Texas Conservative Coalition Research Institute

Comments to the Senate Finance Committee

February 25, 2020

Regarding the Committee's Charge: *Review the investment strategies and performance of funds invested through the Teacher Retirement System, the Permanent School Fund, and university funds. Make recommendations to better coordinate and leverage Texas' purchasing power to maximize investment income to the state.*

Introduction

Several state agencies are responsible for overseeing the investment of funds designed to benefit the state's residents. Among these agencies are the Teacher Retirement System (TRS), which the oversees the management of funds set aside for public school teacher pensions; the University of Texas/Texas A&M Investment Company (UTIMCO) (technically a nonprofit corporation rather than a state agency), which manages funds to support the University of Texas and Texas A&M University Systems; and the School Land Board (SLB) and State Board of Education (SBOE), which jointly mange the Permanent School Fund (PSF) for the benefit of public schools in Texas. Together, these agencies oversee the investment of almost a quarter trillion dollars. While their stewardship of their funds (collectively, the "Endowments") has overall been strong, several improvements are possible, particularly with respect to the management of the PSF. The Legislature should strive to make these improvements because, when dealing with such vast sums of money, even marginal improvements in performance and management can produce significant wealth for the state.

I. Investment Performance

As discussed in this section, over the last ten years, the Endowments have had significant annualized returns. TRS and UTIMCO have consistently outperformed their respective benchmarks. The performance of the PSF relative to a benchmark is less clear, but in any case it has generated significant returns. A benchmark is a rate of return calculated by identifying the asset classes in which an Endowment invests and the proportions in which it does so, and then assuming each asset class which comprises a portion of the portfolio earned the average rate of return for that asset class for the given year. The purpose of the benchmark is to determine the skill, if any, that an investment manager displays over time.

Over the 10-year period ending in June 2018, U.S. college and university endowments with more than $1 billion in assets earned an average annualized return of 6.0 percent.[1] While that figure provides a general reference point, the performance of an endowment relative to its specific benchmark is a superior measure because some endowments may be more willing to accept higher levels of risk than others in the hope of achieving superior returns.

A. TRS

As of August 31, 2019, the TRS investment trust fund held $157.4 billion.[2] The annual return of the fund since 2009 is illustrated in the table below:

FISCAL YEAR	ANNUAL RATE OF RETURN
2009	-13.1%
2010	10.72%
2011	15.50%
2012	7.60%
2013	9.00%
2014	16.90%
2015	-0.30%
2016	7.40%
2017	12.60%
2018	8.20%
2019	5.20%

Source: Unless otherwise noted, all data in tables appearing in this testimony are drawn from the annual reports of the Endowments.

Over the previous three, five, and ten-year periods, TRS has generated annualized returns of 8.6 percent, 6.5 percent, and 9.2 percent, respectively (notably, the 10-year period excludes 2009, a difficult investment year for most endowments in light of the financial recession at that time).[3]

TRS has outperformed its benchmark over time, indicating that its investment managers are doing an excellent job and adding considerable value. The chart below shows the amount by which TRS has outperformed its benchmark in the applicable year, as well as the amount by which its annualized rate of return has outperformed its annual benchmark over the preceding three years.

YEAR	ANNUAL RETURN IN EXCESS OF BENCHMARK	EXCESS RETURN OVER BENCHMARK OVER THE PRECEDING 3-YEAR PERIOD
2012	(1.1%)	1.0%
2013	1.7%	0.5%
2014	0.7%	0.5%
2015	0.5%	1.0%
2016	0.5%	0.2%
2017	1.6%	0.5%
2018	0.8%	0.6%
2019	(0.41%)	0.65%

B. UTIMCO

As of November 30, 2019, UTIMCO had more than $49.8 billion of assets under management.[4] UTIMCO's assets are divided into several funds spread over two categories: endowment funds and operating funds.[5] The three operating funds are the Short Term Fund (STF), the Intermediate Term Fund (ITF), and the Debt Proceeds Fund (DPF). These operating funds are used primarily to fund UT System institutions' short-term operating needs. Endowment funds, on the other hand, are intended to grow over time and to help pay both current and future expenses. UTIMCO's four endowment funds are the Permanent University Fund (PUF), the Permanent Health Fund (PHF), the Long Term Fund (LTF), and the Separately Invested Funds (SIF). The funds within the PHF and LTF are invested together in the General Endowment Fund (GEF).

