



LEGISLATIVE BUDGET BOARD

Annual Report on Major State Investment Funds

Fiscal Year 2017

**SUBMITTED TO THE 86TH LEGISLATURE
PREPARED BY LEGISLATIVE BUDGET BOARD STAFF**

WWW.LBB.STATE.TX.US

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EXECUTIVE SUMMARY

The fiscal years 2016 and 2017 *Report on Major State Investment Funds* presents the financial performance for Texas' major investment funds for two fiscal years. This report includes the risk-adjusted returns for the funds and other performance and background information. The investing agencies or institutions of higher education provided all the information. Additional information is available here. The Legislative Budget Board staff calculated the risk-adjusted return and the five-year average total fund rate of return. The report does not include recommendations regarding portfolio allocations or current management practices. It is intended as an information resource only.

INVESTMENT ENVIRONMENT

Beginning with the first quarter of federal fiscal year 2016, equity markets in the U.S. posted broad gains. For federal fiscal years 2016 and 2017, the Standard & Poor's 500 Index, the Dow Jones Industrial Average, and the NASDAQ Composite increased by 25.3 percent, 32.8 percent, and 34.6 percent, respectively. International equities in other developed markets advanced more modestly during this period, and the MSCI Europe, Australasia, and the Far East (EAFE) Index increased by 11.2 percent. After a substantial decrease during the last quarter of federal fiscal year 2015, developing markets experienced an overall increase similar to U.S. equities, and the MSCI Emerging Markets Index increased by 38.9 percent.

In December 2015, the Federal Reserve instituted the first interest rate increase since June 2006. This action followed the completion of tapering its quantitative easing policies that had been in place to lower long-term interest rates to spur economic activity following the Great Recession. During fiscal years 2016 and 2017, the Federal Reserve raised interest rates on four occasions and increased the discount rate from the range of 0.0 percent to 0.25 percent to the range of 1.0 percent to 1.25 percent.

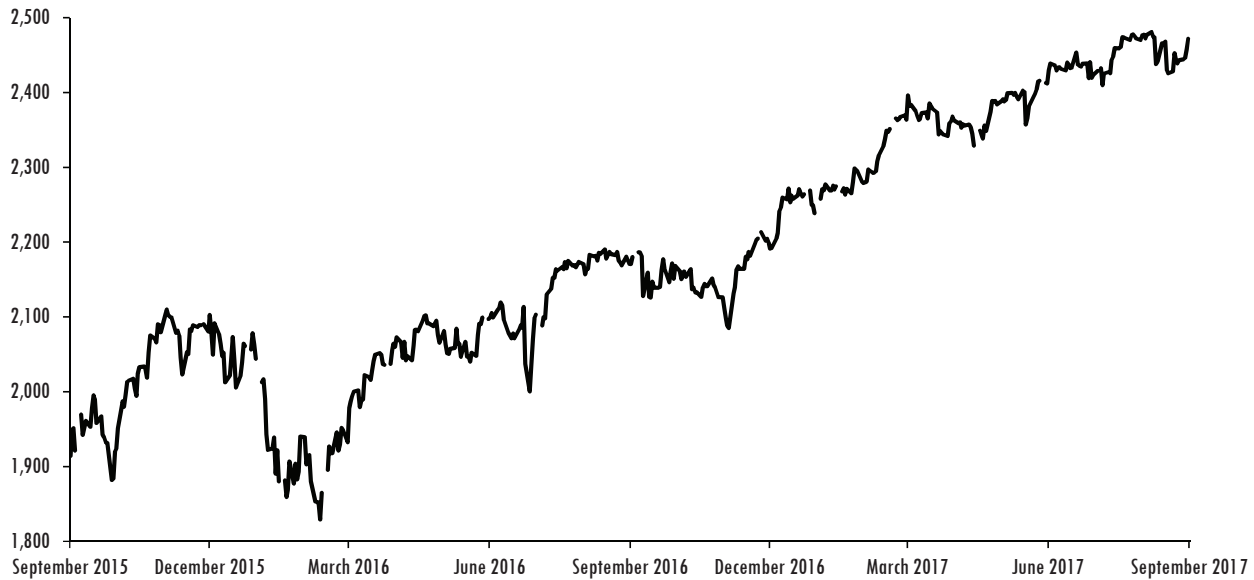
Short-term interest rates as measured by the 90-day U.S. Treasury Bill (T-Bill) increased 93 basis points following the increase in the Federal Reserve discount rate. In contrast, 10-year Treasury yields closed fiscal year 2017 at 2.12 percent, a decrease of 9 basis points from the end of fiscal year 2015. In addition, 30-year fixed mortgage rates decreased by 7 basis

points, and investment grade corporate bond rates decreased by 41 basis points during the period. U.S. consumer price inflation increased by 2.8 percent during fiscal years 2016 and 2017, and the largest portion of this increase, 2.0 percent, occurred during fiscal year 2017.

In contrast to the rapid increase in the value of the U.S. dollar during 2015, measured against international currencies, the overall exchange rate decreased by 1.1 percent during fiscal years 2016 and 2017. The collapse in the prices of hydrocarbon-based commodities in 2015 was reversed during this period, and the price per barrel of Brent crude oil ended fiscal year 2017 trading at \$52.69, an increase of 9.8 percent from the beginning of fiscal year 2016.

Figure 1 shows the path of equity markets during fiscal years 2016 and 2017. **Figure 2** shows the beginning and ending values of various financial indicators during the same period.

FIGURE 1
STANDARD & POOR'S 500 INDEX, FISCAL YEARS 2016 AND 2017



SOURCE: St. Louis Federal Reserve Economic Database.

FIGURE 2
FINANCIAL MARKET INDICATORS, FISCAL YEARS 2016 AND 2017

MARKET	INDICATOR (1)	CLOSE OF FISCAL YEAR			PERCENTAGE CHANGE FROM 2015 TO 2017
		2015	2016	2017	
Domestic Equity	S&P 500	1,972.18	2,170.95	2,471.65	25.33%
Domestic Equity	DJIA	16,528.03	18,400.88	21,948.10	32.79%
Domestic Equity	NASDAQ	4,776.51	5,227.21	6,428.66	34.59%
International Equity	MSCI EAFE	1,736.81	1,685.57	1,930.82	11.17%
International Equity	MSCI World	1,645.43	1,719.52	1,959.74	19.10%
Emerging Markets Equity	MSCI Emerging Markets	818.73	893.68	1,087.70	32.85%
U.S. Treasuries	10-year Yield	2.21%	1.58%	2.12%	(9 bps)
U.S. Corp Debt	Bank of America Merrill Lynch US Corp Master Total Return Index	2,579.86	2,821.85	2,884.06	11.79%
U.S. Dollar	Federal Reserve Bank Trade-weighted U.S. Dollar Index: Broad (January 1997=100)	119.73	121.64	118.40	(1.11%)
Cash Equivalent	Annualized Yield 90-day Treasury Bill	0.08%	0.33%	1.01%	93 bps
Oil Price	Brent Crude Spot	\$47.97	\$47.94	\$52.69	9.84%
Price Inflation	CPI-U (fiscal year average)	236.8	238.6	243.4	2.81%

NOTES:

(1) Financial market indices are shown based on price return.

(2) S&P 500= Standard & Poor's 500 Index; DJIA=Dow Jones Industrial Average Index; MSCI EAFE=MSCI Europe, Australasia, and the Far East; CPI-U=Consumer Price Index for All Urban Consumers.

SOURCES: St. Louis Federal Reserve Economic Database; MSCI.com.

ENDING MARKET VALUE

The ending market value of the major investment funds for fiscal year 2017 was \$237.7 billion, which was \$28.3 billion or 13.5 percent more than the value of the funds at the end of fiscal year 2015. Changes in ending market values include investment returns, fund contributions, fund distributions, and expenses. The funds and their ending market values are shown in **Figure 3**.

