State of New Mexico
LEGISLATIVE FINANCE COMMITTEE

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LFC INVESTMENT REPORT FOR THE QUARTER ENDING JUNE 30, 2017

This report details the comparative investment performance of the three investment agencies: the Educational Retirement Board (ERB), the Public Employees Retirement Association (PERA), and the State Investment Council (SIC) which manages the land grant permanent fund (LGPF) and the severance tax permanent fund (STPF). This report derives agency performance and market environment information from the investment performance reports submitted by PERA, ERB, and SIC for the quarter ending June 30, 2017. Information from the Wilshire Trust Universe Comparison Service (TUCS) report is also included.

INVESTMENT PERFORMANCE HIGHLIGHTS

- In the last year, the aggregate value of the state's combined investment holdings for the pension and permanent funds grew by nearly $4 billion, or 8.9 percent, to end the quarter at $48.6 billion. ERB and PERA's fund balances grew 8.5 percent and 6.9 percent, respectively, and the aggregate value of the permanent funds managed by SIC grew 10.7 percent.
- Over fiscal year 2017, the investment funds' total returns ranged from 11 to 13 percent, and each agency outperformed their long-term targets for the one- and five-year periods.
- ERB, LGPF, and STPF's three-year returns were at or above the median based on percentile rankings in the Wilshire Trust Universe Comparison Service (TUCS) peer universe for public funds greater than $1 billion. The permanent funds ranked above the 50th percentile for the quarter and one-year periods. Both the permanent and pension funds ranked below the 50th percentile for the five- and ten-year periods.

MARKET ENVIRONMENT

The equities markets performed exceptionally well over FY17, with domestic and international equities returning between 18 percent to more than 20 percent. Real GDP growth improved this quarter at 3 percent, up from 2.1 percent last quarter, fueled by consumer and business spending. The U.S. unemployment rate decreased to 4.4 percent this quarter, down from 4.5 percent in the first quarter of 2017. The Federal Reserve increased the fed-funds rate in its March meeting by

0.25 percent, and the 10-year Treasury yield ended the quarter at 2.2 percent. Consumer prices accelerated this quarter with the consumer price index up 0.95 percent.

Market Environment as of June 30, 2017

Index Returns (%)	Quarter	1 Year	5 Years	10 Years
S&P 500	3.09	17.90	14.63	7.18
Wilshire 5000	2.95	18.54	14.61	7.29
Dow Jones Industrial	3.95	22.12	13.44	7.58
Citigroup Broad (BMI)	1.48	-0.28	2.22	4.58
MSCI EAFE (Net)	6.12	20.26	8.69	1.03
Barclays Govt/Credit	1.69	-0.41	2.29	4.57

The table above provides relevant performance benchmarks. Standard & Poor's 500 (S&P 500) and the Wilshire 5000 are seen as leading indicators of the U.S. equities market and are a common benchmark for the U.S. stock market. Based on these indicators, stock market returns were around 3 percent this quarter and about 18 percent for the year ending June 30, 2017. The Dow Jones Industrial Average is a price-weighted average of 30 significant stocks traded on the New York Stock Exchange and NASDAQ, and it includes companies such as General Electric, Exxon Mobil, and Microsoft. The Citigroup Broad Market Index (BMI) Global and the Morgan Stanley Capital International (MSCI) EAFE Index both provide a broad measure of the international equities market. The Barclays Capital U.S. Government/Credit Bond Index measures the performance of U.S. dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one-year.

PERFORMANCE VS. INTERNAL BENCHMARKS

Investment performance is often best considered in terms of full market cycles, which can be defined as a period of full bull-bear-bull periods generally lasting 4 to 5 years.[1] Due to the longer-term duration of a full market cycle, short-term performance (e.g. quarterly or annual) is often not fully indicative of a fund's overall performance, as the focus should generally be on longer-term returns.

