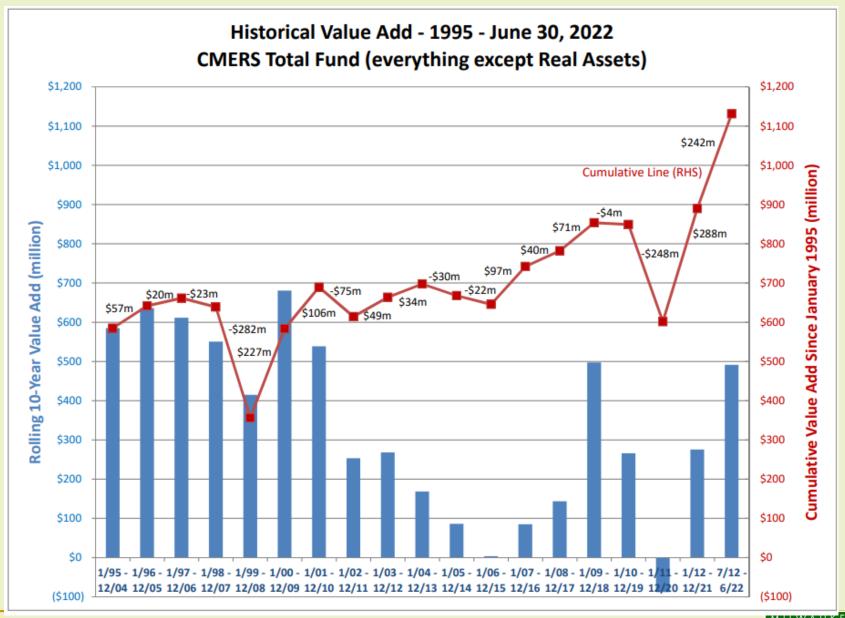
# Employes' Retirement System September 14, 2022





### Historical Value Add - 1995 - June 30, 2022 CMERS Total Fund (everything except Real Assets)

#### MERS' decision to hire some active managers versus hiring only passive managers

		Time	Do	llar Weigh	tes (Net of fees) Active					
			MERS Asset	Annualized Index		Value of a Investe		nagement npact <sup>(c)</sup>		
MERS Asset Class	Index	Gross	Net of fees	Net of fees <sup>(a)</sup>		MERS et Class		ndex	\$1	Millions
Domestic Equity	Russell 3000	10.23%	9.97%	9.94%	\$	13.64	\$	13.56	\$	115.2
International Equity <sup>(b)</sup>	MSCI EAFE	6.53%	6.11%	4.08%	\$	4.70	\$	2.84	\$	394.3
Global Equity <sup>(b)</sup>	MSCI World / ACWI Bloomberg US	8.77%	8.40%	7.97%	\$	2.69	\$	2.56	\$	30.4
Fixed Income	Aggregate	5.96%	5.85%	4.84%	\$	4.77	\$	3.66	\$	256.4
Private Equity <sup>(b)(d)</sup>	Russell 3000 Bloomberg US	N/A	15.93%	16.30%	\$	5.48	\$	5.68	\$	209.8
Absolute Return <sup>(b)</sup>	Aggregate	N/A	5.41%	1.46%	\$	1.52	\$	1.12	\$	125.2
	Estimate of Fund's benefit from its decision to hire active managers over past 27.5 years \$ 1,131.3									

<sup>(</sup>a) Manager Fees for indices are assumed to be:

(b) Inception Dates if less than 27.5 years:

