

Improving ERS Investment Performance, I Hope You Do Something

By Stuart Greenfield, Ph.D.

In 1977 I was hired by Mr. Bullock to work in Revenue Estimating as Chief Economist and Revenue Estimator. One thing that was instilled in everyone who worked for Mr. Bullock was that what you do should be to benefit the people of Texas. This philosophy underlaid the work I did throughout my career at the state.

It appears from their performance, documented below that neither the ERS Board nor the investment staff had or have this simple philosophy. This philosophy, your actions should be to benefit the people of Texas, does not seem to underlie the investment activities associated with the ERS trust fund.

Two years ago, Scott Burns [analyzed](#) the performance of state and local pension funds. Using [data](#) from the Comptroller's Office, Mr. Burns compared the performance of various state and local pension funds to his "couch potato" portfolio that is replicated by Vanguard's [VBIAX](#) fund.

Mr. Burns' analysis showed that none of the public pension funds performed as well over ten years (FY07-FY17) as the Vanguard fund. Over the ten-years, the differential ranged from **-0.96** percent per year for the Teacher's Retirement System to **-2.23** percent for the Texas County & District Retirement System.

Table 1: The ERS and TRS Pension vs. Vanguard Balanced Index Admiral Shares

Period	ERS	TRS	Vanguard Balanced Admiral Shares
1	3.04%	6.40%	8.24%
3	8.19	9.5	8.04
5	6.03	6.7	7.25
10	8.20	9.9	9.94

Source: [ERS](#), page 102; [TRS](#), page 110; [Vanguard](#)

Had ERS invested the corpus and contributions made by both state employees and by the state over the last ten years in VBIAX, the overall return on assets would have been 18.8 percent greater. This increase would have increased the actuarial value of ERS assets by 3.8 billion to \$31.9 billion. This increase in assets would also reduce the Unfunded Accrued Liability (UAL) from \$11.7 billion to \$7.9 billion, a 32.5 percent decrease. The funded ratio would have increased from 70.2 percent to 82.8 percent. While having a positive impact on the system, this change would not be enough to allow ERS to either provide a 13th check or a cost-of-living adjustment (COLA).

Fortunately, there would have been a way to eliminate the unfunded liability, and it was right in front of the ERS investment advisors and staff eyes. The way is presented on page 103 of the ERS, [2019 Comprehensive Annual Financial Report](#) (2019 CAFR), which is shown below.

Table 2: Time-Weighted Rates of Return, ERS

	Time-Weighted Rates of Return (Note A)							
	2015	2016	2017	2018	2019	3 Year (2017-2019)	5 Year (2015-2019)	10 Year (2010-2019)
	%	%	%	%	%	%	%	%
Fixed Income								
ERS	1.29	5.14	3.49	1.19	6.57	3.73	3.52	3.95
Index	1.13	6.50	1.34	(0.93)	10.08	3.39	3.55	4.31
Domestic Equities								
ERS	1.55	8.48	15.81	20.89	(0.01)	11.87	9.05	13.04
Index	0.49	12.54	15.87	20.06	1.72	12.27	9.86	13.42
International Equities								
ERS	(9.86)	1.44	19.38	3.72	(2.96)	6.31	1.90	5.27
Index	(12.35)	2.92	18.88	3.18	(3.27)	5.87	1.37	4.71
Alternative Investments								
ERS	7.89	6.76	11.26	12.50	6.47	10.03	8.94	11.50
Index	NA	NA	NA	NA	NA	NA	NA	NA
Cash Equivalents								
ERS	2.71	0.76	1.91	2.72	2.16	2.27	1.85	0.77
Index	0.03	0.23	0.62	1.52	2.36	1.50	0.95	0.52
ERS Overall								
ERS	0.49	5.32	12.15	9.58	3.04	8.19	6.03	8.20
Index	(1.03)	7.23	11.08	7.94	3.06	7.31	5.57	7.89
Change in CPI	0.21	0.87	1.74	3.01	1.81	2.19	1.53	1.78

Source: ERS, [2019 CAFR](#), pg 102

Before discussing the solution, one needs to have an idea of the time a state employee would be expected to receive an annuity from the state. If we assume that someone starts working at the state at age 25 and works 30 years, retiring at age 55, how long should ERS expect to provide a monthly check? According to the Social Security Administration's [Actuarial Life Table](#), a male retiring at age 55 would be expected to live to 80.5 years. A female retiring at the same age would live another 29 years. So the investment horizon for ERS should reflect the life expectancy of a thirty-year retiree, which would be between 25 and 30 years.