FIGURE 3
ENDING MARKET VALUE OF MAJOR INVESTMENT FUNDS
FISCAL YEARS 2016 AND 2017

(IN BILLIONS)

FUND	2016	2017
Teacher Retirement System Pension Trust Fund	\$133.4	\$146.1
Permanent School Fund – Texas Education Agency	\$30.2	\$32.8
Permanent School Fund – General Land Office (2)	\$4.9	\$6.2
Employees Retirement System Pension Trust Fund	\$25.5	\$27.5
Permanent University Fund	\$17.9	\$19.9
Permanent Health Fund	\$1.1	\$1.1
Tobacco Settlement Permanent Trust Fund	\$2.3	\$2.5
Texas Guaranteed Tuition Plan Fund	\$0.8	\$0.6
Permanent Public Health Fund	\$0.3	\$0.2
National Research University Fund	\$0.7	\$0.7
Economic Stabilization Investment Fund	\$2.7	\$3.2
Total Investment Funds	\$217.0	\$237.7

NOTES:

- (1) Totals might not sum due to rounding.
 (2) Permanent School Fund – General Land Office ending market values are based on years ending June 30.

SOURCES: Investing agencies; the University of Texas/Texas A&M University Investment Management Company.

**FIGURE 4
TEXAS' MAJOR INVESTMENT FUNDS TIME-WEIGHTED GROSS RETURN, FISCAL YEARS 2016 AND 2017**

FUND	2016 RATE OF RETURN		2017 RATE OF RETURN	
	TIME-WEIGHTED	BENCHMARK	TIME-WEIGHTED	BENCHMARK
Teacher Retirement System Pension Trust Fund	7.50%	7.87%	12.72%	11.01%
Permanent School Fund – Texas Education Agency	7.61%	6.84%	11.96%	10.66%
Permanent School Fund – General Land Office (1) (2)	5.51%	N/A	10.35%	N/A
Employees Retirement System Pension Trust Fund	5.32%	7.23%	12.15%	11.08%
Permanent University Fund	4.19%	3.94%	12.54%	10.49%
Permanent Health Fund	4.03%	3.94%	12.49%	10.49%
Tobacco Settlement Permanent Trust Fund	2.63%	3.08%	11.44%	8.49%
Texas Guaranteed Tuition Plan Fund	3.20%	3.30%	1.90%	1.80%
Permanent Public Health Fund	1.91%	3.08%	11.10%	8.49%
National Research University Fund	2.76%	3.08%	11.40%	8.49%
Economic Stabilization Investment Fund	2.43%	1.82%	2.32%	2.19%

NOTES:

- (1) Permanent School Fund – General Land Office (GLO) rates of return are based on year ending June 30, and include cash and short-term securities related to unfunded capital commitments held at the state Treasury. The without-cash rate of return was 10.58% for fiscal year 2016 and 18.27% for fiscal year 2017. GLO reports that it maintains a performance benchmark for gross returns excluding cash only, and does not have one that includes cash. GLO reports that the benchmarks for these years are 8.16% and 5.96%, respectively.
- (2) GLO notes that it can invest only in private markets and real assets investments and is statutorily required to deposit cash designated for future capital commitments into cash equivalents at the state Treasury. This structural delay can result in a significant negative effect on the difference between gross returns including and excluding cash.
- (3) Each fund has different investment objectives and strategies, some required by law, that affect its benchmarks and performance.
- (4) Benchmark Adjusted Gross Returns were calculated by the agencies or institutions and are identified in the background information provided for each fund in Appendix B.

SOURCES: Investing agencies; the University of Texas/Texas A&M University Investment Management Company.

RATES OF RETURN

The average rate of return for the funds during fiscal year 2016 was 4.28 percent and ranged from 1.91 percent to 7.61 percent. The average rate of return for the funds during fiscal year 2017 was 10.03 percent and ranged from 1.90 percent to 12.72 percent. These returns are shown in **Figure 4**.

The total fund rate of return is the gross time-weighted rate of return for all investments of each fund. The time-weighted rate is calculated before related investment expenses are deducted, and it is adjusted to eliminate the effect of timing of cash flows due to contributions and withdrawals. The five-year average rate of return is calculated using a geometric average of the annual rates of return for the five-year period.

The annual rates of return include income earned and change in fund value, without consideration of the risk of fund investments. **Figure 5** shows the average rates of return across five years.

FIGURE 5
AVERAGE ANNUAL RATES OF RETURN
FISCAL YEARS 2012 TO 2016 AND 2013 TO 2017

FUND	2012 TO 2016	2013 TO 2017
Teacher Retirement System Pension Trust Fund	8.11%	9.08%
Permanent School Fund – Texas Education Agency	7.77%	5.86%
Permanent School Fund – General Land Office (1) (2)	8.14%	7.78%
Employees Retirement System Pension Trust Fund	7.65%	8.43%
Permanent University Fund	6.45%	8.26%
Permanent Health Fund	6.30%	8.15%
Tobacco Settlement Permanent Trust Fund	4.91%	6.61%
Texas Guaranteed Tuition Plan Fund	4.97%	3.50%
Permanent Public Health Fund	4.21%	5.85%
National Research University Fund	4.80%	6.53%
Economic Stabilization Investment Fund (5)	N/A	N/A

NOTES:

- (1) Permanent School Fund – General Land Office (GLO) rates of return are based on year ending June 30, and include cash and short-term securities related to unfunded capital commitments held at the state Treasury. The without-cash five-year rate of return was 14.40% for fiscal years 2012 to 2016 and 13.85% for fiscal years 2013 to 2017.
- (2) GLO notes that it can invest in only private markets and real assets investments, and it is statutorily required to deposit cash designated for future capital commitments into cash equivalents at the state Treasury. This structural delay can result in a significant negative effect on the difference between gross returns including and excluding cash.
- (3) Each fund has different investment objectives and strategies, some required by law, that affect its benchmarks and performance.
- (4) The average annual rate of return was determined using the time-weighted rate of return provided by the agencies.
- (5) The Economic Stabilization Investment Fund does not yet have five years of returns to calculate this average.

SOURCES: Investing agencies; the University of Texas/Texas A&M University Investment Management Company.

RISK-ADJUSTED RETURN

Risk-adjusted return is a tool used to compare the performance of funds that have different types and proportions of assets, and quantifies a fund's return relative to its risk.

A risk-adjusted return represents the return and volatility of returns. A generally accepted measure for computing the risk-adjusted return is the Sharpe ratio, developed by Nobel Laureate William Sharpe, which often is used to rank the risk-adjusted performance of various portfolios during the same period. The results of the Sharpe ratio indicate the amount of return, in excess of some risk-free level of return, earned per unit of risk. The Sharpe ratio is constructed for a five-year period of returns.

The following formula calculates the Sharpe ratio:

$$\frac{\left(\begin{array}{c} \text{Portfolio's} \\ \text{Total} \\ \text{Return} \end{array} \right) - \left(\begin{array}{c} \text{Risk-free Rate} \\ \text{of 90-day} \\ \text{Treasury Bills} \end{array} \right)}{\left(\begin{array}{c} \text{Standard Deviation} \\ \text{of the Portfolio's Return} \\ \text{Over Time} \end{array} \right)}$$

For example, a portfolio with an average annualized return of 10.0 percent during the past five years, the growth of which consistently, year after year, was within a small range of 7.0 percent to 12.0 percent, would show a higher (better) risk-adjusted return than another portfolio that averaged the same 10.0 percent annualized return, but varied greatly year to year (higher volatility), with returns ranging from decreases of 20.0 percent to increases of 50.0 percent. Risk-adjusted returns should be calculated for a minimum period of three years because, for a single year, the statistic is unreliable.

The Sharpe ratio is used for comparative purposes, and it does not take into account different investment objectives and restrictions, which legitimately produce different investment strategies and results for different funds.

The total return amounts used in the calculations were provided by the entities responsible for investing the funds. Each fund provided 60 monthly rates of return that were used to calculate the fund's return and standard deviation. The risk-free rate used for the calculation is the average of the monthly annualized yield of the 90-day Treasury Bill throughout the respective fiscal year. All rates are from the Federal Reserve Economic Database.

Figure 6 shows that the ratios range from 0.805 to 1.283 for fiscal years 2012 to 2016 and from 0.969 to 1.771 for fiscal years 2013 to 2017.