Russell 3000 Index - 2 basis points

MSCI EAFE Index - 5 basis points

MSCI World / ACWI Index - 5 basis points

Bloomberg US Aggregate Index - 2 basis points

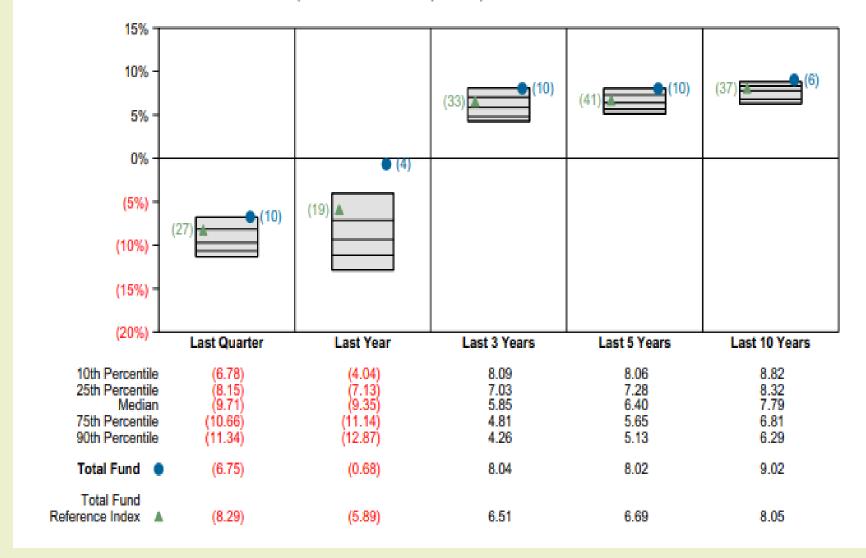
International Equity Composite is May 1, 1996 Global Equity Composite is April 1, 2010 Private Equity Composite is July 1, 2010 Absolute Return Composite is July 1, 2014



<sup>(</sup>c) Active Management Impact \$Millions Estimate is based on monthly ERS asset class balances.

<sup>(</sup>d) Private Equity data in analysis reflects what was shown on December 31, 2021 Value Add analysis. The Private Equity data would be significantly higher as of June 30, 2022 given the lagged nature of Private Equity reporting compared to the Russell 3000 benchmark Private Equity is being compared to.

#### Performance vs Callan Public Fund Sponsor Database (Gross)





#### Deputy Chief Investment Officer Compensation

Average Salary by Fund Assets

Roles and Other Responsibilities



County

Local

Educational

tate

ctive and Retirees II values

> vestment Staff Positions II values

vstems Administered II values

taff Positions II values

house Asset Management

Multiple Roles

Position Type

Years in position

# Union

## Position Percent of Responses 60% 40% 20%

Ä

#### Median Salary by Fund Assets

		N	R	\$1-5	billion	\$5-\$10	) billion	\$10-\$5	0 billion		\$100 lion		e than billion		ler \$1 lion			N	R	\$1-5	billion	\$5-\$10	) billion	\$10-\$5	0 billion		-\$100 llion		e than billion		er \$1 lion	State All
	300K											301,268					300K											301,268				All
								040.000									250K															Othe All
	250K							242,203									250K							226,450								Publi
	200K					195,756											200K															All
Vages	150K			155,759					138,793							Wages	150K			148,538		155,000			138,793							Activ All v
	13010								130,763																				400 500			
	100K												103,538	93,683			100K												103,538	90,661		Inves All v
	50K																50K															7
																																Syste
	0K	e e	ड्	e e	SI	e e	St	9	द	e e	St	o O	स	e e	St		0K	e	St	e e	St	e e	St	e e	S	9	S	9	स	e e	St	All v
		e Base	Bonus	e Bas	Bonus	e Bas	Bonus	e Base	Bonus	e Base	Bonus	e Bas	Bonus	e Bas	Bonus			n Base	Bonus	n Bas	Bont	n Base	Bont	n Bas	Bonus	n Bas	Bont	n Base	Bonus	n Bas	Bont	
		Average	Average	Average Base	Average	Average Base	Average	Average	Average	Average	Average	Average Base	Average	Dep CIO Average Base	Average			Median	Median	Dep CIO Median Base	Median Bonus	Median	Median Bonus	CIO Median Base	Median	Dep CIO Median Base	Dep CIO Median Bonus	Median	Median	Dep CIO Median Base	CIO Median Bonus	Staff All v
		S	CIO A	Dep CIO	CIO A	CO	CIOA	Dep CIO	CIO A	CIO	SIOA	CO	CIO A	CIO	CIO A			OIO d	Dep CIO N	O CI O	CO	CIO	Dep CIO N		00	CIO	CIO	D CIO	S	O CIO	CIO	
		Dep	Dep (	Dep	Dep (	Dep	Dep (	Dep	Dep (	Dep	Dep CIO	Dep	Dep (	Dep	Dep (			Dep	Dep	Del	Dep	Dep	Dep	Dep	Dep	Del	Dep	Dep	Dep	De	Dep	All