The PUF, GEF, and ITF hold the overwhelming majority of UTIMO's investments- more than $46 billion[6]- and accordingly are the focus of this section. As of November 30, 2019, the three funds held $23.6 billion, $13.6 billion, and $9.4 billion, respectively.[7] Notably, ITF's investment horizon is only 3-5 years, whereas that for PUF and GEF is 5-30 years.[8] In other words, the ITF's investments are intended to be more liquid and less volatile, which means that their expected rate of growth is lower. The table below illustrates the performance of the ITF, the PUF, and the GEF over the last decade.

Year	Intermediate Term Fund (ITF)	Permanent University Fund (PUF)	General Endowment Fund (GEF)
2009	7.07%	-12.98%	-13.22%
2010	11.04%	13.04%	13.02%
2011	11.39%	14.62%	14.74%
2012	2.87%	3.21%	3.24%
2013	5.03%	8.8%	9.0%
2014	10.45%	15.1%	14.7%
2015	3.28%	0.43%	1.08%
2016	3.27%	3.94%	4.03%
2017	8.37%	12.2%	12.7%
2018	3.01%	9.2%	9.6%
2019	5.28%	4.5%	4.5%
Average Annual Rate of Return	6.46%	6.55%	6.67%

Like TRS, UTIMCO has routinely outperformed its benchmark over various time frames, indicating that its investment managers are overall adding considerable value. The table below shows returns over one, three, five, and ten-year horizons, measured from November 30, 2019.[9]

Year	Return Exceeding Benchmark (ITF)	Return Exceeding Benchmark (PUF)	Return Exceeding Benchmark (GEF)
1 Year	2.57%	1.58%	1.57%
3 Year	1.03%	0.70%	0.92%
5 Year	0.88%	1.01%	1.27%
10 Year	1.62%	1.21%	1.38%

C. Permanent School Fund

The Permanent School Fund (PSF) is a state fund, the earnings of which are intended to support public education in Texas. The State Board of Education (SBOE) manages the bulk of the fund's securities portfolio, and the School Land Board (SLB) within the General Land Office (GLO) oversees the fund's land holdings, generates revenue through the sale and lease of land and the management of mineral interests, and manages a real assets investment portfolio.[10]

As of August 31, 2019, the PSF held $46.5 billion in net assets ($48.5 billion in total assets). Approximately $13.5 billion of this amount is under the management of the SLB, with the remainder under the management of the SBOE.

The SBOE was the sole manager of non-land PSF investments until 2001, when the Legislature granted SLB the authority to set aside a portion of the revenues it generates from mineral leases on PSF land to buy additional property and mineral interests for the benefit of the PSF.[11] The Legislature expanded SLB's investment authority in 2005[12] and 2007[13], allowing the board to invest in real estate, energy, and infrastructure, in addition to land.

The recent investment returns for the SBOE portion of the PSF are illustrated below:

Year	**Return of SBOE portion of the PSF**	**Benchmark for SBOE portion of the PSF**
2015	(-3.49%)	*(-3.71%)*
2016	7.47%	*6.84%*
2017	11.80%	*10.66%*
2018	6.95%	*6.89%*
2019	4.17%	*3.76%*

The annualized investment returns for both the SBOE and SLB portions of the PSF over various time frames are illustrated below:

Year	**Return of SBOE portion of the PSF**	**Benchmark for SBOE portion of the PSF**	**Return of the SLB portion of the PSF**	**Benchmark for SLB portion of the PSF**	**Return of the SLB Portion of the PSF (excluding cash)**
1 Year	4.17%	*3.76%*	5.84%	*5.23%*	9.86%
3 Years	7.59%	*7.26%*	7.44%	*5.85%*	13.37%
5 Years	5.25%	*4.98%*	6.13%	*6.72%*	11.36%
10 Years	8.18%	*7.83%*	6.41%	*7.23%*	11.71%