Given this time horizon, ERS should be focusing its investment on which would provide the highest risk-adjusted long-term return. As shown in the table above, this would be domestic equities. If ERS followed their domestic equity "strategy" or just invested in the **Index** ([S&P 1500/S&P 1500 Blend](#)) used to evaluate the ERS domestic equity portfolio, ERS's overall rate of return would have increased substantially. Had ERS invested all funds in their domestic equities index, the ten-year return on investment would have improved by 4.84 percent per year compared to the 10-year ERS Overall return of 8.20 percent (13.04 percent – 8.20 percent = 4.84 percent). Had they just purchased the Domestic Equities Index, there would have been a 5.22 percent per year improvement.

A 4.84 percent per year increase in the rate of return for ten years would have increased the fund's actuarial asset value by 60.4 percent. This increase (\$17.0 billion) would have resulted in the actuarial asset value rising to 45.0 billion.

The investment fees associated with purchasing an index fund would be markedly less than the \$176.1 million (66 basis points) ERS paid in 2019. The fee for the Vanguard [VBIAX](#) is seven basis points. Reducing investment expenses by 59 bp/year for ten years would increase the fund's asset value by \$1.7 billion (6.0 percent).

Increasing returns and reducing investment fees would result in an increase in 66.4 percent in the actuarial value of assets from \$28.1 billion in 2019 to \$46.7 billion. As you'll note from page 117 of the ERS [CAFR](#), \$18.6 billion in additional Actuarial Value Assets would result in your Funded Ratio increasing from 70.5 percent to 114.8 percent.

[Oy Vey](#), what is required for you to realize that over your investment horizon buying the market and eliminating a \$100 million-plus in investment fees per year is the appropriate strategy. Look at the recent Scott Burns [article](#) evaluating TRS's performance. As shown in Table 1, TRS's performance in FY19 was twice the ERS performance. An [article](#) in Monday's Institutional Investor indicated that private equity had not been a sterling performer.

While I am not an actuary, I would hope that this Committee has their staff and that the ERS Board have the ERS investment staff, its actuary, and [Investment Advisory Committee](#) review my analysis. Assuming my math is correct, I would hope this would motivate the Legislature modify [Sec 815.3016](#) so the ERS board would have to reverse its policy of placing more dollars in alternative investments and allocate the funds into a market index fund.

Another alternative might be considering outsourcing investments to the Nevada PERS. As you'll note from the table below, the Nevada PERS over the past five and ten year periods has done 150 bp better than ERS. One hundred-fifty bp over ten years would have resulted in a cumulative increase of 16.1 percent, not too shabby.

Table 3: Rates of Return, Nevada PERS, through June 2020

Asset Class	Sub-Asset Class	Market Value (Millions)	Target Allocation	Actual Allocation	FYTD Return	One Year	3 Years	5 Years	10 Years	Since Inception
U.S. Stocks	S&P 500 Index	\$ 19,569	42.0%	42.0%	7.4%	7.4%	10.7%	10.7%	14.0%	10.2%
	Total U.S. Stocks	\$ 19,539	42.0%	42.0%	7.4%	7.4%	10.7%	10.7%	14.1%	11.1%
	Market Return				7.5%	7.5%	10.7%	10.7%	14.0%	11.3%
International Stocks	MSCI World x US Index	\$ 8,808	18.0%	18.9%	-5.0%	-5.0%	1.2%	2.4%	6.1%	5.5%
	Total Intl. Stocks	\$ 8,809	18.0%	18.9%	-5.0%	-5.0%	1.2%	2.4%	6.1%	5.2%
	Market Return				-5.4%	-5.4%	0.8%	2.0%	5.7%	4.7%
U.S. Bonds	US Bond Index	\$ 12,750	28.0%	27.4%	10.2%	10.2%	5.5%	4.0%	3.7%	5.1%
	Total U.S. Bonds	\$ 12,750	28.0%	27.4%	10.2%	10.2%	5.5%	4.0%	3.8%	7.3%
	Market Return				10.2%	10.2%	5.5%	4.0%	3.7%	7.2%
Private Markets	Private Real Estate	\$ 2,116	6.0%	4.5%	3.6%	3.6%	7.0%	7.4%	10.1%	7.6%
	Private Equity	\$ 2,644	6.0%	5.7%	5.5%	5.5%	13.6%	13.9%	14.6%	12.7%
	Total Private Markets	\$ 4,759	12.0%	10.2%	4.7%	4.7%	10.4%	10.6%	12.3%	9.7%
	Market Return				7.4%	7.4%	9.9%	10.5%	13.2%	7.8%
Cash		\$ 718	0.0%	1.5%						
Total PERS' Fund		\$ 46,575	100.0%	100.0%	7.2%	7.2%	8.1%	7.7%	9.6%	9.3%
Market Return					6.4%	6.4%	7.6%	7.4%	9.5%	9.1%