#### Average Salary by Fund Assets and Tenure

	Dep CIO: Years in position (bin)	NR	\$1-5 billion	\$5-\$10 billion	\$10-\$50 billion	\$50-\$100 billion	More than \$100 billion	Under \$1 bil
3g	Null			155,000	241,009		326,436	
Averag	0		161,559	216,134	242,423		276,100	
	5				261,893			
OIO C	10		144,158		221,899			
Dep	15							
3g	Null							
Averag	0				138,793		103,538	
4	5							



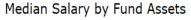
#### Chief Investment Officer Compensation

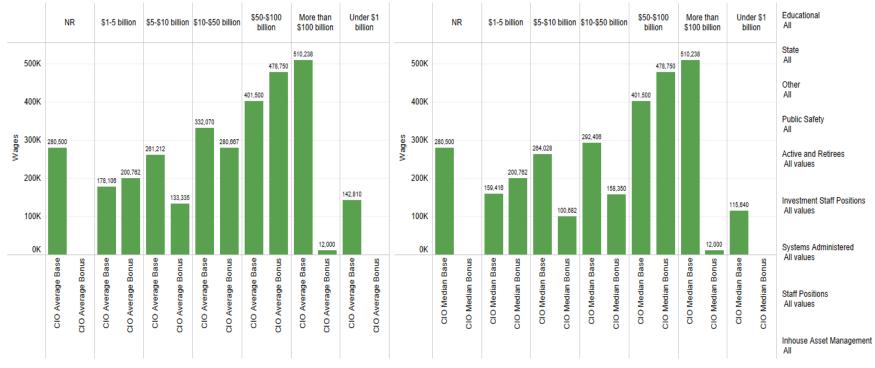
Average Salary by Fund Assets

Roles and Other Responsibilities



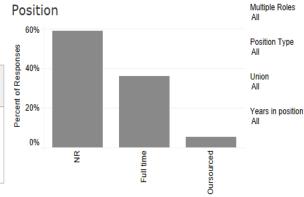
County All





#### Average Salary by Fund Assets and Tenure

CIO: Yea position (		\$1-5 billion	\$5-\$10 billion	\$10-\$50 billion	\$50-\$100 billion	More than \$100 Und billion
<sub>p</sub> Null			102,559	265,000		510,238
Null 0	280,500	137,454	280,807	328,060	383,000	
5		187,254	267,585	350,000		
5 10		223,667	341,960	257,936		
15		232,027		442,709	420,000	
23				295,000		
Null						12,000
Null 0			23,497	215,000	478,750	
<u> </u>			400 400	250,000		





#### Local Chief Financial Officer Compensation Roles and Other Responsibilities County Average Salary by Fund Assets Median Salary by Fund Assets \$50-\$100 \$50-\$100 More than Under \$1 More than Under \$1 Educational NR \$5-\$10 billion \$10-\$50 billion NR \$1-5 billion \$5-\$10 billion \$10-\$50 billion \$100 billion billion \$100 billion billion billion billion All 497,209 222,716 State 500K All 200K Other 184,830 400K 172,784 152,443 Public Safety 150K 142,558 137,717 135,000 Wages Wages Wages 115,500 Active and Retirees All values 222,716 100K 200K 167,268 Investment Staff Positions 137,888 140,011 134,369 All values 115,500 50K 100K Systems Administered 8,915 All values 7,500 8,915 6,574 5,440 0K 0K CFO Average Bonus CFO Average Base CFO Average Bonus CFO Median Base CFO Median Bonus CFO Median Base CFO Median Bonus **CFO Median Base** CFO Median Bonus CFO Median Base CFO Median Bonus Staff Positions All values Inhouse Asset Management Average Salary by Fund Assets and Tenure Position Multiple Roles CFO: Years More than \$100 Under \$1 billion Position Type NR \$10-\$50 billion \$50-\$100 billion of Responses in position \$1-5 billion \$5-\$10 billion billion (bin) 15 Null 135,000 169.977 Union Average Base 0 131,980 131,209 147,685 222,716 1.700.000 13 5 172,784 154,681 177,174 223,046 16

