QUARTERLY PERFORMANCE REPORT

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

June 30, 2020

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BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

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EXECUTIVE SUMMARY

ERS TRUST DASHBOARD

	CYTD	FYTD
Fund Performance	-4.5%	0.1%
Policy Benchmark	-1.6%	3.6%
Excess Return	-2.9%	-3.5%

3 Yr Tracking Error	1.92%
5 Yr Sharpe Ratio	0.64
5 Yr Sortino Ratio	0.69

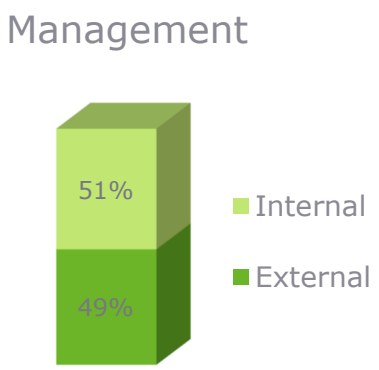
Largest Contributors (Quarter)

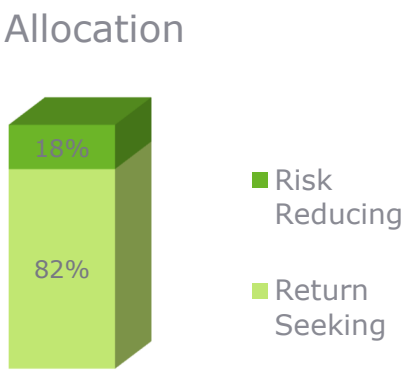
Rates contributed +0.2% versus the policy benchmark

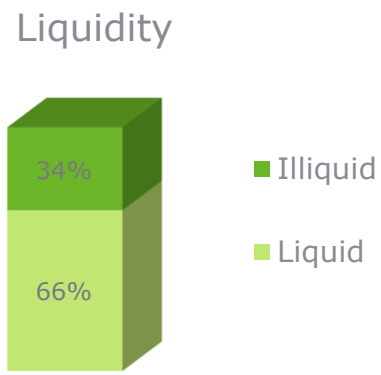
Largest Detractors (Quarter)

Private Equity (-1.9%), Public Equity (-0.5%) and Global Credit (-0.5%) underperformed and detracted versus the policy benchmark

Profile
Market Value at 6/30/2020:
$27.44 Billion
Actuarial Accrued Liability 8/31/19:
$39.8 Billion
Actuarial Assumed Rate of Return:
7.0%
Retirees and Beneficiaries 8/31/2019:
115,155
Retirement Payments Year Ended 8/31/2019:
$2.62 Billion
ERS Trust Funding Ratio 8/31/2019
70.5%







TOTAL FUND PERFORMANCE DETAIL (NET OF FEES)