**FIGURE 6
RISK-ADJUSTED RATE OF RETURN (SHARPE RATIO)
FISCAL YEARS 2012 TO 2016 AND 2013 TO 2017**

FUND	2012 TO 2016	2013 TO 2017
Teacher Retirement System Pension Trust Fund	1.220	1.716
Permanent School Fund – Texas Education Agency	1.022	0.969
Employees Retirement System Pension Trust Fund	1.064	1.504
Permanent University Fund – UTIMCO	1.158	1.771
Permanent Health Fund – UTIMCO	1.134	1.768
Tobacco Settlement Permanent Trust Fund	1.021	1.752
Texas Guaranteed Tuition Plan Fund	1.283	1.363
Permanent Public Health Fund	0.805	1.316
National Research University Fund	0.971	1.682
Economic Stabilization Investment Fund (3)	N/A	N/A

NOTES:

- (1) The rates of return used in the Sharpe ratio calculations are the monthly rates of return provided by the investing agencies and the University of Texas/Texas A&M University Investment Management Company (UTIMCO).
- (2) The Permanent School Fund – General Land Office (GLO) invests solely in real estate and cash; therefore, it is not appropriate to use GLO's risk-adjusted return as measured by the Sharpe ratio in comparison to the other funds.
- (3) The Economic Stabilization Investment Fund does not yet have five years of returns to calculate this average.

SOURCE: Investing agencies; the University of Texas Investment Management Company.

FIGURE 7
PORTION OF ASSETS MANAGED INTERNALLY AND EXTERNALLY, FISCAL YEARS 2016 AND 2017

FUND	2016		2017	
	INTERNAL	EXTERNAL	INTERNAL	EXTERNAL
Teacher Retirement System Pension Trust Fund	75.0%	25.0%	73.6%	26.4%
Permanent School Fund – Texas Education Agency	42.1%	57.9%	39.5%	60.5%
Permanent School Fund – General Land Office (1)	8.8%	91.2%	9.1%	90.9%
Employees Retirement System Pension Trust Fund	63.3%	36.7%	61.0%	39.0%
Permanent University Fund	5.3%	94.7%	6.1%	93.9%
Permanent Health Fund (2)	4.8%	95.2%	4.2%	95.8%
Tobacco Settlement Permanent Trust Fund	0.0%	100.0%	0.0%	100.0%
Texas Guaranteed Tuition Plan Fund	0.0%	100.0%	0.0%	100.0%
Permanent Public Health Fund	0.0%	100.0%	0.0%	100.0%
National Research University Fund	0.0%	100.0%	0.0%	100.0%
Economic Stabilization Investment Fund	0.0%	100.0%	31.5%	68.5%

NOTES:

(1) Permanent School Fund – General Land Office percentages represent the management of real estate only.

(2) The University of Texas – Permanent Health Fund assets are invested in the University of Texas System General Endowment Fund. The percentages shown represent the allocation of the endowment's assets

SOURCES: Investing agencies; the University of Texas/Texas A&M University Investment Management Company.

USE OF EXTERNAL MANAGERS OR ADVISORS FOR INVESTMENTS

Each of the funds varies in its use of external managers or advisors to invest its assets. **Figure 7** shows the portion of assets managed internally and externally for fiscal years 2016 and 2017.

ACRONYMS

The following acronyms are used throughout **Appendices B to D**:

The University of Texas System – UT

Texas Education Agency – TEA

General Land Office – GLO

State Board of Education – SBOE

School Land Board – SLB

Employees Retirement System – ERS

Teacher Retirement System – TRS

Comptroller of Public Accounts – CPA

Permanent School Fund – PSF

Permanent University Fund – PUF

Permanent Health Fund – PHF

Tobacco Settlement Fund – TSF

Texas Guaranteed Tuition Plan Fund – TGTF

Permanent Public Health Fund – PPHF

National Research University Fund – NRUF

APPENDIX A – AUTHORIZING STATUTE

SECTION 1. Chapter 322, Texas Government Code, is amended by adding Section 322.014 to read as follows:

Sec. 322.014. REPORT ON MAJOR INVESTMENT FUNDS.

- (a) In this section, “state investment fund” means any investment fund administered by or under a contract with any state governmental entity, including a fund:
- (1) established by statute or by the Texas Constitution; or
 - (2) administered by or under a contract with:
 - (A) a public retirement system as defined by Section 802.001, Government Code, that provides service retirement, disability retirement, or death benefits for officers or employees of the state;
 - (B) an institution of higher education as defined by Section 61.003, Texas Education Code; or
 - (C) any other entity that is part of state government.
- (b) The Legislative Budget Board shall evaluate and publish an annual report on the risk-adjusted performance of each state investment fund that in the opinion of the board contains a relatively large amount of assets belonging to or administered by the state. The board in its report shall:
- (1) compare the risk-adjusted performance of the funds; and
 - (2) examine the risk-adjusted performance, within and among the funds, of similar asset classes and comparable portfolios within asset classes.
- (c) Each state governmental entity that administers a state investment fund and each person that administers a state investment fund under contract shall provide the board with the information the board requests regarding the performance of the fund.

(d) The board shall publish the annual report in a format and using terminology that a person without technical investment expertise can understand.

APPENDIX B – MAJOR STATE INVESTMENT FUNDS

TEACHER RETIREMENT SYSTEM – PENSION TRUST FUND

FUND PURPOSE

The Teacher Retirement System of Texas (TRS) administers a defined benefit plan that is a qualified pension trust fund pursuant to the U.S. Internal Revenue Code, Section 401(a). The pension trust fund provides service and disability retirement, and death and survivor benefits to eligible employees of public school districts and institutions of higher education in Texas and their beneficiaries.

FUND CONTRIBUTIONS

Member contributions, state contributions, reporting entity contributions, member reinstatements, and investment income increased the fund's value during fiscal year 2017. The Texas Constitution requires the Legislature to establish a member contribution rate of no less than 6.0 percent of the member's annual compensation and a state contribution rate of 6.0 percent to 10.0 percent of the aggregate annual compensation of all members of the system during that fiscal year. For fiscal year 2017, the member contribution rate was 7.7 percent, an increase from the 6.7 percent rate during fiscal year 2015. The state contribution rate for fiscal year 2015 was 6.8 percent.

Fiscal year 2017 total contributions increased by \$18,472.3 million, or 354.9 percent, from fiscal year 2015, primarily due to \$17,079.8 million in investment income compared to a loss of \$412.8 million during fiscal year 2015. For fiscal year 2017, member contributions were \$3,242.6 million, nonemployer contributing entity contributions were \$1,698.0 million, participating employer contributions were \$1,588.3 million, and other revenue was \$81.4 million. For fiscal year 2017, investment income resulted in a gain of \$17,079.8 million to the fund.

FUND DISTRIBUTIONS

Deductions from the fund predominantly are retirement, death, and survivor benefits. During fiscal year 2017, the fund paid \$9,872.1 million for benefits, \$420.4 million for members refunding their accounts, and \$44.2 million for other expenses (net of investing activity expenses). For fiscal year 2017, fund distributions totaled \$10,336.7 million.

INVESTMENT OBJECTIVE

The TRS Board of Trustees governs the investment process by adopting investment policies and objectives, which define the fund's strategic investment initiatives, and by monitoring performance to measure the results of tactical and strategic investment strategies. The total investment portfolio is structured to control risk through diversification of asset classes and to achieve a long-term rate of return that exceeds the assumed actuarial rate of return adopted by the board. The rate also is structured to exceed the long-term rate of inflation by an annualized 5.0 percent and to exceed a composite index composed of the respective long-term, normal asset mix weighting of the major asset classes, operating within the defined risk parameters for the various asset classes. Investment decisions must adhere to the prudent person standard. For fiscal year 2018, the board decreased its investment of return assumption from 8.0 percent to 7.25 percent to represent lower anticipated future returns. This change is based on the results of an August 31, 2017, Experience Study and the current asset allocation, which includes 46.0 percent public equity, 19.5 percent real return, 16.9 percent stable value, 12.6 percent private equity, and 5.0 percent risk parity as of August 31, 2017.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

The TRS Board of Trustees holds system assets in trust and oversees the investment of the system's funds in accordance with applicable constitutional and statutory provisions. The board is composed of nine trustees who are appointed by the Governor to staggered terms of six years. Three trustees are direct appointments. Two trustees are appointed from a list prepared by the State Board of Education. Two trustees are appointed by the Governor from the three public school district active member candidates nominated for each position by employees of public school districts. One trustee is appointed from the three higher education active member candidates nominated by employees of institutions of higher education. One trustee is appointed from the three retired member candidates nominated by retired TRS members. A majority of the board is required to have financial expertise, and the board is assisted by outside investment consultants and internal and external legal counsel. Appointments are

subject to confirmation by the Senate. Board member terms expire August 31 of odd-numbered years.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to TRS, internal staff manages 73.6 percent of TRS assets; the remaining 26.4 percent are managed externally. External management of funds began in August 2008.

