, third party vendors, etc.)
- Passive strategies: Investments that intend to match the return of an index
- Private strategies: Investments in illiquid assets such as privately held companies or real estate
- Total expense ratio: Total expenses (sum of management fees, incentive fees, and operating expenses) divided by average plan assets

Asset Allocation Considerations

The Secular Decline in Investment Returns¹



Source: Meketa Investment Group



*Likely amount by which returns could vary
Source: Callan Associates

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Asset Allocation Considerations

	Federated (%)	P&F (%)	Global 60/40 (%)
Expected Return¹	7.3	7.1	6.1
Standard Deviation¹	12.3	11.8	12.4
Probability of Achieving 6.875%:			
1 year	51.3	50.5	47.5
3 years	52.2	50.9	45.6
5 years	52.9	51.2	44.3
10 years	54.1	51.6	42.0
20 years	55.7	52.3	38.7
"Worst Case" Returns:²			
1 year	-19.9	-19.2	-21.3
3 years	-9.4	-9.0	-10.7
5 years	-5.9	-5.6	-7.2
10 years	-2.2	-2.1	-3.5
20 years	0.5	0.5	-0.8
<i>Expected Return if Equities Decline 25%</i>	<i>-12.2</i>	<i>-11.9</i>	<i>-15.5</i>
<i>Expected Return if Equities Decline 40%</i>	<i>-22.1</i>	<i>-21.8</i>	<i>-27.8</i>

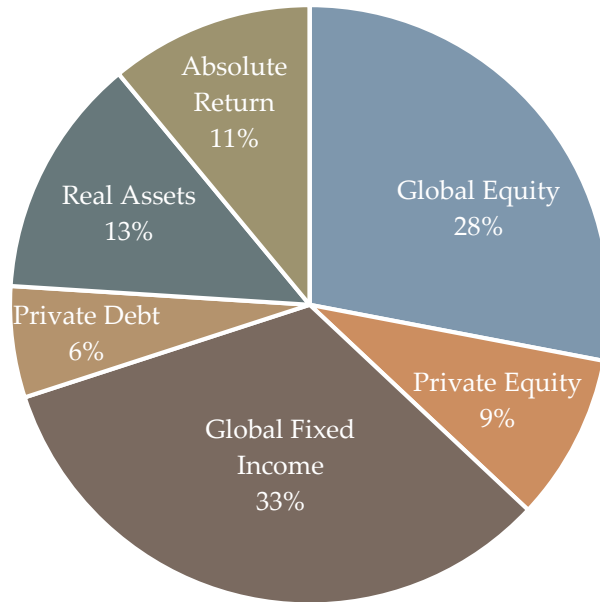
¹ Expected return and standard deviation are based upon Meketa Investment Group's 2018 Annual Asset Study and reflect our 20-year expectations. Returns for periods longer than one year are annualized.