The SLB portion of the PSF portfolio has had one, three, five, and ten-year returns (measured from August 31, 2019) of 5.84 percent, 7.44 percent, 6.13 percent, and 6.41 percent, respectively. These numbers improve significantly when the cash holdings of SLB are excluded; SLB is essentially required to keep a significant portion of its assets in cash, which earns small amounts of interest and drags down the overall return of the portfolio. If cash holdings are excluded, the SLB portion of the PSF portfolio returned 9.86 percent, 13.37 percent, 11.36 percent, and 11.71 percent, respectively, over the same time periods. However, because the SLB's investments are concentrated in real estate and energy in accordance with statute, its strong performance in recent years (excluding cash) and its relatively weak performance over a 10-year period may simply reflect that real estate and energy have been favorable asset classes the last few years (and unfavorable overall over a ten-year period), and not that the SLB showed special skill (or lack of skill) in managing the investments.

Two points regarding the SLB portion of the PSF portfolio deserve emphasis. First, the benchmark the SLB uses in the PSF's 2019 annual report was an improvement over the 2018 annual report, which listed no benchmark at all. The benchmark in the 2019 report is described as a "composite of 67% CPI Index, All Urban Consumers plus 74.10707 basis points quarterly and 33% NFI-All Open Ends Funds Index." This last component is an "aggregate of open-end, commingled equity real estate funds with diverse investment strategies."[14] While it is difficult to obtain a suitable benchmark for the type of non-publicly-traded assets in which the SLB invests, it is not clear how the current benchmark was determined to be appropriate. Because the SLB can invest in energy and infrastructure as well as real estate, the current benchmark might not be well-suited to measuring the investment performance of the SLB portion of the portfolio. Notably, the SLB has underperformed its benchmark over five and ten-year periods; however, that may be a result of the benchmark being improperly constructed to some extent.

Second, the significant cash holdings of the SLB- almost $4.5 billion as of August 31, 2019- are a point of contention. The Texas Land Commissioner has defended this large allocation to cash on the grounds that the SLB needs to have funds on hand to satisfy any capital calls issued by projects in which it invests.[15] As the SLB's parent office, the General Land Office, has noted, the SLB's portion of the PSF is restricted to asset classes such as real estate and energy to a greater extent than the SBOE.[16] Investments in these asset classes are often made with external managers, who have the contractual right to demand that their investors periodically provide agreed-upon cash when called upon to do so.[17]

However, even with these constraints, some critics believe that SLB has been overly conservative in its heavy allocation to cash. For example, the statement of intent for Senate Bill 1659 in the 86th Session (which passed the Senate but did not receive a vote in the House) stated that "The [then] $4.2 billion in cash

holdings—about 40 percent of [SLB's] assets—far exceed the amount needed for capital commitments and generate only a nominal return in the State Treasury."[18] The statement went on to cite Education Commissioner Mike Morath's testimony to the Senate in which he stated that the SLB's large allocation to cash costs the state approximately $200 million per year.[19]

II. Strategies

Over the last decade, most endowments have sought to diversify their holdings beyond the once-standard blend of stocks and bonds. According to the Pew Charitable Trusts, in 2014 public pension funds- funds similar to endowments- held on average an asset allocation of 51 percent equity, 24 percent fixed income (bonds and other stable value investments), and 25 percent alternative assets such as risk parity, commodities, hedge funds, and real estate.[20] This 25 percent also included investments to non-publicly traded stocks ("private equity"), which could alternatively be categorized as an equity investment. The average endowment's 25 percent allocation to alternative assets (including private equity) was more than double the 2006 allocation of 11 percent.[21]

By diversifying portfolios to include alternative assets, financial experts believe that endowments can maximize risk-adjusted returns. In contrast, an endowment heavily invested in a single asset class, such as domestic stocks, can face a severe downturn if a stock market "crash" such as that in 2008-2009 occurs. Consistent with the above trend, TRS, UTIMCO, and the SBOE have all increased their allocations to alternative asset classes over the last decade, while still investing significant amounts in public equities. Because SLB is restricted by statute in what investments it can make, its investments have always been split between cash and alternative assets.