INVESTMENT COSTS

The cost of investing the funds for fiscal year 2017 was \$217.9 million, or 15 basis points (0.15 percent) of the net assets held in trust for pension benefits at the end of fiscal year 2015. The investment cost consists of \$48.7 million in administrative investing activity expenses. External investment costs include fees paid to external managers and do not include transaction costs on investments. These costs were \$217.9 million for fiscal year 2017.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, passed the following bills that affect the TRS Pension Trust Fund:

- **Senate Bill 1663 – TRS Administration of Systems and Programs.** The legislation amends and clarifies various statutes governing TRS administration, including changes related to contributions, benefits, late fees, eligibility, reporting, and creditable service. The legislation also grants additional authority for the board's investment decisions and establishes a Sunset review for TRS in 2025;
- **Senate Bill 1664 – TRS Administration of Systems and Programs.** The legislation amends and clarifies the governing statutes of TRS, including provisions related to U.S. Internal Revenue Service Code compliance, statutory corrections, and certain benefit changes. The legislation also provides TRS members additional time to purchase sick and personal leave credit at retirement, and clarifies the statutory provision that board certifications of the state contribution to the Optional Retirement Program refer to the Higher Education Coordinating Board rather than the Teacher Retirement System Board; and
- **Senate Bill 1665 – Investment Authority of TRS.** The legislation clarifies and extends authorization for the use of derivatives and external managers in the

investment of Pension Trust Fund assets, and repeals the Sunset legislation on these authorities.

PERMANENT SCHOOL FUND – TEXAS EDUCATION AGENCY

FUND PURPOSE

The Permanent School Fund (PSF) was established expressly for the benefit of funding Texas public schools. A total return distribution rate, which was 3.7 percent for fiscal year 2017, and 25.0 percent of the state's motor fuel tax revenues are transferred to the Available School Fund (ASF). Monies from the fund are distributed to local public school districts based on the average daily attendance of public school students.

FUND CONTRIBUTIONS

The General Land Office (GLO) manages the PSF's real estate assets. GLO adds proceeds from the sale of PSF land, royalties, and other earnings annually to the fund. In addition to these deposits, GLO transfers an authorized amount set by the State Land Board (SLB) each year to the Texas Education Agency (TEA). According to TEA, GLO transferred \$200.0 million to the PSF during fiscal year 2017.

FUND DISTRIBUTIONS

The fund calculates its annual distribution to the ASF using a total return methodology, established by constitutional amendment during fiscal year 2003. Distribution rates are set by a two-thirds vote of the State Board of Education (SBOE). If the SBOE does not set the rate before the start of the next legislative session, then the Legislature will set the distribution rate. The distribution rate cannot exceed 6.0 percent of the total market value, and the total distribution during the previous 10 years cannot exceed the total return for the same period. The distribution rate was set at 3.7 percent for fiscal year 2017. During fiscal year 2017, \$1,056.4 million was transferred to the ASF.

INVESTMENT OBJECTIVE

The investment objective, according to TEA, is long-term and focused on balancing the benefits fairly while preserving the real per-capita value of the PSF. Investment decisions adhere to the prudent person rule, and asset class allocations are adjusted accordingly to meet the fund's objectives.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

The Texas Constitution assigns control of PSF assets to the SBOE, and administrative duties related to the PSF reside with the Commissioner of Education and TEA staff. SBOE members are elected from 15 single-member districts, and the Governor designates the chairman. No board members are required to have experience in investment management.

The SBOE appoints a committee of investment advisors to provide independent review of the fund's investment policies, procedures, and nature of investments. Each member of the SBOE appoints a single member to the committee, and these advisors serve for as long as the SBOE members choose.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to TEA, approximately 60.5 percent of PSF assets were managed externally during fiscal year 2017. Independent firms are used to invest funds, provide custodial and accounting services, provide securities lending services, offer advice regarding asset allocation, and evaluate investment performance. TEA reports that external managers are used to manage international equities and absolute-return investments.

INVESTMENT COSTS

According to TEA, the cost of administering the fund was \$23.2 million, or 7 basis points (0.07 percent) of the ending fund balance for fiscal year 2017. This cost includes \$22.6 million of internal investment expenses and \$540,000 of external investment expenses. In addition to standard investment salaries, costs, and allocated agency overhead, TEA reports that investment expenses included costs associated with accounting, information technology, compliance and support staff, and fees paid for external management.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, passed the following bill that affects the PSF:

- **Senate Bill 1480 – Guarantee of School District and Charter District Bonds by the Permanent School Fund.** The legislation applies the available capacity for charter districts to the total capacity of the bond guarantee program, based on the number of students enrolled in charter schools as a percentage of all public school students. The increase of charter bond guarantee capacity would be phased in across five years.

PERMANENT SCHOOL FUND – GENERAL LAND OFFICE

FUND PURPOSE

The School Land Board (SLB) and the Commissioner of the General Land Office (GLO) are authorized to manage the state-owned lands that are dedicated to the Permanent School Fund (PSF). The funds are managed through the Real Estate Special Fund Account (RESFA) and can be used to acquire real assets and to protect, maintain, and enhance the value of the public school land. The real assets portfolio of the PSF is limited by statute to no more than 15.0 percent of the fund's total market value.

FUND CONTRIBUTIONS

Contributions to the RESFA include revenue from school land sales, oil and gas royalties, surface damage fees, return of capital on real assets investments, mineral lease bonus payments, and various other sources. According to GLO, \$1,977.2 million was added to the RESFA during fiscal year 2017.

FUND DISTRIBUTIONS

The SLB authorizes the RESFA distribution to the PSF annually. According to GLO, during fiscal year 2017, \$200.0 million was distributed to the PSF. During fiscal year 2017, the SLB passed a resolution to distribute \$300.0 million from the PSF to the Available School Fund during the 2018–19 biennium.

INVESTMENT OBJECTIVE

The primary investment objective, according to GLO and SLB, is to pursue a long-term strategy of investing in various real assets to produce gross total returns that exceed the returns of a blended composite benchmark. Investment decisions must adhere to the prudent investor standard.

According to the GLO, the agency can invest only in private-markets real assets investments. GLO is statutorily required to deposit cash that is designated for capital commitments to external investment managers into the state Treasury for investment in short-term, cash-equivalent investments, until the cash is called by the investment managers for investment. This structural delay can cause a significant amount of unfunded commitments in the form of cash at the state Treasury to accrue on a continuous basis, which can result in a substantial negative effect on the difference between gross returns including and excluding cash.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

The PSF real estate investment portfolio is managed through a combined effort of SLB, the Investment Advisory Committee (IAC), GLO staff, and external fund managers including a real assets investment advisor. SLB includes the Land Commissioner, an appointee of the Governor, and an appointee of the Attorney General. The IAC includes the GLO Deputy Commissioner of Funds Management, the General Counsel, the Deputy Commissioner of Asset Management, the Chief Clerk, and a member of SLB.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to GLO, 90.9 percent of the PSF real estate assets were managed externally for fiscal year 2017. External investment managers manage a portfolio of real assets in limited partnerships. The internally managed portfolio includes direct commercial real estate investments for areas in which GLO is the only investor, including raw land, industrial, and some mixed-use investments. GLO indicated that 100.0 percent of cash and short-term securities are managed externally by the Comptroller of Public Accounts, as required by statute.

INVESTMENT COSTS

According to GLO, total investment expenses for the year ending June 30, 2017, were \$40.7 million or 65 basis points (0.65 percent) of the ending fund balance. This amount includes \$3.8 million for direct internal costs, \$0.8 million in indirect internal expenses, and \$36.1 million for external costs. Internal investment expenses include cost for personnel and operating expenses relating to portfolio management, fees for legal services, procurement, and financial reporting. External expenses include management and incentive fees in accordance with limited partnership agreements.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, did not pass any legislation that affected the GLO-managed portion of the Permanent School Fund significantly.

EMPLOYEES RETIREMENT SYSTEM – PENSION TRUST FUND

FUND PURPOSE

The Legislature established the Employees Retirement System of Texas (ERS) in 1947. The agency is administered pursuant to the Texas Constitution. ERS provides a retirement and disability pension plan for state employees, law enforcement and custodial officers, elected state officials, and two classes of judges. The agency administers the trust funds with a fiduciary obligation to the members and retirees of the system who are its beneficiaries. The Employees Retirement System of Texas Plan, the Law Enforcement and Custodial Officer Supplemental Retirement Plan (LECOS), the Judicial Retirement System of Texas Plan One (JRS I), and the Judicial Retirement System of Texas Plan II (JRS II) are single-employer, defined-benefit pension plans. For investment purposes the trust funds are joined, but separate accounting records are maintained.