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

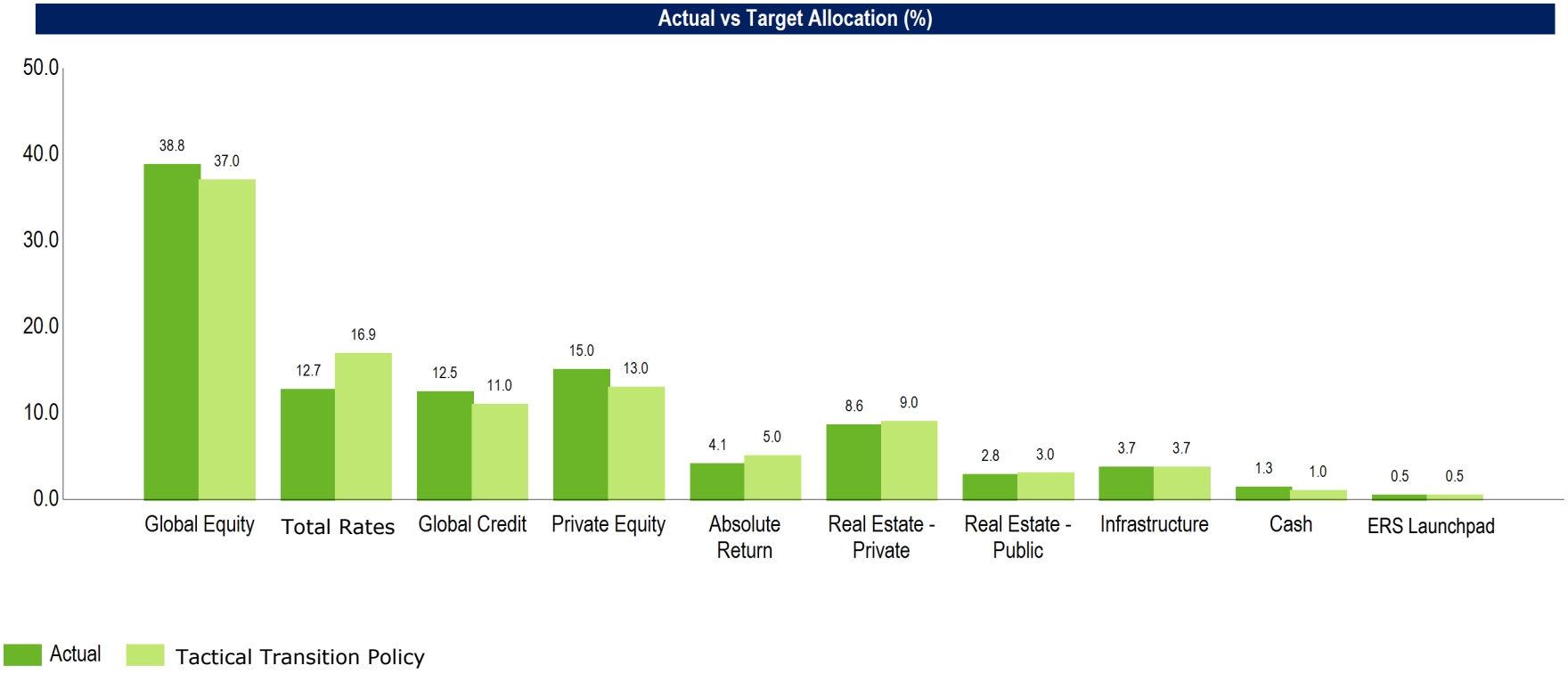
- **One-year ended June 30, 2020, the Fund underperformed the policy benchmark by 2.9%.**
- **The Fund's assets decreased from $28.67 billion to $27.44 billion in the calendar year which includes a $76.49 million investment gain in the calendar year and a $1.59 billion investment gain in the second calendar quarter.**
- **Three–year period ended June 30, 2020, the return of 5.1% underperformed the benchmark by 0.5%. On a risk-adjusted basis, the Sharpe and Sortino Ratios over this period equaled and underperformed the benchmark respectively.**
- **Five-year period ended June 30, 2020, the Fund returned 5.4% and underperformed the policy benchmark. On a risk-adjusted basis, the Fund's Sharpe Ratio indicates that active management benefitted the Plan while on a Sortino Ratio basis, returns per unit of downside risk underperformed against the policy benchmark.**

3 Years Ending June 30, 2020	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio RF
Total Fund	5.06%	7.30%	0.47	0.46
Total Fund Policy Index	5.62%	8.44%	0.47	0.53

5 Years Ending June 30, 2020	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio RF
Total Fund	5.43%	6.70%	0.64	0.69
Total Fund Policy Index	6.05%	7.85%	0.63	0.77

Employees Retirement System of Texas

TOTAL FUND ASSET GROWTH SUMMARY



Summary of Cash Flows	Last Three Months	Year-To-Date	Fiscal Year-To-Date	One Year	Three Years	Five Years
Beginning Market Value	$26,156,889,219	$29,406,588,242	$28,518,729,026	$28,668,965,891	$26,979,126,647	$25,896,309,479
Contributions	$2,644,323,805	$5,831,020,231	$15,329,032,250	$17,141,105,799	$36,466,343,723	$50,737,152,975
Withdrawals	-$2,957,352,679	-$6,476,720,322	-$16,433,563,914	-$18,450,964,314	-$40,184,470,668	-$56,367,030,874
Net Cash Flow	-$313,028,875	-$645,700,091	-$1,104,531,664	-$1,309,858,514	-$3,718,126,945	-$5,629,877,899
Net Investment Change	$1,591,950,031	-$1,325,077,776	$21,613,013	$76,493,298	$4,162,691,124	$7,157,259,247
Ending Market Value	$27,435,810,375	$27,435,810,375	$27,435,810,375	$27,435,810,375	$27,435,810,375	$27,435,810,375