Market strength in fiscal year 2017 produced significant returns on the state's investment funds, with PERA's investment returns at 11.1 percent, ERB at 12 percent, LGPF at 13 percent, and STPF at 12.8 percent. As of June 30, 3017, ERB's fund returns exceeded their interim policy targets for each period except the one-year, and LGPF returns exceeded the policy index for periods except the three-year. STPF returns exceeded the policy index for the quarter and one-year periods, but fell below the policy index for the three-, five-, and ten-year periods. PERA's fund returns fell below its policy index for all periods except the five-year. However, both the pension and

[1] Generally, full market cycles are a peak-to-peak period typically containing a price decline of at least 20 percent over at least a two-month period from the previous market peak, followed by a rebound that establishes a new, higher peak.

permanent funds' one- and five-year returns met or exceeded their long-term targets, which are 7.25 percent (PERA), 7.25 percent (ERB)[2], 7 percent (LGPF), and 6.75 percent (STPF).

Returns as of June 30, 2017 (Net of Fees)

	PERA		ERB		LGPF		STPF	
Returns (%)	**Fund**	**Policy Index**	**Fund**	**Policy Index**	**Fund**	**Policy Index**	**Fund**	**Policy Index**
Quarter	2.8	2.9	2.8	2.7	3.1	2.8	3.1	2.9
1-Year	11.1	11.7	12.0	12.1	13.0	11.5	12.8	11.7
3-Year	4.4	5.2	6.1	5.4	5.4	5.4	5.3	5.5
5-Year	8.5	8.5	8.7	7.8	8.9	8.8	8.6	8.8
10-Year	4.0	5.0	5.2	4.6	4.8	4.4	4.2	4.4

While investment return information displayed above represent the quarter, one-, three-, five-, and 10-year performance, "long-term" performance should really be considered over a span of 20 to 30 years, as the state's pension and permanent funds have investment strategies focused on the growth and preservation of the funds over a multi-decade horizon. Specifically, the pension funds operate under a dual mandate to generate income to pay current retiree benefits and to grow the principal of the fund to pay retiree benefits into the future. The permanent funds' investment goals are to grow the funds such that future generations may receive the same or greater benefits as current beneficiaries. These long-term goals are important to the funds' risk-to-return choices, particularly in making asset allocation decisions that drive fund returns over the very long term.

FUND ASSET VALUES

Fund balances grew over fiscal year 2017, as shown in the table below. All amounts displayed below are net-of-fees and represent annual growth in fund balances less any distributions. The aggregate value of all four of the state's investment funds grew by nearly $4 billion, or 9 percent, this fiscal year and grew by nearly $13 billion, or 36 percent, over the last five years. The land grant permanent fund, which is the largest of the four funds, added almost $1.7 billion in FY17 to the fund balance. The pension funds each added about $967 million to their fund balances over the year, and STPF added about $378 million to its value.

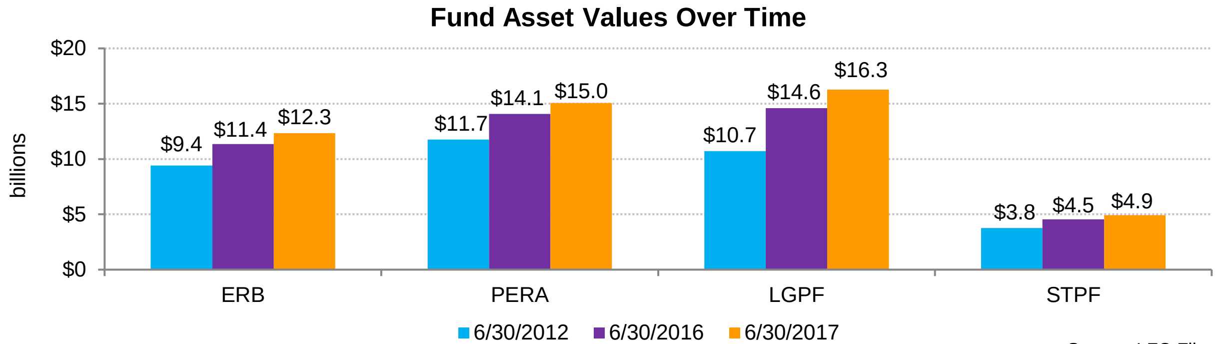
Current Asset Values* (millions)
For One-Year Period Ending June 30, 2017

	ERB	PERA	LGPF	STPF	TOTAL
Current Asset Value	**$12,333.5**	**$15,050.8**	**$16,272.2**	**$4,921.6**	**$48,577.6**
Annual Change					
Ending Asset Value (6/30/2016)	$11,366.6	$14,082.4	$14,607.5	$4,542.4	$44,599.2
Value Change – Year Over Year	$966.9	$967.4	$1,665.7	$378.2	$3,977.3
% Change – Year Over Year	8.5%	6.9%	11.4%	8.3%	8.9%

*Net of Fees

[2] In April 2017, ERB's Board of Trustees voted to lower the fund's investment return assumption to 7.25 percent, down from the previous target of 7.75 percent. The action was taken based on results of ERB's biennial actuarial experience study.