FUND CONTRIBUTIONS

Member and state contributions are made to the trust funds as a percentage of compensation set by state law. For ERS, the Texas Constitution requires that the state contribution must be from 6.0 percent to 10.0 percent, and the member contribution must be at least 6.0 percent. The Eighty-fourth Legislature, 2015, set the state contribution rate for fiscal year 2017 at 9.5 percent, with an additional 0.5 percent contribution rate from general state agencies. The fiscal year 2017 member contribution rate was set at 9.5 percent.

Members of LECOS are also members of ERS. The member contribution rate to LECOS was 0.5 percent for fiscal year 2017, and the state contribution rate was 0.5 percent.

JRS I is a pay-as-you-go plan that has no trust fund to receive contributions. Member contributions of 9.5 percent for fiscal year 2017 are deposited as unappropriated receipts in the state's General Revenue Fund. Annuity payments and refunds for this plan are appropriated each biennium; therefore, the fund has no invested assets. Contributions to JRS II are set by general law and the General Appropriations Act. For fiscal year 2017, the member contribution rate was 7.5 percent, and the state contribution rate was set at 15.663 percent.

According to ERS, total fund contributions for fiscal year 2017 were \$1,440.3 million, an increase of 41.8 percent from the fiscal year 2015 contributions of \$1,015.7 million.

FUND DISTRIBUTIONS

Distributions from the pension trust fund are based on benefit payments owed and according to ERS, equaled \$2,500.7 million for fiscal year 2017, an 11.8 percent increase from the fiscal year 2015 distributions of \$2,237.7 million.

INVESTMENT OBJECTIVE

The primary investment objective, outlined by ERS in the Comprehensive Annual Financial Report, is to earn a rate of return that ensures payments due to members and their beneficiaries at a reasonable cost to members and taxpayers. The investment policy is structured around maximizing return while maintaining the safety of principal, decreasing risk through diversification, and managing costs associated with implementation. The Board of Trustees of ERS sets a long-term asset allocation target that is adjusted to meet the needs of the plan and the beneficiaries. Investment decisions must adhere to the duty of care specified in the Texas Government Code, Section 815.307.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

The Board of Trustees has general responsibility for investment decisions. Six members serve on the board: three members are elected by participating state employees, one member is appointed by the Governor, one is appointed by the Chief Justice of the Supreme Court of Texas, and one is appointed by the Speaker of the House of Representatives. The board selects external investment managers and appoints an investment advisory committee. The committee members are investment professionals who are required to meet at least quarterly to review ERS investments. An independent consultant also is retained to evaluate and analyze investment results.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to ERS, during fiscal year 2015, staff received external counsel for 39.0 percent of invested funds.

INVESTMENT COSTS

According to ERS, the cost of investing the funds was \$35.3 million, or 13 basis points (0.13 percent) of the ending fund balance, for fiscal year 2017. This amount includes \$24.2 million in direct internal expenses and \$11.1 million in external expenses. Internal investment costs included expenses for materials and supplies, rentals, salaries and wages, professional fees and services, and other operating expenses. External investment expenses do not include the management fees paid for alternative investments.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, passed the following bill affecting the ERS Pension Trust Fund:

- **Senate Bill 301 – Employees Retirement System Sunset Review.** The legislation changes the timing of actuarial experience studies from every five years to every four years, requires additional reporting regarding alternative investments, and requires a new process enabling members to participate directly in Group Benefits Program benefit determinations. Provisions in the legislation also require training for board members and encourage the use of negotiated rule making and alternative procedures for dispute resolution.

UNIVERSITY OF TEXAS SYSTEM – PERMANENT UNIVERSITY FUND

FUND PURPOSE

The Permanent University Fund (PUF) is a public endowment established by the Texas Constitution in 1876. The PUF contributes to the support of most institutions in the University of Texas (UT) System and the Texas A&M University (TAMU) System. Distributions from the PUF and all surface lease income are deposited in the Available University Fund (AUF) for the benefit of the eligible institutions.

FUND CONTRIBUTIONS

Mineral and other incomes are added annually to the fund. According to the UT System, \$688.7 million in income earned by PUF lands was contributed to the PUF during fiscal year 2017. This amount represents a 14.6 percent decrease from the fiscal year 2015 contribution of \$806.7 million.

FUND DISTRIBUTIONS

The PUF is a total-return fund, and amounts from income and from changes in asset values may be distributed. PUF distributions are intended to provide a predictable stream of distributions and ensure that the inflation-adjusted value of distributions is maintained. The UT System Board of Regents has established an annual distribution to the AUF of 4.75 percent of the previous three years' average net asset value of the PUF. However, for fiscal year 2012, due to a record year of PUF lands' lease sales and the constrained state budget for the 2012–13 biennium, the UT System board increased the annual distribution to an amount equivalent to 5.50 percent of the preceding 12 quarters' average net asset value of the PUF. According to the University of Texas/Texas A&M Investment Management Company (UTIMCO), \$839.4 million was distributed to the AUF during fiscal year 2017, an increase of 9.9 percent from the fiscal year 2015 distribution of \$763.6 million.

INVESTMENT OBJECTIVE

According to UTIMCO, the PUF's primary investment objective is to preserve the purchasing power of fund assets and annual distributions by earning an average annual real return across rolling 10-year periods or longer at least equal to the target distribution rate of the PUF after all expenses. The objective is dependent on the fund's ability to generate high returns during periods of low inflation that will offset lower returns during years when the capital markets

underperform the rate of inflation. Investment decisions must adhere to the prudent investor rule.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

The Texas Constitution assigns responsibility for managing the PUF's lands and investment to the UT System Board of Regents. UTIMCO is the PUF's investment manager. UTIMCO is the first external management corporation formed by a public university. The UTIMCO Board of Directors includes three members of the UT System Board of Regents, the Chancellor of the UT System, and five outside investment professionals.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to the UT System, approximately 93.9 percent of the PUF assets were managed externally during fiscal year 2017.

INVESTMENT COSTS

According to the UT System, total investment expenses were \$71.5 million, or 36 basis points (0.36 percent), of the ending fund balance for fiscal year 2017. This amount includes \$8.5 million for direct internal costs, \$9.1 million for indirect internal costs, and \$53.9 million for external expenses. Investment expenses included costs for management fees and fees related to custodial, auditing, consulting, performance, and risk management. Investment costs for fiscal year 2015 were \$52.5 million or 0.30 percent of the fund balance.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, did not pass any legislation that affected the PUF significantly.

UNIVERSITY OF TEXAS SYSTEM – PERMANENT HEALTH FUND

FUND PURPOSE

The Permanent Health Fund (PHF) is a collection of public endowments to support research and other programs at higher education institutions. The consolidated fund includes the Permanent Health Fund for Higher Education, Permanent Funds for Health-related Institutions, and the University of Texas at El Paso. The Permanent Fund for Higher Education Nursing, Allied Health and Other Health Related Programs, and the Permanent Fund for Minority Health Research and Education were transferred to the Comptroller of Public Accounts (CPA) during fiscal year 2002. The endowments were established with proceeds from a 1998 comprehensive tobacco settlement between the State and corporations within the tobacco industry.

FUND CONTRIBUTIONS

Initially, \$890.0 million of endowment corpus was transferred on August 30, 1999, and another \$25.0 million was transferred during fiscal year 2000. The Permanent Fund for Higher Education Nursing, Allied Health and Other Health Related Programs, and the Permanent Fund for Minority Health Research and Education totaling \$88.2 million, were transferred to CPA during fiscal year 2002. No contributions have been made since then.

FUND DISTRIBUTIONS

The PHF is a total-return fund. Distributions from income and capital gains may be distributed. The UT System Board of Regents established an annual distribution of 4.5 percent of the beginning value of the PHE. Distributions are increased annually by the average inflation rate, measured by the Consumer Price Index, provided that the distribution rate remains from 3.5 percent to 5.5 percent of the fund's market value. According to the UT System, \$50.2 million was transferred to eligible institutions during fiscal year 2017.