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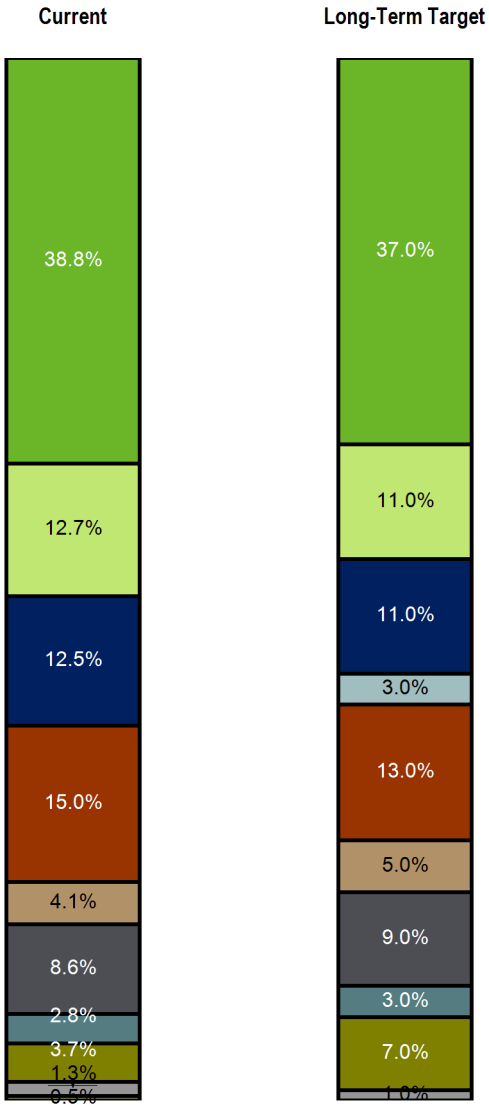
FUND ASSET ALLOCATION VS. POLICY TARGETS



Asset Allocation vs. Target	Current	Current	Long-Term Target	Policy Range
Global Equity	$10,651,605,918	38.8%	37.0%	27.0% - 47.0%
Rates	$3,490,624,121	12.7%	11.0%	12.0% - 22.0%
Global Credit	$3,419,343,860	12.5%	11.0%	1.0% - 21.0%
Opportunistic	--	--	3.0%	0.0% - 8.0%
Private Equity	$4,118,338,008	15.0%	13.0%	8.0% - 18.0%
Absolute Return	$1,114,742,890	4.1%	5.0%	0.0% - 10.0%
Real Estate - Private	$2,355,053,389	8.6%	9.0%	4.0% - 14.0%
Real Estate - Public	$778,770,271	2.8%	3.0%	0.0% - 13.0%
Infrastructure	$1,010,877,575	3.7%	7.0%	2.0% - 12.0%
Cash	$370,111,656	1.3%	1.0%	0.0% - 7.0%
ERS Launchpad	$126,342,686	0.5%	--	0.0% - 100.0%
Total	**$27,435,810,375**	**100.0%**	**100.0%**	

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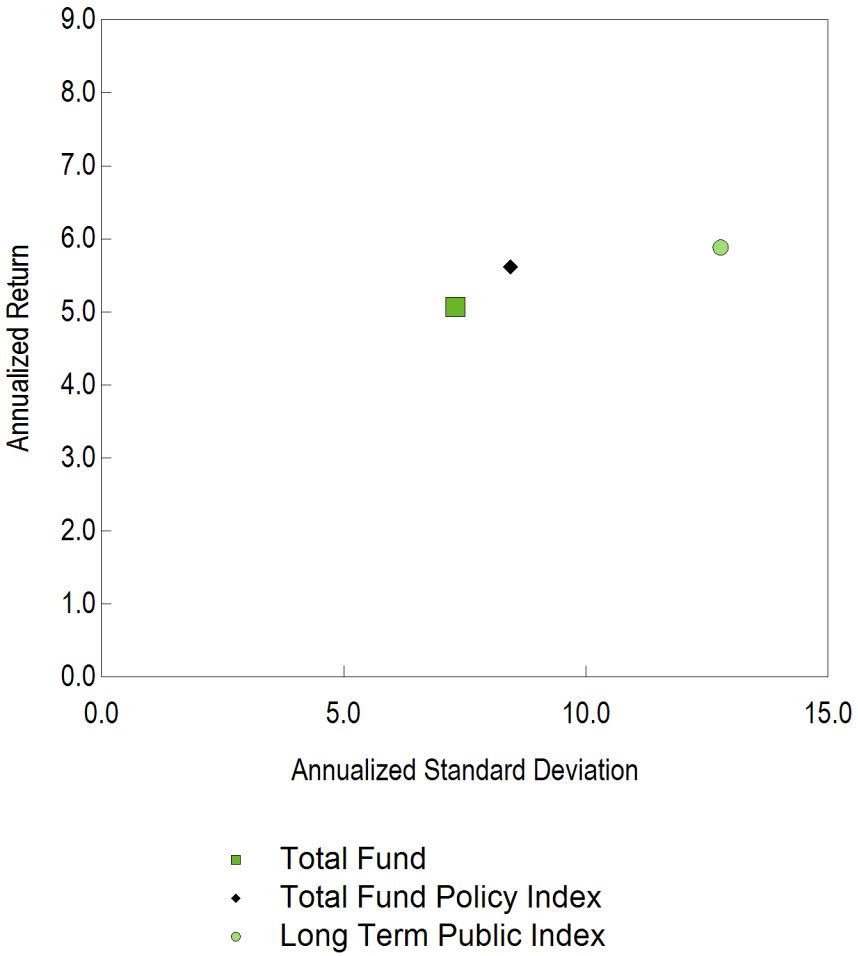
TOTAL FUND RISK/ RETURN