The tables below illustrate the asset allocation of each Endowment as of August 31, 2018. Each Endowment's asset allocation is set forth in a separate table rather than in a single joint table because each Endowment categorizes its sub-asset classes differently than the others. For example, one Endowment may consider absolute return investments to be of the stable value asset class, while another Endowment might consider them to be an alternative investment. Also, categories may overlap to an extent. For example, an allocation to stable value hedge funds could encompass an allocation to U.S. Treasuries, and an allocation to risk parity could encompass equity investments. A "master" summary table comparing the asset allocation of TRS, UTIMCO, the SBOE, and the SLB appears after the individual tables.

TRS

U.S. Public Equity	17.6%
International Developed Equity	13.2%
Emerging Markets Equity	8.8%
Directional Hedge Funds	3.9%
Private Equity	13.8%
Total Equity	**57.3%**
U.S Treasuries	10.6%
Absolute Return	2.5%
Stable Value Hedge Funds	4.2%
Cash	0.4%
Total Stable Value	**17.7%**
Inflation-Linked Bonds	3.1%
Real Assets	11.9%
Commodities	0.0%
Energy, Natural Resources, & Infrastructure	5.0%
Total Real Return	**20.0%**
Total Risk Parity	**5.0%**
TOTAL	**100%**

UTIMCO

(Notably, the table immediately below lists the combined asset allocation only for the GEF and the PUF, because the ITF has a uniquely short investment outlook than all other funds in the Endowments.)

U.S. Public Equity	**10.9%**
International Developed Equity	7.8%
Emerging Markets Equity	10.0%
Directional Hedge Funds	14.0%
Private Equity	21.1%
Total Equity	**63.8%**
U.S Fixed Income (Investment Grade)	3.5%
Non-U.S. Fixed Income	2.6%
Emerging Markets Debt	1.2%
Stable Value Hedge Funds	4.1%
Cash	3.5%
Total Stable Value	**14.9%**
Inflation-Linked Bonds	0.1%
Gold	1.6%
Commodities	1.0%
Natural Resources	9.1%
Infrastructure	1.7%
Public Real Estate	0.1%
Private Real Estate	7.7%
Total Real Return	**21.3%**
TOTAL	**100%**

SBOE

U.S. Public Equity (Large)	**17.17%**
U.S. Public Equity (Small-Mid)	5.19%
International Equity	18.16%
Total Public Equity	**40.52%**
U.S Fixed Income	13.25%
Emerging Markets Debt	6.21%
Cash	0.31%
Total Fixed Income	**19.77%**
Real Estate	7.47%
Risk Parity	6.78%
Real Return	5.95%
Absolute Return	10.35%
Private Equity	9.16%
Total Alternative Assets	**39.71%**
TOTAL	**100%**

SLB

Domestic Equity	**0.04%**
Land, Real Asset Investments and Minerals, Sovereign/Other Lands and Discretionary Internal Investments	6.57%
Investments with External Managers	31.07%
Mineral Investments	20.1%
Cash	42.21%
TOTAL	**100%**

If each Endowment is divided into three categories- public equity, fixed income/stable value/cash, and alternative investments (all other investments), the respective asset allocations for the Endowments are:

All Endowments

Asset Class	TRS	UTIMCO	SBOE	SLB
Public Equity	43.5%	42.7%	40.52%	0.04%
Fixed Income/Stable Value/Cash	15.2%	14.9%	19.77%	42.21%
Alternative Investments	41.3%	42.4%	39.71%	57.75%

Seen in this light, all of the Endowments except for the SLB share a similar asset allocation: a substantial allocation to public equity, a roughly equal allocation to alternative investments, and a smaller allocation to more conservative, stable investments. The SLB's different allocation is explained by the limited nature of the investments the SLB is authorized to make, and the large amounts of cash it keeps on hand to satisfy capital calls.