INVESTMENT OBJECTIVE

According to the University of Texas Investment Management Company (UTIMCO), the PHF's primary investment objective is to preserve the purchasing power of assets and annual distributions by earning an average annual real return across rolling 10-year periods or longer at least equal to the target distribution rate, plus the annual expected expense.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

The Seventy-sixth Legislature, 1999, designated the UT System Board of Regents as the administrator of the fund. The board designated UTIMCO as the investment manager. UTIMCO is the first external management corporation formed by a public university. The UTIMCO Board of Directors includes three members of the UT System Board, the Chancellor of the UT System, and five outside investment professionals. The Long Term Fund and the PHF are invested in shares of the General Endowment Fund (GEF), an internal mutual fund managed by UTIMCO.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

PHF assets are invested in the UT System's GEF. According to the UT System, 95.8 percent of GEF assets were managed externally during fiscal year 2017.

INVESTMENT COSTS

According to the UT System, total investment expenses for fiscal year 2015 were \$6.3 million, or 55 basis points (0.55 percent) of the ending fund balance. This amount includes \$0.5 million in direct internal investment expenses, \$0.8 million in indirect internal investment expenses, and a \$5.0 million allocation from the GEF. The investment expenses included costs for management fees, custodian services, and audit fees.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session 2017, did not pass any legislation that affected the Permanent Health Fund significantly.

COMPTROLLER OF PUBLIC ACCOUNTS – TOBACCO SETTLEMENT PERMANENT TRUST FUND

FUND PURPOSE

The Tobacco Settlement Permanent Trust is an endowment to support counties with unreimbursed healthcare expenditures. The Seventy-sixth Legislature, 1999, established the endowment with proceeds from the 1998 comprehensive tobacco settlement between the State and companies within the tobacco industry. Although the Comptroller of Public Accounts (CPA) manages the investments, the endowment is classified as a private-purpose trust fund.

FUND CONTRIBUTIONS

The initial contribution of tobacco settlement proceeds was made on March 1, 2000. According to CPA, \$1.683 billion was contributed to the fund through fiscal year 2003. No additional contributions are anticipated.

FUND DISTRIBUTIONS

Annual distributions, payable quarterly, are calculated as 3.5 percent multiplied by the 20-quarter, moving average value of the fund as of June 30 for distributions to be made the following fiscal year. The annual distribution may not exceed 7.0 percent of the average net fair market value of the investment assets. According to CPA, \$67.2 million was distributed during fiscal year 2017.

INVESTMENT OBJECTIVE

The fund's primary investment objective, according to CPA, achieves the following goals: provides a predictable stream of distributions; ensures that the inflation-adjusted value of distributions is maintained for the long term; ensures that the inflation-adjusted value of the corpus, after distributions and fund expenses, is maintained for the long term; and achieves the desired portfolio volatility and minimize negative risk through diversification and risk. The investment return objective of the fund is 6.0 percent. Investment decisions must adhere to the prudent investor rule.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

CPA, through the Texas Treasury Safekeeping Trust Company, is responsible for management and oversight of the fund. An investment advisory committee composed of members from participating entities advises CPA and approves rules governing CPA's duties and responsibilities

for the investment of and distributions from the fund. The advisory committee is composed of 11 appointed members. The Comptroller appoints one member. One member each is appointed by the political subdivisions that, during the year preceding the appointment, received the largest and second largest annual distributions from the account. Four members are appointed by the Texas Conference of Urban Counties from subdivisions that received the third largest through the twelfth largest annual distributions during the preceding year. The County Judges and Commissioners Association of Texas, the North and East Texas County Judges and Commissioners Association, the South Texas County Judges and Commissioners Association, and the West Texas County Judges and Commissioners Association each appoint one member.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to CPA, 100.0 percent of the fund's assets are managed externally.

INVESTMENT COSTS

According to CPA, total investment expenses for fiscal year 2017 were \$6.8 million, or 28 basis points (0.28 percent) of the ending fund balance. This amount includes \$5.2 million for direct internal costs and \$1.6 million for external costs. These expenses included costs for salaries, consulting and auditing services, information technology systems, compliance monitoring, overhead, risk-management services, reporting and investment accounting, and management services.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, did not pass any legislation that affected the Permanent Public Health Fund significantly.

TEXAS GUARANTEED TUITION PLAN FUND

FUND PURPOSE

The Texas Guaranteed Tuition Plan (TGTP), formerly called the Texas Tomorrow Fund, is a fully guaranteed prepaid tuition program, which began in January 1996. The Texas Prepaid Higher Tuition Board has closed the Texas Guaranteed Tuition Plan Fund for enrollment. The Texas Tuition Promise Fund went into effect September 1, 2008, and is accepting enrollment. The board's plan manager, OFI Private Investments, Inc., has invested the plan's assets in accordance with the board's investment policy.

FUND CONTRIBUTIONS

Existing member contributions are added annually to the Texas Guaranteed Tuition Plan fund. For fiscal year 2017, investment income resulted in a gain of \$14.3 million to the fund. According to the TGTP, investment income combined \$422,000 of other income, negative \$6.4 million actuarial change in future contract collections, and negative \$15.0 million in contract payments net of refunds of contract principal to result in a total fund contribution of negative \$6.7 million for fiscal year 2017.

FUND DISTRIBUTIONS

According to TGTP, \$155.6 million was distributed to colleges for tuition payments during fiscal year 2017. An additional \$1.4 million was distributed for administrative expenses, and \$26.4 million of earnings on cancelled mature contracts was refunded to contract purchasers. Due to a \$194.8 million actuarial decrease in the value of future contract benefits, net fund distributions were negative \$11.4 million for fiscal year 2017.

According to TGTP's 2017 Actuary's Report on Program Soundness, the plan's liabilities exceed the value of its assets as of August 31, 2017, by \$613.8 million, an increase of \$78.3 million from the fiscal year 2015 unfunded liability of \$535.5 million. The funded ratio of the plan is 50.7 percent. Based on actuarial assumptions for expected income and disbursements, TGTP is projected to deplete available cash to pay benefits during fiscal year 2020, and final plan benefits are estimated to be paid in 2037.

INVESTMENT OBJECTIVE

According to the TGTP, the fund's investment objective is to accumulate sufficient funds to fully meet current and future obligations to fund participants. To meet this goal, the Texas Prepaid Higher Education Tuition Board has developed the

following four general objectives: (1) preserve the purchasing power of the fund by achieving investment earnings in excess of inflation; (2) protect the fund principal from market value erosion; (3) keep return volatility low by employing prudent fund diversification; and (4) invest assets in compliance with the prudent person standard.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

The Texas Prepaid Higher Education Tuition Board directs the investment policies that are carried out by investment managers. The board is chaired by the Comptroller of Public Accounts and includes two members appointed by the Governor and four members appointed by the Lieutenant Governor. At least two of the Lieutenant Governor's appointees are from a list of individuals recommended by the Speaker of the House of Representatives.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to the TGTP, 100.0 percent of the fund's assets are managed externally.

INVESTMENT COSTS

According to the TGTP, the costs of investing the fund for fiscal year 2017 were \$1.3 million, or 20 basis points (0.20 percent) of the ending fund balance. This amount consists of external investment expenses and includes securities lending fees.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, did not pass any legislation that affected the TGTP significantly.

COMPTROLLER OF PUBLIC ACCOUNTS – PERMANENT PUBLIC HEALTH FUND

FUND PURPOSE

The Permanent Public Health Fund (PPHF) is a collection of public endowments to support state-administered health-related programs. The consolidated fund includes the Permanent Tobacco Education and Enforcement Fund, the Permanent Children and Public Health Fund, the Permanent EMS and Trauma Care Fund, the Permanent Rural Health Facility Capital Fund, and the Permanent Small Urban Hospitals Funds. The endowments were established with proceeds from the 1998 comprehensive tobacco settlement between the State and companies within the tobacco industry.

FUND CONTRIBUTIONS

Initially, \$475.0 million of tobacco settlement proceeds were contributed during fiscal year 2000. No additional tobacco proceeds have been added to the fund.

FUND DISTRIBUTIONS

Annual distributions, payable quarterly, are calculated as 3.5 percent multiplied by the 20-quarter, moving average value of the fund as of June 30 for distributions to be made the following fiscal year. According to the Comptroller of Public Accounts (CPA), \$89.7 million was distributed during fiscal year 2017. Of this amount, \$6.0 million was distributed to the accounts to fund the relevant programs, and \$83.7 million was distributed to the Cancer Prevention and Research Institute of Texas to pay debt service.