3 Years Ending June 30, 2020



10 Years Ending June 30, 2020

Note: Long Term Public Index is comprised of 79% MSCI ACWI IMI and 21% Barclays Intermediate Treasury Index. Index definitions can be found in the appendix.

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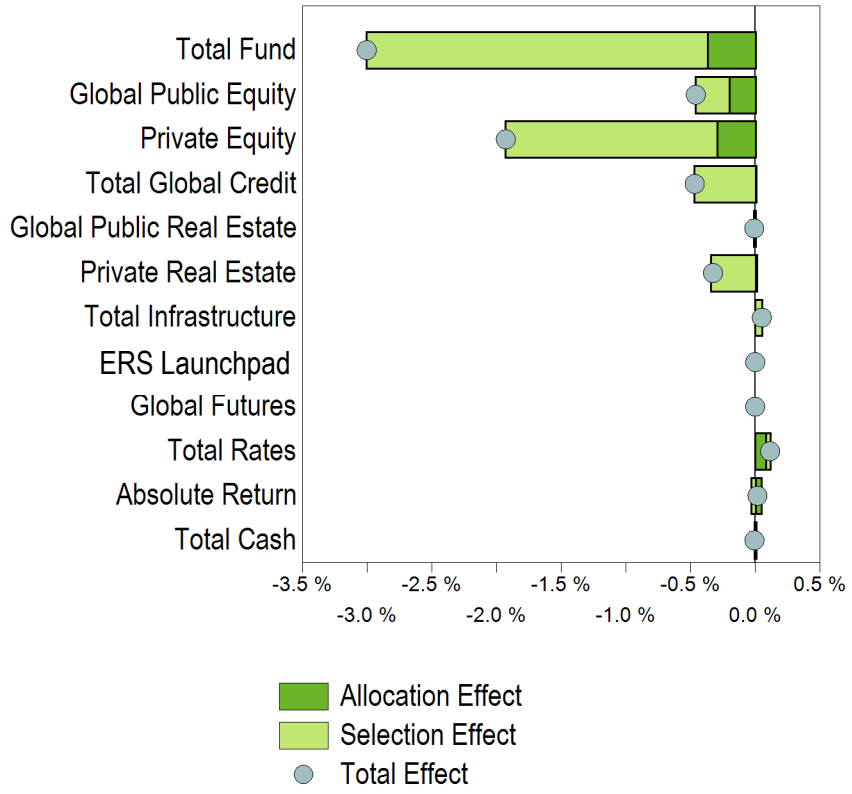
TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Months Ending June 30, 2020



Attribution Summary
3 Months Ending June 30, 2020

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Global Public Equity	19.1%	19.9%	-0.8%	-0.3%	-0.2%	-0.5%
Private Equity	-8.8%	0.6%	-9.4%	-1.6%	-0.3%	-1.9%
Total Global Credit	5.9%	10.1%	-4.3%	-0.5%	0.0%	-0.5%
Global Public Real Estate	10.2%	10.2%	0.0%	0.0%	0.0%	0.0%
Private Real Estate	-2.9%	0.8%	-3.7%	-0.3%	0.0%	-0.3%
Total Infrastructure	1.3%	0.1%	1.2%	0.1%	0.0%	0.1%
ERS LaunchPad	--	--	--	--	--	--
Global Futures	--	--	--	--	--	--
Total Rates	0.7%	0.5%	0.2%	0.0%	0.1%	0.2%
Absolute Return	0.6%	1.2%	-0.5%	0.0%	0.0%	0.0%
Total Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**6.1%**	**8.9%**	**-2.8%**	**-2.6%**	**-0.4%**	**-3.0%**