Overall, TRS, UTIMCO, and SBOE are well-diversified in their investments, which reduces the chance of each Endowment's value plummeting because of poor performance by one asset class. This stability comes at a cost. For instance, the performance of a passive 60 percent stock/40 percent bond index fund, had an annual return of 9.95 percent for the ten-year period ending August 31, 2018[22], which handily beat the performance of TRS, UTIMCO, the SBOE, and the SLB over the same time period. But the entire purpose of diversifying into alternative asset classes is to avoid deep losses outside of the time periods when stocks and bonds have strong performance, as they have for the last decade.

III. Recommendations

Overall the Endowments have been well-run, with each posting annual returns which generally meet or exceed its benchmark, except for the SLB over five and ten-year periods. However, benchmark data for the SLB is of uncertain quality. The Legislature could seek improvements by requiring each Endowment to adhere to certain best practices. In addition, the Legislature may want to consider providing the SBOE with greater control over the PSF and returning the SLB to its traditional role of managing the land under its stewardship.

A. Best Practices

A key point behind best practices is minimizing fees that erode the value of the Endowments, particularly the fees the Endowments pay to external investment managers. A simple hypothetical illustrates how important this goal is when dealing with the vast collective assets of the Endowments. Assume the Endowments in the aggregate control $250 billion in assets as of 2020 and earn a return of 8 percent per year net of fees. If the Endowments make no distribution, then in 30 years their total assets will grow to approximately $2.515664 trillion, or phrased differently, $2,515.664 billion. If, however, annual investment fees paid by the Endowments add up to an additional 80 basis points per year (i.e., 0.8% of total assets), the corresponding figure after 30 years will be approximately $2.012721 trillion dollars, or $2,012.721 billion. In other words, a seemingly small fee in this scenario would erode the value of the Endowments by more than $500 billion over a 30 year period. Of course, in reality the Endowments will make distributions over a 30-year period, thereby reducing the funds' principal, and as a result the compounding "drag" of fees will not be so pronounced, but the essential point is that small fees over time can result in losses which are significant in absolute terms.

1. Require Endowments to Consider Index Funds When Investing in Public Securities

To minimize fees, each Endowment should consider investing in public securities through index funds when possible, while still providing managers with the flexibility to exercise discretion over stock investments. Investing through a passive indexing approach eschews "active" management, in which managers attempt to pick stocks they believe will outperform the broader market. Many state pension funds have expanded their investments in index funds in recent years after concluding that the substantial fees charged by active managers did not create enough value. For example, in 2013 the board of trustees for the California Public Employees' Retirement System (CalPERS), concluded that "Markets aren't perfectly efficient, but inefficiencies are difficult to exploit after [taking into account] costs" and that "Calpers will use index tracking strategies where we lack conviction or demonstrable evidence that we can add value through active management."[23]

While indexing should be strongly considered for investments in public securities, it should not be mandatory for the Endowments given their need for investment flexibility.

2. For Investments in Public Securities, External Managers' Compensation Should Require "Beating" Index Funds

Because indexing allows investors to obtain the return of the general stock market at extremely low annual costs (as low as 4 basis points in some cases[24]), a third party manager retained by an Endowment to invest in public securities should be compensated only to the extent he or she can "beat" the index fund for the applicable equity class. This compensation arrangement ensures that the manager is compensated only for the value (if any) he or she adds. While TRS has done an outstanding job overall in managing the assets entrusted to it and has routinely exceeded its overall benchmark, even it might benefit from considering indexing; over three, five, and ten-year time frames (measured from August 31, 2019), its investment returns in U.S. public equity significantly lagged its benchmark, indicating that managers of that specific portion of the TRS portfolio were unable to add value over those time periods.[25] Despite this underperformance, TRS paid approximately $78 million in domestic equity management fees for the year ending on June 30, 2019.

3. Review Possibilities for Internal Management Periodically

Given the size of the Endowments, in-house management should be considered periodically to minimize fees; this is already done to an extent, with the Endowments using a mix of internal and external investment managers. While in some cases outside expertise will be necessary, the Endowments may be able to attract the necessary expertise in-house as their assets grow over time.