INVESTMENT OBJECTIVE

According to CPA, the fund's primary investment objective achieves the following goals: provides a predictable stream of distributions ensures that the inflation-adjusted value of distributions is maintained for the long term; ensures that the inflation-adjusted value of the corpus, after distributions and fund expenses, is maintained for the long term; and achieves the desired portfolio volatility and minimizes downside risk through diversification and risk. The investment return objective of the fund is 6.0 percent across rolling 10-year periods or longer. Investment decisions must adhere to the prudent investor rule.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

CPA, through the Texas Treasury Safekeeping Trust Company, is responsible for management and oversight of the fund.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to CPA, 100.0 percent of the fund assets are externally managed.

INVESTMENT COSTS

According to CPA, the costs of administering the fund for fiscal year 2017 were \$496,000, or 28 basis points (0.28 percent) of the ending fund balance. Internal and external investment expenses included costs for consulting, auditing, information technology systems, compliance monitoring, overhead, risk management, reporting, investment accounting, investment management, and fees paid to money managers and custodians.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, passed the following bill affecting the Permanent Public Health Fund:

- **House Bill 3849 – Relating to the establishment and re-establishment of funds and accounts, the dedication and rededication of revenue, and the exemption of unappropriated money from use for general governmental purposes.** The legislation made four accounts within the PPHF available for budget certification and changed the interest deposit from these funds to the General Revenue Fund.

COMPTROLLER OF PUBLIC ACCOUNTS – NATIONAL RESEARCH UNIVERSITY FUND

FUND PURPOSE

Proposition 4, 2009, amended the Texas Constitution, Article VII, Section 20, which established the National Research University Fund (NRUF). House Bill 51, Eighty-first Legislature, Regular Session, 2009, also transferred the corpus of the Permanent Higher Education Fund, which was intended to be an endowment fund supporting higher education institutions that were not eligible for distributions from the Permanent University Fund, to the NRUF. The purpose of the NRUF is to provide a dedicated, independent, and equitable source of funding to enable emerging research universities in Texas to achieve national prominence as major research universities.

FUND CONTRIBUTIONS

All assets from the Permanent Higher Education Fund, \$546.3 million, were transferred to the NRUF in January 2010. For fiscal year 2017, \$506,801 was contributed to the fund.

FUND DISTRIBUTIONS

The Texas Higher Education Coordinating Board (THECB) is tasked with developing eligibility rules for institutions to receive NRUF distributions. THECB also must certify during each even-numbered year which institutions have satisfied those standards. The Texas Constitution, Article VII, Section 20(f), requires that the amount appropriated from the fund during any fiscal year may not exceed 7.0 percent of the average net fair-market value of the fund's investment assets. As of August 2017, the University of Texas at Dallas, Texas Tech University, and the University of Houston are eligible to receive NRUF distributions. Distributions of \$19.1 million were made from the NRUF during fiscal year 2017, an increase of 4.4 percent from the fiscal year 2015 distributions of \$18.3 million.

INVESTMENT OBJECTIVE

The investment objective of the NRUF is to earn a long-term annual rate of return of 8.0 percent to achieve the following goals: provide a predictable stream of distributions; ensure that the inflation-adjusted value of distributions is maintained for the long term; and ensure that the inflation-adjusted value of the corpus after distributions is maintained for the long term.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

CPA, through the Texas Treasury Safekeeping Trust Company, is responsible for management and oversight of the fund.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to CPA, 100.0 percent of the fund assets are managed externally.

INVESTMENT COSTS

According to CPA, the costs of administrating the fund for fiscal year 2017 were \$1.9 million, or 27 basis points (0.27 percent) of the ending fund balance. Direct internal expenses were \$1.5 million, and external investment expenses were \$0.5 million for fiscal year 2017. Internal and external investment expenses included costs for consulting, auditing, information technology systems, compliance monitoring, overhead, risk management, reporting, investment accounting, investment management, and fees paid to money managers and custodians.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, did not pass any legislation that affected the NRUF significantly.

COMPTROLLER OF PUBLIC ACCOUNTS – TEXAS ECONOMIC STABILIZATION INVESTMENT FUND

FUND PURPOSE

Proposition 1, 1988, amended the Texas Constitution, Article III, Section 49-g, which established the Economic Stabilization Fund (ESF), commonly known as the Rainy Day Fund. To maintain the ESF's purchasing power during historically low interest rates, the Eighty-fourth Legislature, 2015, authorized investing the portion of the ESF balance that is greater than a fund balance sufficient to meet cash-flow requirements through the Texas Economic Stabilization Investment Fund.

FUND CONTRIBUTIONS

House Bill 903, Eighty-fourth Legislature, 2015, directed the Comptroller of Public Accounts (CPA) to invest a percentage of the ESF balance that exceeds the amount of the sufficient fund balance during a state fiscal biennium pursuant to the Texas Government Code, Section 316.092. For fiscal year 2017, \$475.0 million was contributed to the Texas Economic Stabilization Investment Fund.

FUND DISTRIBUTIONS

The Texas Constitution, Article III, Section 49-g, specifies that allowable distributions from the ESF and, thus, distributions from the Texas Economic Stabilization Investment Fund, include funding a deficit during the current biennium, a revenue decrease for the following biennium as estimated by the CPA with a vote of three-fifths of legislative members present, and for any time or purpose with a vote of two-thirds of legislative members present. No distributions were made from the ESF or the Texas Economic Stabilization Investment Fund during fiscal year 2017.

INVESTMENT OBJECTIVE

Throughout most of its history, ESF revenue was invested in short-term, low-yield, highly liquid instruments, to keep the funds readily available if needed. Funds invested in the Texas Economic Stabilization Investment Fund are intended to provide safe returns and prevent the erosion of the ESF's purchasing power due to inflation. The fund is subject to a prudent investor standard.

INVESTMENT AND OVERSIGHT RESPONSIBILITY

CPA, through the Texas Treasury Safekeeping Trust Company, is responsible for management and oversight of the fund.

PERCENTAGE OF ASSETS MANAGED OR ADVISED EXTERNALLY

According to CPA, 100.0 percent of the fund assets are managed externally.

INVESTMENT COSTS

According to CPA, the costs of administrating the fund for fiscal year 2017 were \$2.1 million, or 4 basis points (0.4 percent) of the ending fund balance. Direct internal expenses were \$2.1 million.

LEGISLATIVE ACTIONS

The Eighty-fifth Legislature, Regular Session, 2017, did not pass any legislation that affected the Texas Economic Stabilization Investment Fund significantly.

APPENDIX C – GLOSSARY

ALTERNATIVE INVESTMENTS

Investment opportunities that have not been identified by traditional public or fixed-income capital markets. Also may be defined as private, nontraditional, illiquid investments. Alternative investments are accomplished almost exclusively through private offerings of debt equity interest, and often are made through entities organized as limited partnerships. Examples of alternative investments include international and emerging market stocks, hedge funds, event-driven strategies, and illiquid equity investments such as venture capital, mezzanine financing, private equity and buyout investing, real estate, and oil and gas.

ASSET ALLOCATION

The process of diversifying an investment portfolio among asset classes (e.g., stocks, bonds, real estate, etc.) to achieve a particular investment objective. Asset allocation is used to anticipate the long-term direction of markets and to deploy assets in a way that will result in superior performance in the context of acceptable risks. Studies have shown that asset allocation has a greater effect on investment performance than do the selection of investment managers or individual securities.

BASIS POINT

The smallest measure used in quoting investment performance or fees. One basis point is 0.01 percent. Thus, 100 basis points equals 1.0 percent. A bond's yield that increased from 8.00 percent to 8.50 percent would have increased 50 basis points. A management fee of 25 basis points represents 0.25 percent of the value of the assets managed.

BENCHMARK

A reference that serves as a standard by which others may be measured. In the investment environment, the benchmark may be a common economic or financial index, such as the Consumer Price Index or the Standard & Poor's 500 (S&P 500) Index.

BOND

A contract to pay a specified sum of money (the principal or face value) at a specified future date (maturity) plus interest paid at an agreed percentage of the principal. Maturity

typically is more than one year. The relationship between the bondholder and the issuer of the bonds is that of creditor and debtor. Thus, the holder has no corporate ownership privileges as stockholders do.

BROKER

A person who acts as an intermediary between a buyer and seller, usually charging a commission.