Each of the funds showed significant growth in the last five years, with LGPF growing 51.7 percent, and ERB, PERA, and STPF growing 31 percent, 28.1 percent, and 30.6 percent, respectively.



Source: LFC Files

Notably, as pension funds, PERA and ERB's fund values reflect retiree benefit payouts, which must be made regardless of the amount of contributions received. Distributions from the permanent funds, however, are based on a formula using revenue, contributions, and a five-year average of the fund. Generally, due to these differences in liabilities, the permanent funds tend to have a larger percent change in fund asset values than the pension funds.

ACTUAL VS. TARGET ASSET ALLOCATIONS

The target asset allocations shown below represent the investment funds' portfolio structure, detailing how investments are made. Each of the investment agencies focus on a diversified portfolio, spreading out investments across a variety of asset classes. The table below shows the current actual asset allocation for the period ending June 30, 2017, compared with the funds' policy targets (except PERA, whose strategic asset allocation follows a different structure).

	ERB		PERA	LGPF		STPF	
	Actual	Target	Actual	Actual	Target	Actual	Target
US Equity	**18.7%**	**20.0%**	**6.5%**	**27%**	**26%**	**24%**	**26%**
International Equity	**14.6%**	**15.0%**	**6.4%**	**19%**	**18%**	**20%**	**18%**
Global Equity*			**28.6%**				
Fixed Income	**8.0%**	**6.0%**	**21.8%**	**22%**	**23%**	**20%**	**22%**
Emerging Market Debt	**1.8%**	**2.0%**	**3.5%**				
Total Alternatives	**53.7%**	**56.0%**	**30.6%**	**32%**	**32%**	**34%**	**33%**
Private Equity	11.3%	11.0%	4.6%	9%	9%	11%	10%
Real Estate	7.3%	7.0%	5.8%	9%	9%	9%	9%
Real Assets	6.3%	8.0%	7.0%	10%	9%	9%	9%
Absolute Return	0.0%	0.0%	1.1%	4%	5%	4%	5%
Hedged Equity			1.6%				
ETI**						1%	0%
Opportunistic Credit	18.8%	20.0%	10.6%				
Global Asset Allocation	4.9%	5.0%					
Risk Parity	5.1%	5.0%					
Cash Equivalents	**3.3%**	**1.0%**	**2.6%**	**1%**	**1%**	**1%**	**1%**
Total Fund %	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

*Unlike the other investment funds, PERA's global equity asset class includes domestic and international public securities, global low volatility equity, hedged equity, and private equity.

**Economically targeted investments

ASSET CLASS PERFORMANCE

Domestic and international equities performed very well over the fiscal year with net-of-fee returns ranging between 18 percent and 22 percent for both the pension and permanent funds. Private equities also yielded double-digit returns this year for each of the four funds, ranging from 11 percent to nearly 18 percent; however, returns for this asset class fell below the policy indices for both the permanent and pension funds.

ERB's outperforming investments this fiscal year were its global asset allocation, real estate, and real assets, exceeding the benchmark returns by 3 percent or more. While ERB's non-U.S. emerging markets equity composite returned about 18.7 percent over the year, it was the fund's largest underperformer over the year, missing the benchmark by over 5 percent. ERB describes its U.S. small/mid cap equity composite returns as somewhat disappointing, with returns barely exceeding the target for the three- and five-year periods. This is the only portion of ERB's domestic equity composite with active external management, and with lackluster performance, ERB is considering indexing this allocation.