4. Consider Alternative Benchmarks for SLB Investments

As noted above, it is difficult to construct a benchmark for the SLB, given the asset classes in which it invests. The Legislature should request information from the SLB regarding how the current benchmark was determined to be appropriate and how it might be improved.

5. List All Fees Paid to Third Parties

All fees paid to third parties should be clearly listed by the Endowments in their annual reports. A list of all fees paid should include fees paid out of the invested assets themselves, not just fee payments made by the Endowments to external managers.

6. Negotiate the Lowest Fees

Each Endowment should negotiate the lowest possible fees with third party managers. TRS has been an outstanding role model for this negotiation approach in recent years, as evidenced by its successful insistence on a "1 or 30" model rather than the traditional "2 and 20" model. Under the traditional "2 and 20" model, private equity and hedge fund managers often charge a management fee equal to two percent of the invested assets, as well as a performance fee equal to 20 percent of the investment gains. As competition has increased in the hedge fund and private equity industries, sophisticated investors have sometimes been able to negotiate better rates. Each of the Endowments should be able to negotiate reasonable rates with third-party investment managers. TRS, in particular, controls a vast pool of assets, which should give it the leverage to demand better rates. In fact, TRS in recent years began requesting a "1 or 30" model with outside hedge fund managers, under which the manager receives an annual fee equal to only the greater of 1 percent of the invested assets, or 30 percent of the investment gains in excess of an agreed-upon minimum "hurdle" rate.[26]

One way of demanding the lowest possible fee by external managers is requesting a "most favored nation" MFN) clause in the contract with the manager. An MFN clause provides that the client will never be charged a higher fee than the manager's other clients, all else being equal.[27] Of course, it may not be possible for an Endowment in a given case to obtain an MFN clause or a special discounted fee from an external manager. Nevertheless, the Endowments should strive for these benefits given the significant leverage with which their considerable assets provide them.

7. Tie Bonuses for Endowment Employees to Net Results, Not Gross Results

As noted below, the *Houston Chronicle* reported that employees in the SBOE and SLB received bonuses based on the gross performance of the PSF portfolio. To ensure that incentives between employees and the state are properly aligned, and that taxpayers are paying only for actual value added, bonuses should be based on the performance of the PSF net of fees.

B. Bifurcated Management of the PSF and Related Dysfunction between the SBOE and the SLB

The PSF is jointly managed by the SBOE and SLB. This bifurcated approach creates complexity and arguably is duplicative. A recent year-long investigation by the *Houston Chronicle*, "Broken Trust," has highlighted tension between the SLB and the SBOE and problems with the PSF's management, including a lack of transparency, a faulty compensation structure of employees, high management fees, and declining distributions (adjusted for inflation) over time for the benefit of public education.[28] Among other findings, the investigation found that the SLB's actual investment returns were lower than those stated, which was partially attributable to large amounts of money being held in the form of cash deposits, which earn little interest.[29] In addition, employees tasked with investment management received bonuses based on portfolio performance gross of fees, rather than net of fees.[30]

In 2018, the SLB, for the first time in its history, declined to pay any portion of its earnings to the SBOE, and instead paid the funds directly to schools. The SBOE argued that this could result in lower contributions to education funding by the SBOE due to concerns about depleting its endowment. The SLB argued that its investment performance has been superior to that of the SBOE; the SBOE disputed this and suggested that political aspirations were the motivation for the SLB's decision.[31]

The Legislature should examine the fundamental question of why (if at all) the PSF requires two entities to manage it. While the SLB may have a role to play in managing certain land for the benefit of the PSF, it is not clear why the investment of funds generated by the land should be managed by the SLB. If nothing else, consolidating the management of PSF investments into a single entity would likely result in economies of scale. For example, two executive positions (i.e., chief investment officer) could be combined into one. Additionally, combining assets into a larger fund could provide the state with more leverage to demand lower external management fees. Moreover, the potential for disputes between the heads of the SBOE and the SLB would be greatly minimized.