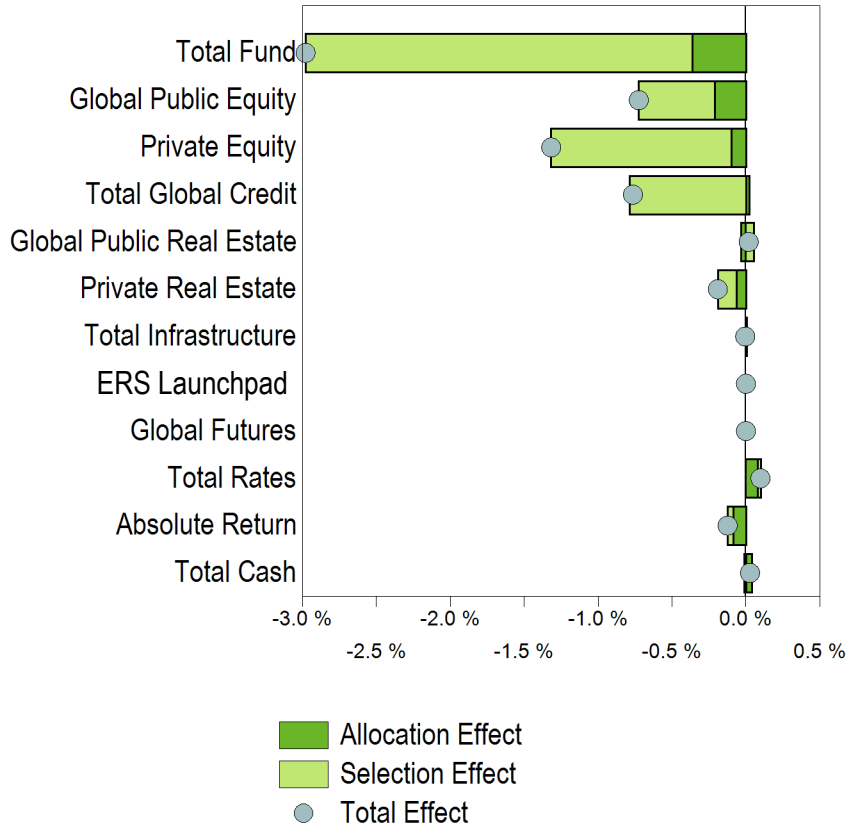
Note: Not all assets valued through June 30, 2020 within Private Equity, Total Global Credit, Private Real Estate, Total Infrastructure and Absolute Return.

* Total Fund Attribution Analysis uses policy weights.

Employees Retirement System of Texas

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
1 Year Ending June 30, 2020



Attribution Summary
1 Year Ending June 30, 2020

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Global Public Equity	0.0%	1.5%	-1.5%	-0.5%	-0.2%	-0.7%
Private Equity	-4.6%	2.8%	-7.4%	-1.2%	-0.1%	-1.3%
Total Global Credit	-7.1%	0.0%	-7.1%	-0.8%	0.0%	-0.8%
Global Public Real Estate	-14.0%	-15.7%	1.7%	0.1%	0.0%	0.0%
Private Real Estate	2.7%	3.9%	-1.2%	-0.1%	-0.1%	-0.2%
Total Infrastructure	8.2%	8.7%	-0.5%	0.0%	0.0%	0.0%
ERS LaunchPad	--	--	--	--	--	--
Global Futures	--	--	--	--	--	--
Total Rates	7.2%	7.1%	0.1%	0.0%	0.1%	0.1%
Absolute Return	4.5%	5.5%	-1.0%	0.0%	-0.1%	-0.1%
Total Cash	1.2%	1.6%	-0.4%	0.0%	0.0%	0.0%
Total	**0.3%**	**3.2%**	**-2.9%**	**-2.6%**	**-0.4%**	**-3.1%**

Note: Not all assets valued through June 30, 2020 within Private Equity, Total Global Credit, Private Real Estate, Total Infrastructure and Absolute Return.

* Total Fund Attribution Analysis uses policy weights.