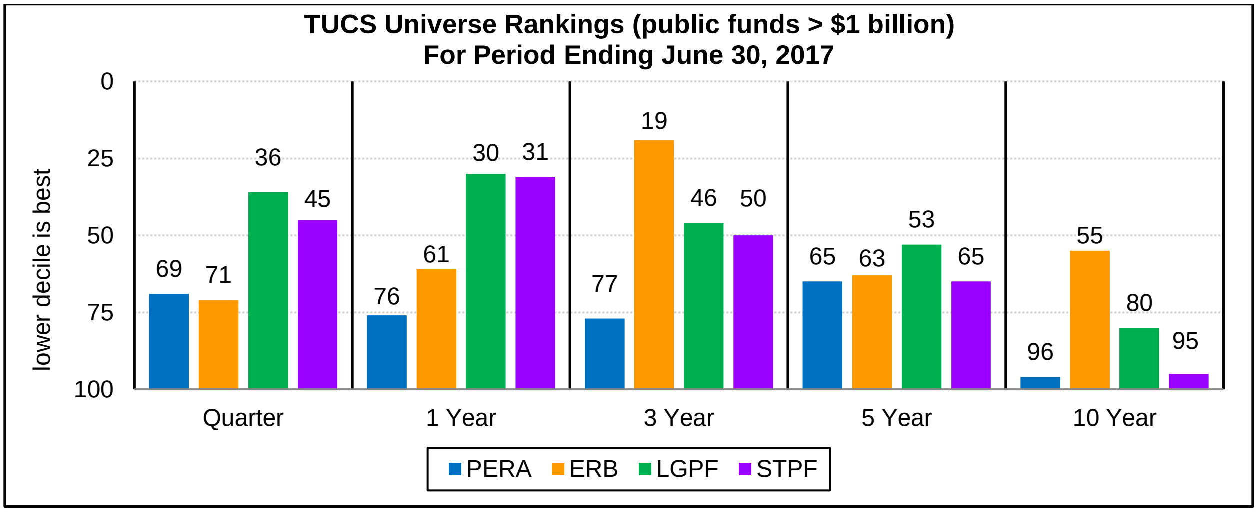
SIC's real return composite markedly outperformed its target in FY17, exceeding the benchmark by 10.5 percent, largely due to strong performance by the energy and infrastructure portfolios. Additional outperformers were the international equity and fixed income composites, exceeding their benchmarks by about 2 percent. While SIC's private equity investments posted some of the largest returns compared to other asset classes, SIC's private equity managers continue to perform below par, with the private equity composite for LGPF missing its benchmark by over 3 percent and for STPF by over 6 percent. In the recently released FY18 Annual Investment Plan, SIC notes poor performance of the non-core funds (mostly pre-2011 legacies subject to the pay-to-play issues) as the main reason for private equity underperformance against the Cambridge Index benchmark. SIC states it will focus on a strategy of identifying "core managers" with whom to build longer-term relationships, which SIC believes will eventually result in better performance.

PERA's global equity composite and risk reduction and mitigation composite each outperformed the policy index by 1.8 percent and 0.5 percent respectively. However, PERA's credit oriented fixed income composite and real assets composite both markedly underperformed in FY17, falling below their benchmarks by 3.2 percent and 5.2 percent, respectively. PERA states that weakness in U.S. Treasuries, as well as in global sovereign and investment grade debt, in the current market environment contributed to the weak performance of the core fixed income portfolio, an asset that typically lends stability in times of market stress.

PERFORMANCE RELATIVE TO PEERS

The Wilshire Trust Universe Comparison Service (TUCS) benchmark service evaluates the performance and allocation of institutional investment assets. The service evaluates New Mexico's investment fund returns alongside approximately 50 public funds with more than $1 billion in assets. The following figure shows gross-of-fees total return rankings for the agencies' large funds for the quarter, one-, three-, five-, and 10-year periods. A lower number (1 is best) denotes better performance when compared with other public funds within a comparable investment universe.