Source: Nevada Public Employees Retirement System, [Investment Performance](#)

According to the above, the Fiscal YTD return for the Nevada PERS was 7.2 percent. The 7.2 percent return compares to the 0.1 percent, YES 0.1 percent total fund return for ERS. Pay more get less is the hallmark of every public trust fund.

Table 4: ERS Total Fund Performance Detail (Net of Fees)

	Market Value(\$)	3 Mo(%)	YTD(%)	Fiscal YTD(%)	1 Yr(%)	3 Yrs(%)	5 Yrs(%)	10 Yrs(%)
Total Fund	27,435,810,375	6.1	-4.5	0.1	0.3	5.1	5.4	7.8
Total Fund Policy Index		8.9	-1.6	3.6	3.2	5.6	6.0	7.9
Long Term Public Index		15.6	-3.5	4.8	3.6	5.9	5.9	8.1

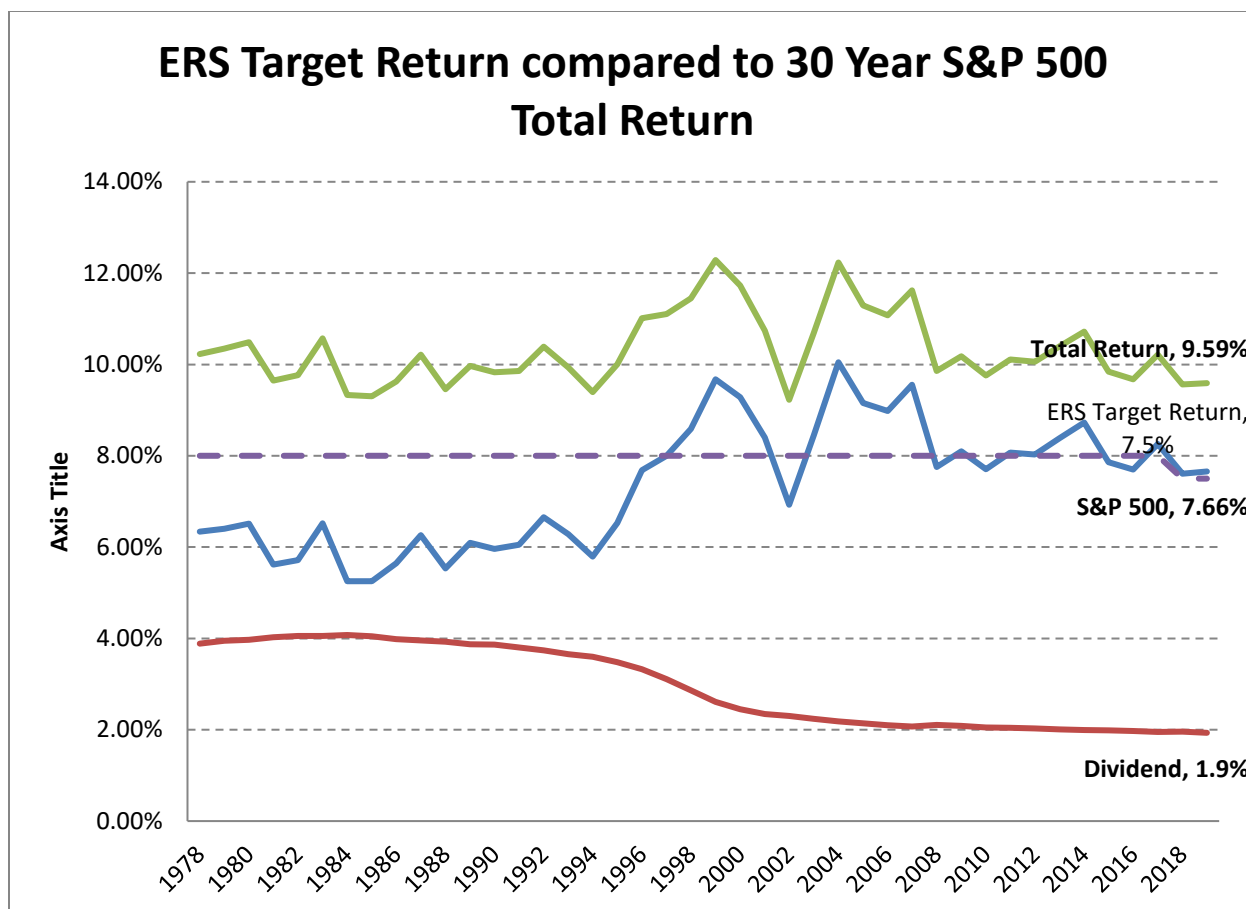
- **One-year ended June 30, 2020, the Fund underperformed the policy benchmark by 2.9%.**
- **The Fund's assets decreased to \$27.44 billion from \$28.67 billion in the last calendar year which includes an investment gain of \$76.49 million for the year.**