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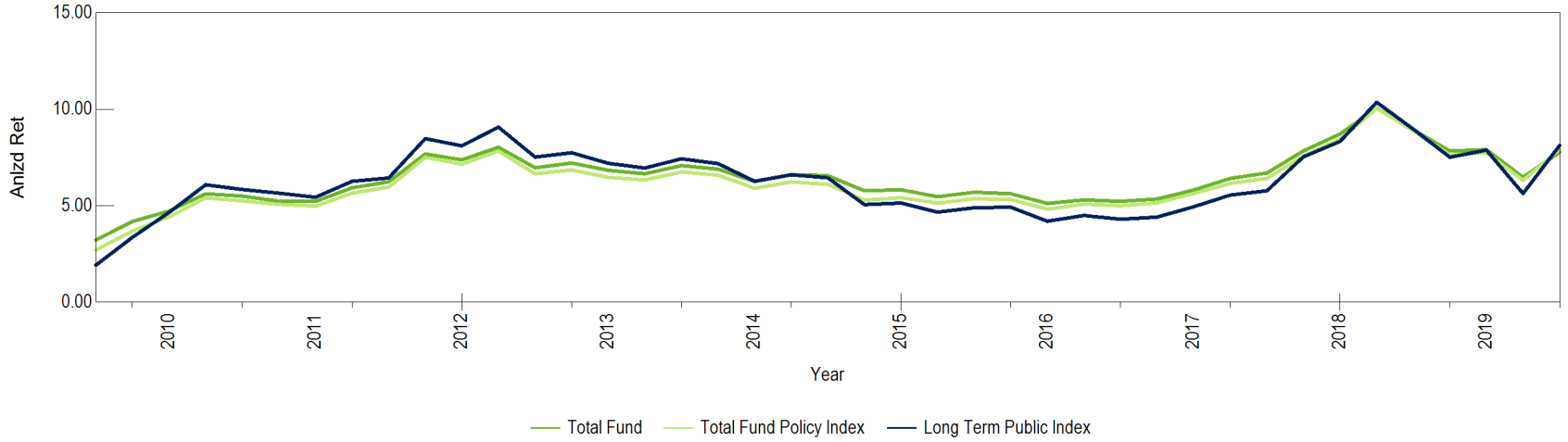
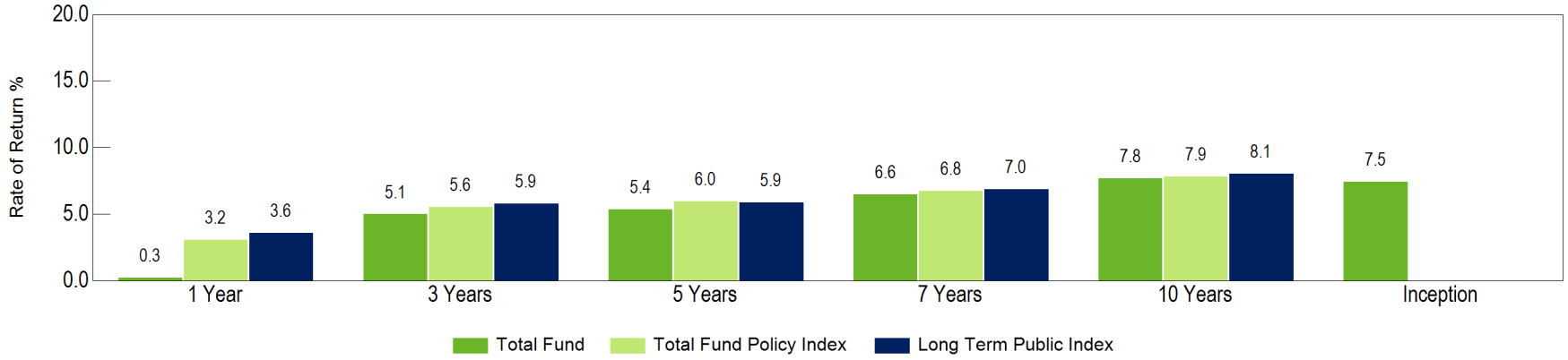
LONG TERM INVESTMENT RESULTS

Rolling 10 Year Annualized Return (%)