Recent proposed legislation has contemplated some reforms. For example, Senate Bill 608 (86R) passed into law and incorporated some of the suggestions of the Sunset Commission's report on the SLB. Among other things, the bill requires the SBOE and the SLB to have an annual joint public meeting once a year on the asset allocation and investment performance of the PSF. In addition, the SLB is required to clearly report fees paid to investment managers and consultants. Senate Bill 1659, had it passed, would have required the SLB to submit quarterly reports regarding its investment performance and the applicable benchmarks, and to transfer a portion of its funds to the SBOE which would otherwise be held by SLB in the form of cash. Despite SB 1659 failing to pass, the SLB improved its reporting in the PSF's most annual report by identifying a benchmark and showing investment returns net of fees (rather than gross of fees).

The reforms of SB 608 and the proposed reforms of SB 1659 are improvements over the status quo, but the Legislature should squarely address whether the bifurcated management of the PSF offers any benefit. Absent evidence to the contrary, the presumption should be that the PSF is best managed by a single entity.

It should be emphasized that eliminating the SLB's investment powers would not be punishment or a finding that the SBOE had better performed its duties. Indeed, the SLB has had solid returns over the last decade when its cash holdings are excluded. But if only one entity is to manage the PSF investments in the future, the SBOE is the logical choice because it already manages a much larger portion of the PSF and its investment powers predate those of the SLB.

[1] Rick Seltzer, "Endowment Returns Slow; Survey Offers Peek at Spending" (Jan. 31, 2019), available at https://www.insidehighered.com/news/2019/01/31/college-endowments-returned-82-percent-2018-annual-survey-adds-some-insight-how
[2] Teachers Retirement System 2019 Annual Report, available at https://www.trs.texas.gov/TRS%20Documents/cafr_2019.pdf
[3] Ibid.
[4] UTIMCO, Performance Summary as of November 2019, available at https://www.utimco.org/media/3208/201911-performance-summary.pdf
[5] UTIMCO, Funds Management Overview, available at https://www.utimco.org/funds-managed/
[6] See n. 4, supra.
[7]Ibid.
[8] UTIMCO, Assets Under Management, available at https://www.utimco.org/media/3185/c-users-gcollins-desktop-fye2020oamassets.pdf
[9] See n. 4, supra.
[10] Among other sources, see the Sunset Advisory Commission's 2018-19 Staff Report on the School Land Board with Final Results.
[11] See House Bill 3558 (77R, 2001), available at https://capitol.texas.gov/BillLookup/History.aspx?LegSess=77R&Bill=HB3558
[12] See House Bill 2217 (79R, 2005), available at https://capitol.texas.gov/BillLookup/History.aspx?LegSess=79R&Bill=HB2217
[13] See House Bill 3699 (80R, 2007), available at https://capitol.texas.gov/BillLookup/History.aspx?LegSess=80R&Bill=HB3699
[14] NCREIF Fund Index- Open End Equity (NFI-OE), available at https://www.ncreif.org/data-products/open-end-index-oe/
[15] Susan Carroll and David Hunn, "Broken Trust: Texas' Huge School Endowment Pays Out Less and Less for Schoolchildren," *Houston Chronicle*, (March 3, 2019), available at https://www.houstonchronicle.com/news/investigations/article/Broken-Trust-Texas-huge-school-endowment-pays-13631937.php. See also http://www.glo.texas.gov/slb/
[16] Texas General Land Office, "SLB Myth vs. Facts," available at http://www.glo.texas.gov/slb/
[17] Ibid.
[18] Bill Analysis for Senate Bill 1659 (86R, 2019) available at https://capitol.texas.gov/tlodocs/86R/analysis/pdf/SB01659I.pdf#navpanes=0
[19] Ibid.
[20] The Pew Charitable Trusts, "State Public Pension Funds Increase use of Complex Investments" (April 2017), available at https://www.pewtrusts.org/-/media/assets/2017/04/psrs_state_public_pension_funds_increase_use_of_complex_investments.pdf
[21] Ibid.
[22] Scott Burns, "Couch Potato Investing Beats the Teachers' Pension Fund — Again," *Dallas News* (June 22, 2019), available at https://www.dallasnews.com/business/personal-finance/2019/06/22/couch-potato-investing-beats-the-teachers-pension-fund-again/
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