143,625

132,388

154,633

140,000

15

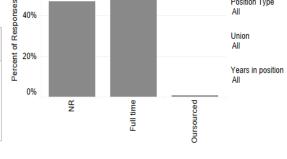
20

30 Null 157,277

235,604

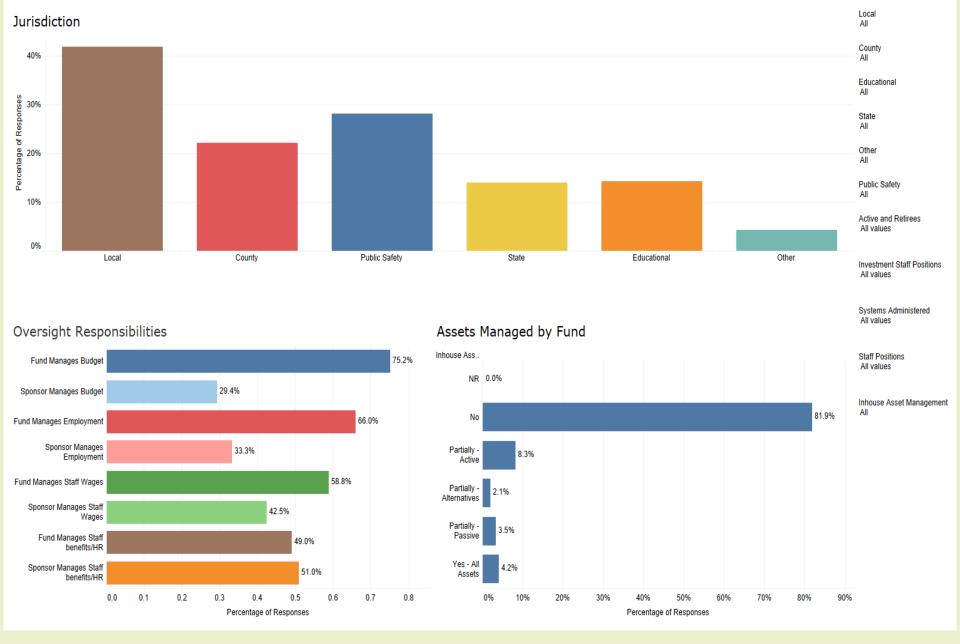
222,950

232,296



11







#### **Summary Counts**

Count of Active and Retired Individuals	9,270,043
Count of Staff Positions	11,617
Count of Systems Administered	1,714
Count of Investment Staff Positions	1,074

#### Summary Means

Avg. Count of Active and Retired Individuals	62,63
Avg. Count of Staff Positions	7
Avg. Count of Systems Administered	1:
Avg. Count of Investment Staff Positions	

Local All

County

Educational All

State All

Other All

Public Safety

Active and Retirees All values

Investment Staff Positions All values

Systems Administered All values

Staff Positions All values

Inhouse Asset Management All



The May 2012 issue of The NAPPA Report, a publication of the National Association of Public Pension Attorneys, cites a 2011 study done by researchers at the University of Toronto's Rotman School of Management which found that the ability of pension funds to "attract, retain and incent high performance talent within their respective organizations" is associated with higher investment returns.



"Unless ERS dramatically improves the cash compensation of its investment staff, it should be prepared to deal with recurring staff vacancies. ERS should not use any investment strategy whose success depends on uninterrupted support from a high quality investment staff, unless it also has the ability to exit the strategy quickly."

L.R. Wechsler Organizational Review of ERS



The City, as plan sponsor and under its indemnification agreement with the ERS, would be implicated in any such litigation. The City is not only exposed to potential increased employer contributions needed to make up any investment shortfall if the Pension Board were forced to adopt a suboptimal investment strategy; it has also agreed to indemnify members of the Pension Board and employees of ERS against liabilities; costs and expenses arising from a breach of or failure to perform their legal (i.e., fiduciary) duties. - Excerpt from 6/21/2012 opinion of outside legal counsel