CASH EQUIVALENTS

Investment instruments have such high liquidity and safety that they are virtually as valuable as cash. They typically have a short maturity. Examples include a money market fund, Treasury Bills, and investments in a custodian bank's short-term investment fund (STIF) or similar fund. Such securities help to minimize risk during volatile market periods and to provide cash flow.

COMMON STOCK

Share in a public company or a privately held firm. Common stockholders typically have voting and dividend rights. In the event of corporate bankruptcy or other liquidation of assets, common stockholders are paid after secured and unsecured creditors, bond holders, and preferred stockholders.

CORPUS

The principal of a fund or estate; distinct from income or interest.

DIVERSIFICATION

The spreading of risk by investing in several individual investments or categories of investments, such as stocks, bonds, cash equivalents, and real estate.

ENDOWMENT

Funds given to an entity, such as a college or university, with donor-imposed restrictions that the funds are not to be expended but are to be invested for the purpose of producing income.

EQUITY INVESTMENT

Ownership interest processed by shareholders in a corporation.

EXTERNAL MANAGER

A person or firm that makes investment portfolio decisions and executes transactions independently, subject to the overall restrictions agreed upon by contract between the fiduciary for the fund and the external manager.

FIXED-INCOME INVESTMENTS

A security that pays a fixed rate of return in the form of interest or dividends over a specified period and includes government, corporate, and municipal bonds; preferred stocks; and certain mortgage investments. This asset class is expected to provide regular, predictable income and greater stability of market value than available from equity investments. It is advantageous in times of low inflation, but it does not protect holders against the decrease of buying power during increasing inflation because interest or dividend payments do not increase.

HEDGE/HEDGING

A strategy used to offset investment risk. A perfect hedge is one that eliminates the possibility of future gain or loss.

HEDGE FUND

A hedge fund typically is set up as a private investment partnership that is open to a limited number of investors. The portfolios typically are managed more aggressively and rely on advanced investment strategies to generate high returns. Hedge funds are not regulated by the U.S. Securities and Exchange Commission.

INDEX

A statistical composite that measures changes in the economy or in financial markets, often expressed in percentage changes from a base period. For example, the Consumer Price Index, which is composed of the prices of key goods and services, moves up or down as the rate of inflation changes. Other indexes measure the increases and decreases of the stock, bond, and other investment markets. Common indexes include the New York Stock Exchange Index and the Standard & Poor's 500 Index.

INVESTMENT ADVISOR

A person or service retained by the investing entity to provide investment advice for a fee. The advisors may present economic information such as expected changes in interest rates, current and future national or global

economic growth, and other factors that may affect the economy. Investment advisors also present industry information that may affect decisions in selecting specific securities. The advisor may specialize in a particular type of investment, such as emerging growth stocks or international stocks.

LARGE/MEDIUM/SMALL CAPS

Stocks of companies with market capitalization of \$500.0 million or less are small caps. Such stocks typically represent companies that are less well-established, but often are faster-growing than mid-caps or large caps. Medium-cap companies have a market capitalization of \$500.0 million to \$5.0 billion. Large caps have a capitalization of \$1.0 billion or more). Small caps often are more volatile than stocks of more well-established companies.

LIQUIDITY

The ease with which an asset can be converted to money. Also, the ability to buy or sell an asset quickly and in large volume without substantially affecting the price.

MATURITY

The date on which a debt's principal is to be repaid.

MEZZANINE FINANCING

Investment in the subordinated debt of privately owned companies. The debt holder participates in equity appreciation through conversion features such as rights, warrants, or options.

BANK OF AMERICA MERRILL LYNCH 3-MONTH U.S. TREASURY BILL INDEX

A benchmark that assumes that Treasury Bills are bought at the beginning of a period at market value and held to maturity. Upon maturity, it is assumed that additional bills are purchased at market value and again held until maturity. The rollover continues until the end of the period. The calculation includes the sum of the yields earned by the Treasury Bills.

MUTUAL FUND

Portfolio of securities professionally managed by the sponsoring management company or investment company that issues shares to investors. The major advantages of mutual funds are diversification, professional management, and ownership of a variety of securities with a minimal capital investment.

PORTFOLIO

A combined holding of more than one investment. The purpose of a portfolio is to decrease risk by diversification.

PRIVATE INVESTMENTS

Investment opportunities that have not been identified by traditional capital markets. Typically, more volatile than traditional securities and require strong due-diligence controls.

PRIVATE PLACEMENT

A securities issuance, which is exempt from registration requirements of the federal Securities Act of 1933. It typically involves the sale of stocks, bonds, or other investments directly to an institutional investor.

PRUDENT INVESTOR STANDARD

This standard provides that a board or fiduciary in making investments may acquire or retain any kind of investment that prudent investors, exercising reasonable care, skill, and caution, would acquire or retain considering the purposes, terms, distribution requirements, and other prevailing circumstances of the fund, taking into consideration the investment of all the assets of the fund rather than a single investment. Typically, this standard assumes that the board or fiduciary has investment knowledge and expertise, and provides broader investment authority than the prudent person standard.

PRUDENT PERSON STANDARD

A concept borne from the 1830 Massachusetts court decision of *Harvard College v. Armory* that described the duty owed by a trustee to beneficiaries: “All that can be required of a trustee to invest is, that he shall conduct himself faithfully and exercise sound discretion. He is to observe how men of prudence, discretion, and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, as well as the probable safety of the capital to be invested.”

RISK

In exchange for a return on investment, the investor may expose assets to possible losses. Risk is the probability or possibility of such losses. Risk is also often defined in terms of market volatility, or standard deviations of returns. The standard deviation is a statistical measure of portfolio risk, which reflects the average deviation of observations from

their sample mean. It is used as an estimate of risk because it measures how wide the range of returns typically is. The wider the range of returns, the higher the portfolio risk.

STANDARD & POOR'S 500

The Standard & Poor's (S&P) 500 Index measures the performance of the common stock of 500 of the largest U.S. corporations. The S&P 500 represents the aggregate market value changes relative to a base period of 500 stocks primarily traded on the New York Stock Exchange.

S&P 1500

The S&P 1500 Composite Index measures the performance of the top 1500 U.S. companies.

SECURITIES LENDING

A program in which institutional investors transfer their securities to broker-dealers and other borrowers in exchange for collateral and a promise by the borrower to return the identical securities. The collateral may consist of cash, securities, or letters of credit. The lender agrees to return the collateral to the borrower upon maturity of the loan and return of the borrowed securities.

TIME-WEIGHTED RATE OF RETURN

The total rate of return on an investment adjusted to eliminate the effect of timing of cash flows due to contributions and withdrawals, which are not controllable by investment managers.

TOTAL RETURN

The annual return on an investment including appreciation and interest or dividends. A total-return fund is indifferent to whether the return is generated by appreciation or ordinary income because it can spend from both categories.

VENTURE CAPITAL

Venture capital is an important source of financing for start-up companies or existing firms embarking on a new or turnaround ventures that entail some investment risk but offer the potential for above-average profits. Sources of venture capital include wealthy individual investors; subsidiaries of banks and other corporations organized as small business investment companies; and groups of investment banks and other financing sources that pool investments in venture capital funds or venture capital limited partnerships. Some venture capital sources invest only at a certain stage of entrepreneurship, such as the start-

up or seed money stages, the first-round or second-round phases that follow, or at the mezzanine level immediately preceding an initial public offering. In return for taking an investment risk, venture capitalists typically are rewarded with some combination of profits, preferred stock, royalties on sales, and capital appreciation of common shares.

VOLATILITY

The extent to which a security or market increases or decreases sharply in price within a short-term period.

YIELD

The annual return on investment from dividends or interest expressed as a percentage of either cost or current price. Yield is one component of return.

APPENDIX D – REFERENCES

The following investing agencies and institutions of higher education provided information included in this *Annual Report on Major State Investment Funds*:

- Teacher Retirement System (TRS);
- General Land Office – portion of Permanent School Fund (PSF–GLO);
- Texas Education Agency – portion of Permanent School Fund (PSF–TEA);
- Employees Retirement System (ERS);
- University of Texas System (UT System) –UT System Permanent University Fund (PUF) and UT System Permanent Health Fund (PHF); and
- Comptroller of Public Accounts (CPA) – Tobacco Settlement Permanent Trust (TSF), Texas Guaranteed Tuition Plan Fund (TGTP), Permanent Public Health Fund (PPHF), and Permanent Higher Education Fund (NRUF).