² "Worst Case" return projections encompass 99% of all possible outcomes

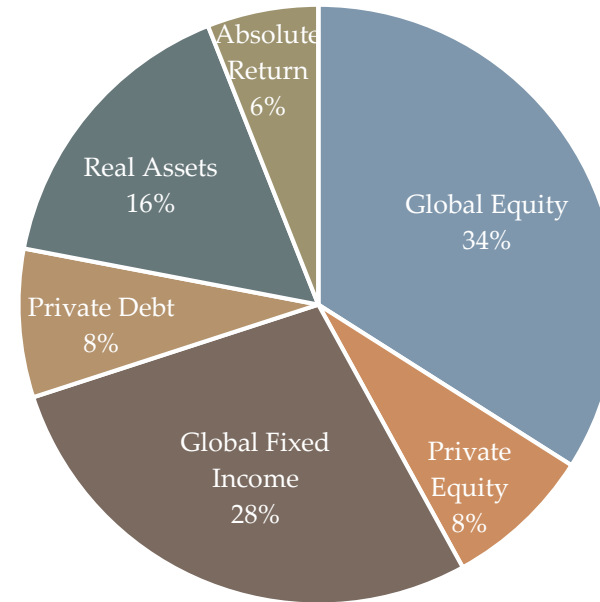
Asset Allocation Targets

As of June 30, 2018

Federated Pension



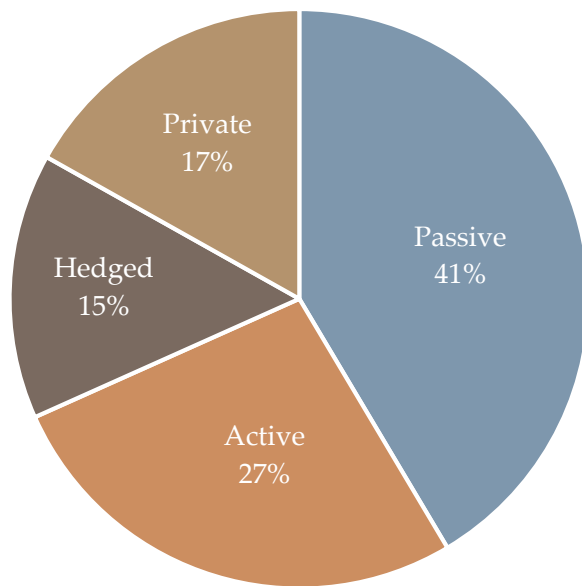
Police & Fire Pension



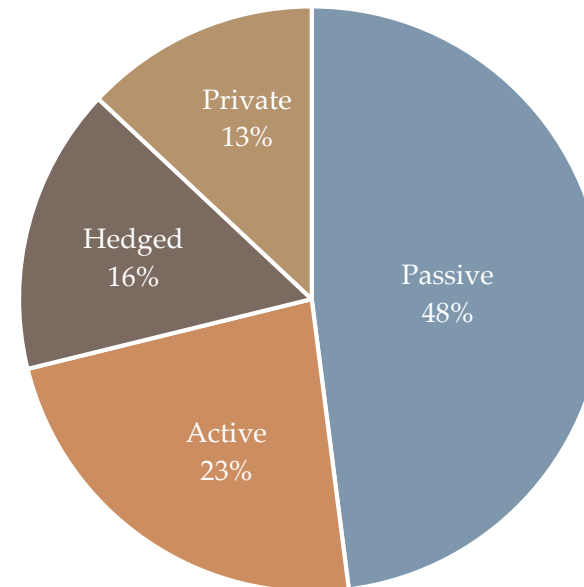
Allocation to investment fund types

As of June 30, 2018

Federated Pension



Police & Fire Pension



Plan Return History

For period ending June 30, 2018

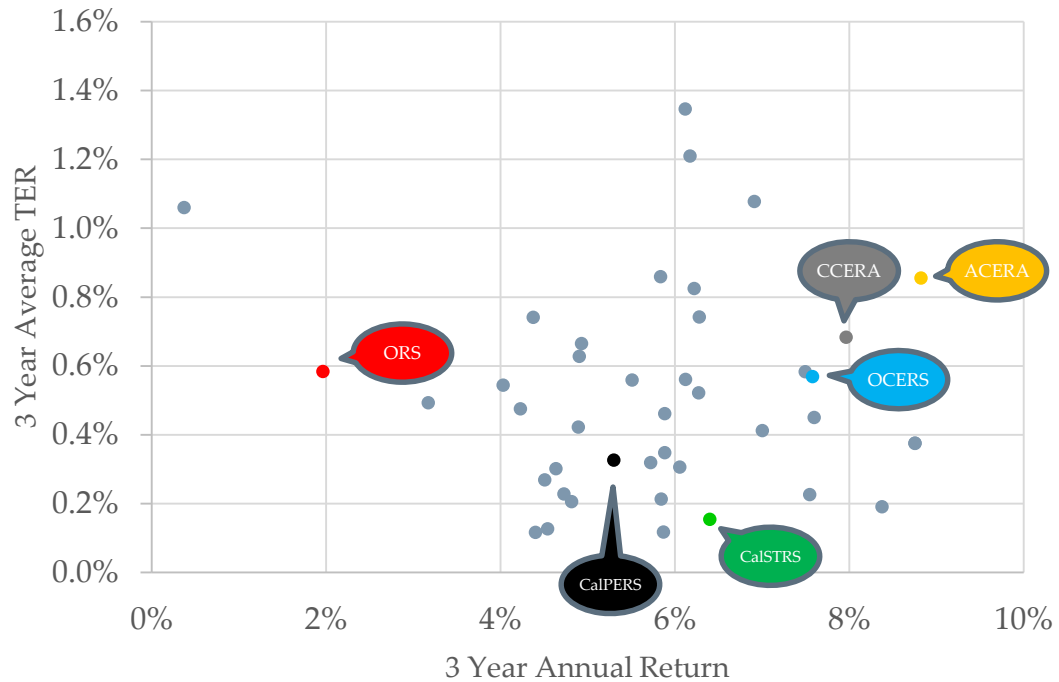
Plan Name	FY 2017-18			FY 2016-17			FY 2015-16		
	Plan	Policy	Excess	Plan	Policy	Excess	Plan	Policy	Excess
Federated Pension	5.9%	7.5%	-1.6%	7.5%	8.1%	-0.6%	-0.7%	1.3%	-2.0%
Police & Fire Pension	6.9%	7.6%	-0.7%	9.7%	9.5%	0.2%	-0.6%	1.0%	-1.6%
Federated Health Care	4.9%	7.9%	-3.0%	8.7%	9.1%	-0.4%	-2.7%	0.7%	-3.4%
Police & Fire Health Care	3.6%	7.4%	-3.8%	7.0%	9.5%	-2.5%	0.3%	1.3%	-1.0%