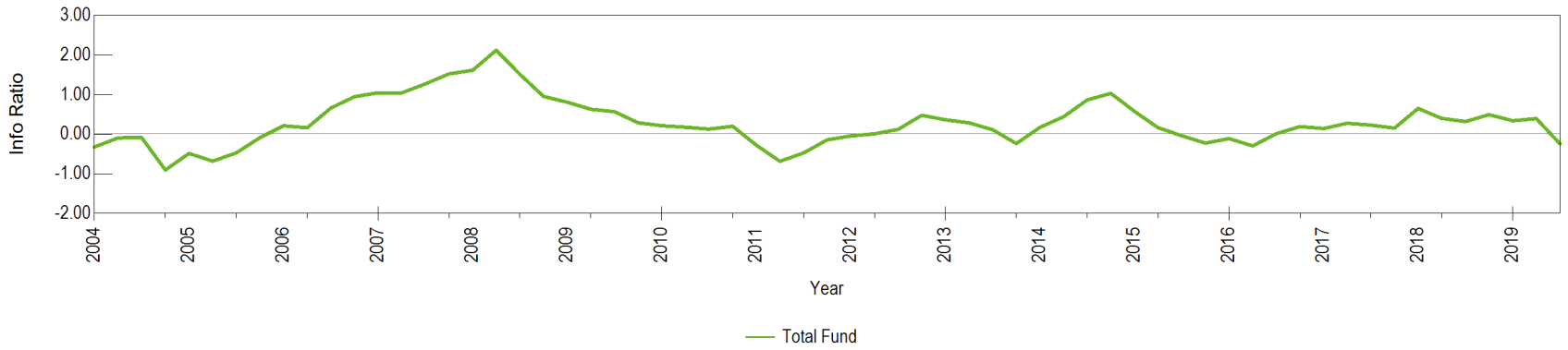
Return Summary
Ending June 30, 2020



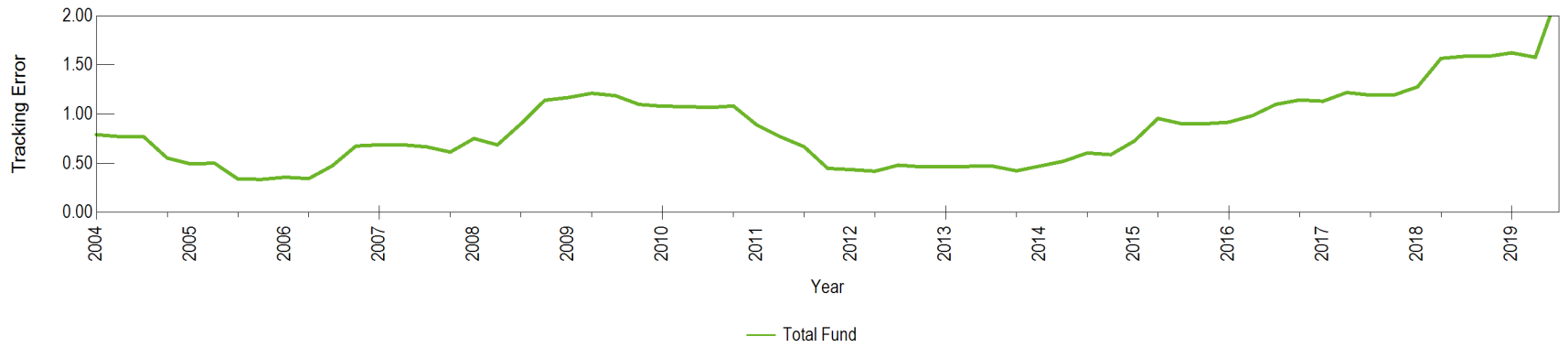
Note: Long Term Public Index is comprised of 79% MSCI ACWI IMI and 21% Barclays Intermediate Treasury Index. Index definitions can be found in the appendix.

ROLLING INFORMATION RATIO AND TRACKING ERROR

Rolling 3 Year Information Ratio



Rolling 3 Year Tracking Error



SUMMARY PERFORMANCE COMMENTARY

- **Over the past 10 years, Total Fund returns outperformed the policy benchmark by 0.1% and outperformed the Plan's actuarial rate of return.**

- **In the one-year ended June 30,2020 the Fund underperformed (-2.9%) the policy benchmark.**
  - Private Equity detracted -1.3% and Global Credit detracted -0.8% from Fund returns vs. the policy benchmark
  - Rates (+0.1%) contributed positively to returns vs. the policy benchmark

- **In the past one-year, portfolio positioning at the asset class level detracted -0.4% from Total Fund returns vs. policy benchmark.**
  - An over-weight position to Public Equity contributed negatively (-0.2%) to Fund returns versus the policy benchmark.
  - An over-weight position to Private Equity contributed negatively (-0.1%) to total fund returns vs. the policy benchmark.
  - An over-weight position to Rates contributed positively (+0.1%) to Fund returns versus the policy benchmark.