While a useful comparison, universe rankings represent an imperfect measure. Universe rankings focus singularly on a fund's returns compared with the returns of other funds of similar size without consideration of differing missions or investment goals. For example, funds focused on stability with specific distribution requirements, such as pension funds, will choose diversified asset allocations over a longer-term investment horizon (20-30 years) than the periods reported by the universe comparison (up to 10 years). Such a decision recognizes that in a given time period, certain assets classes will underperform and others will outperform – meaning the fund may give up some short-term return potential in favor of less risk over the long-term. As such, a fund may rank very low or very high in a given timeframe, but that ranking may not be indicative of how well suited the fund is for long-term viability. Specifically, funds with heavy equities exposure may rank high during stock market rallies but risk significant losses in the event of a market crash.



The permanent funds performed at or above the median for the quarter, one-, and three-year periods; however, these funds fell below the 50th percentile for the five- and 10-year periods. The relatively strong performance in the quarter and one-year periods, compared to the state's pension funds, could be due to a larger exposure to public equities, which performed exceptionally well this fiscal year. About 45 percent of each of the permanent funds are invested in domestic and international equities, while the pension funds have a smaller allocation to this asset class.

ERB retained its strong ranking in the three-year period, performing above the 25th percentile for this period for the fourth quarter in a row. However, ERB's portfolio fell below the median for all other periods reported. According to ERB, underperformance relative to other funds in the peer universe for the quarter and one-year periods are largely due to the funds' asset allocation plan, which has less emphasis on public equities than most plans.[3] ERB notes it has intentionally diversified away from a heavy stock market exposure, and in doing so recognizes the fund will give up potential returns in bull markets in favor of additional stability in moderate or negative return markets.

While the PERA fund benefited from public equity gains this year, the PERA portfolio ranked below the 50th percentile for the quarter and below the 75th percentile for the one-, three-, and 10-year periods. PERA views the fund rankings as an indication of their defensive asset allocation

[3] For example, the median plan in the TUCS universe has over 50 percent of assets in public equities; however, ERB's portfolio has about 33 percent of its assets in public equities. Thus, in a year like FY17, when equity market returns ranged from the high teens to 20+ percent, ERB would expect to fall below the median relative to other funds. On the other hand, when equity markets are weaker, ERB would expect to come out above the median.

relative to their peers. As such, PERA does not expect to outperform against funds that have higher exposures to risky asset classes, such as global equity.

RISK PROFILES

Risk is an inherent component of investing in financial markets. As risk of an investment fund is a function of the strategic asset allocation, it is prudent to keep the risk within tolerant levels to achieve the overall goals of the plan. This report utilizes a few key measures to evaluate the impact that risk plays in an investment portfolio. The table below reports funds' standard deviation, Sharpe Ratio, and beta for the five-year period ending June 30, 2017. This report uses the five-year period as a proxy for the portfolios' risk profiles over the course of a full market cycle.

Risk Metrics*, Five Years Ending 06/30/17

	ERB	PERA	LGPF	STPF
Standard deviation	4.70	5.87	4.93	4.91
Sharpe Ratio	1.80	1.47	1.75	1.71
Beta	0.93	1.12	0.98	0.97

*Net of fees

Standard deviation measures the fund's expected variability (deviation) of returns from the mean return. Investments that are more volatile generate a higher standard deviation. Of the four funds, PERA demonstrated the highest standard deviation, indicating higher volatility relative to the other funds. PERA is in the process of transitioning its portfolio to new policy targets. During the transition period, the PERA portfolio has shown greater volatility than its policy index, which is more diversified.

The Sharpe Ratio measures the risk-adjusted performance of a portfolio. The higher the number, the higher the return-to-risk level.[4] Typically, a good ratio is 1 or better, a very good ratio is 2 or better, and an excellent ratio is 3 or better. Each of the funds had a "good" Sharpe Ratio for the five-year period (between 1 and 2), suggesting a fair level of return for the investment risk taken.

Beta represents the volatility of the portfolio versus the market.[5] ERB demonstrated the lowest volatility over the five-year period, with a beta less than 1, indicating lower correlation to broad market swings. The beta for the permanent funds hovered around 1, indicating that investments generally follow market movements. The beta for the PERA was just over 1.1, demonstrating more volatility relative to the other funds and greater correlation to market swings.

[4] An example of a risk free return is a 5-year treasury bond.
[5] Beta = 1: portfolio moves with the market. Beta < 1: portfolio is less volatile than market. Beta > 1: portfolio is more volatile than the market.

ATTACHMENT 1 – INVESTMENT RETURNS