Source: Meketa Investment Group

Returns/Expense Ratios

(Comprehensive)

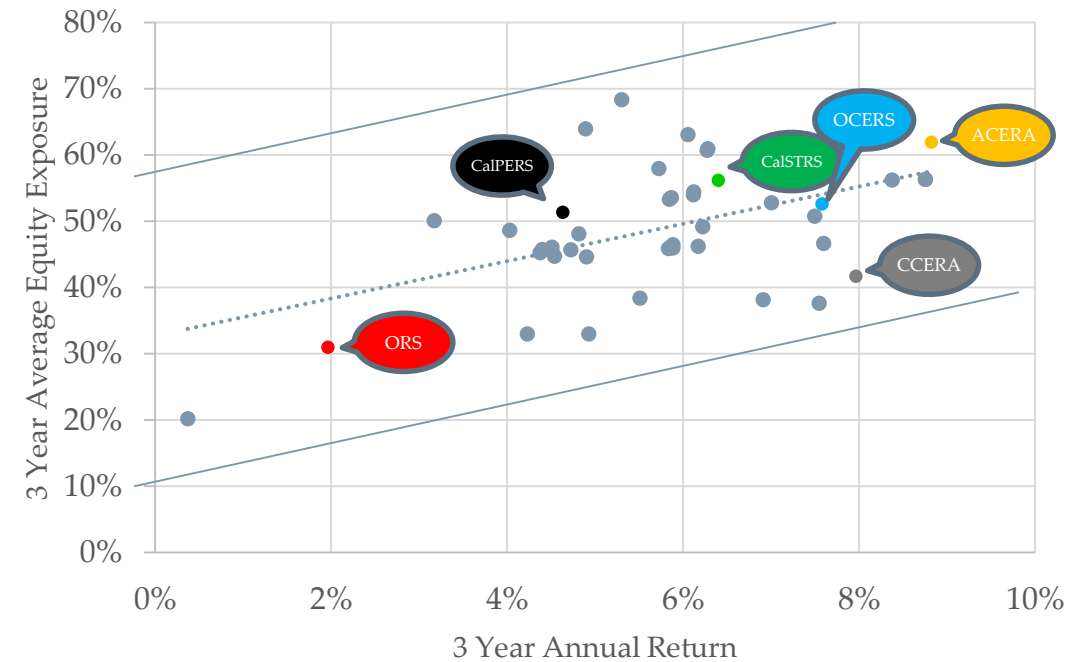
Higher returns not correlated to higher expenses



Returns/Public Equity Exposure

(CAFR data)

Higher returns correlated to higher public equity exposure



Source	Public Plans Database (from CAFRs)
Time Periods	Fiscal year basis, ending June 30, 2017
Data points	43 diversified U.S. Public Plans \$3-10 billion, CA Public Plans All 4 ORS plans aggregated