Source <https://agendasuite.org/iip/erstexas/file/getfile/1378>, pg 86

The members of the Committee should find Scott Burns's recent [analysis](#) of all ninety-nine public pension funds in Texas. Only three of the 99 were able to beat the Vanguard Balanced Index fund. ERS ranked 39th. I assume that being in the top forty percent is not something the members find desirable.

Until recently, ERS had specified that an 8.0 percent rate was required for the fund to remain actuarially sound. In 2017 the board reduced this return to 7.5 percent. The chart below shows the 30-year S&P 500 return, the 30-year S&P 500 dividend return, and the 30-year S&P 500 total return.

ERS was created in 1948. Starting in 1978, I computed the return one would have earned for every 30 years since the creation of ERS, in both the S&P 500 and also the dividend yield. The sum of these is the total return. As you'll note, the 30-year total return has exceeded the ERS target return for every year since 1978.



Source: [Historical Returns on Stocks, Bonds and Bills - United States](#)

For most of the 21st century, just the S&P 500 returns exceeded the target return. Buying the S&P 500 would substantially reduce the investment fees that ERS has provided to enrich investment advisors whose performance is below the S&P 500 return. ERS spending on investment fees would be markedly reduced from the \$176.1 million that was spent for underperforming institutions.

When the Legislature enacted [Sec. 815.3016](#), APPROVAL OF CERTAIN ALTERNATIVE INVESTMENTS, you authorized the pension funds to invest in alternative assets. So please have the [ERS Trustees](#) to ask/direct their [Investment Advisory Committee](#) and investment staff to review the “alternative investment” strategy now in place. To benefit all stakeholders improving returns would be the most beneficial. Had they invested in the S&P 500, everyone, but the investment advisors would be better off.

With improved returns, the contribution by the state and current employees could be reduced. I would expect that both parties would be overjoyed with a reduction in their contribution rates. Future retirees and current retirees younger than me would also benefit from improved performance. Receiving an annuity adjustment over the 25-30 years, you’ll be paying benefits to each retiree would be helpful. And finally, retirees like me who have not seen an adjustment since the beginning of the century might find a supplement in their payment.

Notes:

Burns, <https://couchpotatoinvesting.com/couch-potato-investing-versus-texas-state-pension-funds/>

Comptroller Pension DB, <https://comptroller.texas.gov/application.php/pension/search>

Morningstar VBIAX <https://www.morningstar.com/funds/xnas/vbiax/betaquote.html>

Pew Trust, <https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2018/state-retirement-fiscal-health-and-funding-discipline#/state-profiles/texas?year=2016> and

<https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2018/09/state-public-pension-funds-investment-practices-and--performance-2016-data-update>

Governing, <http://www.governing.com/topics/finance/gov-pensions-fees-pew-charitable-trusts-report.html>

S&P 1500, <https://etfdb.com/index/sp-composite-1500-index/#dividends&page=1>