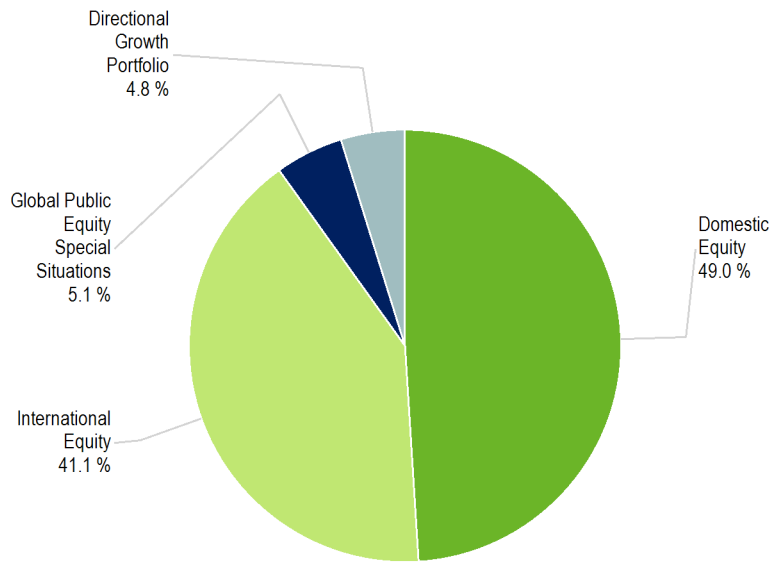
APPENDIX

Employees Retirement System of Texas

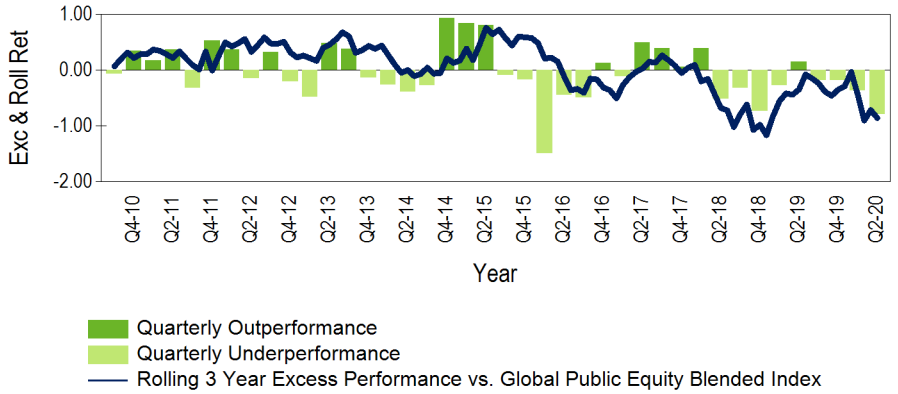
GLOBAL PUBLIC EQUITY PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Global Public Equity	**$10,651,605,918**	**19.1%**	**-8.0%**	**1.9%**	**0.0%**	**5.0%**	**5.5%**	**9.4%**
Global Public Equity Blended Index		*19.9%*	*-6.9%*	*3.8%*	*1.5%*	*5.9%*	*6.5%*	*9.6%*

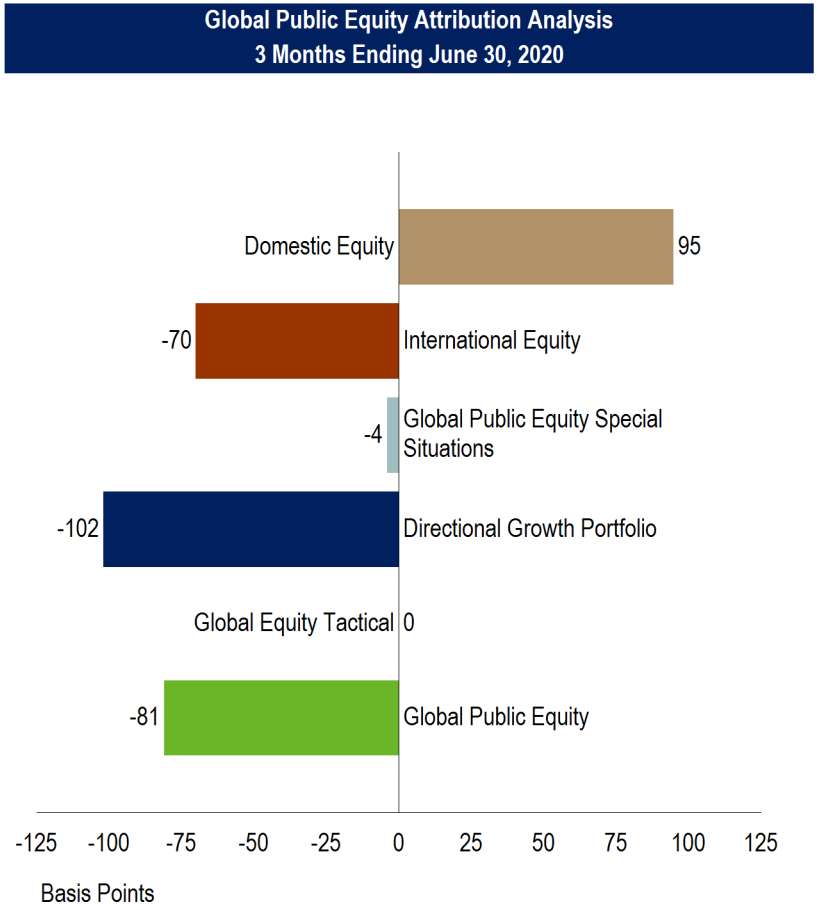
Global Public Equity Asset Allocation



Rolling Annualized Excess Performance



GLOBAL PUBLIC EQUITY ATTRIBUTION ANALYSIS

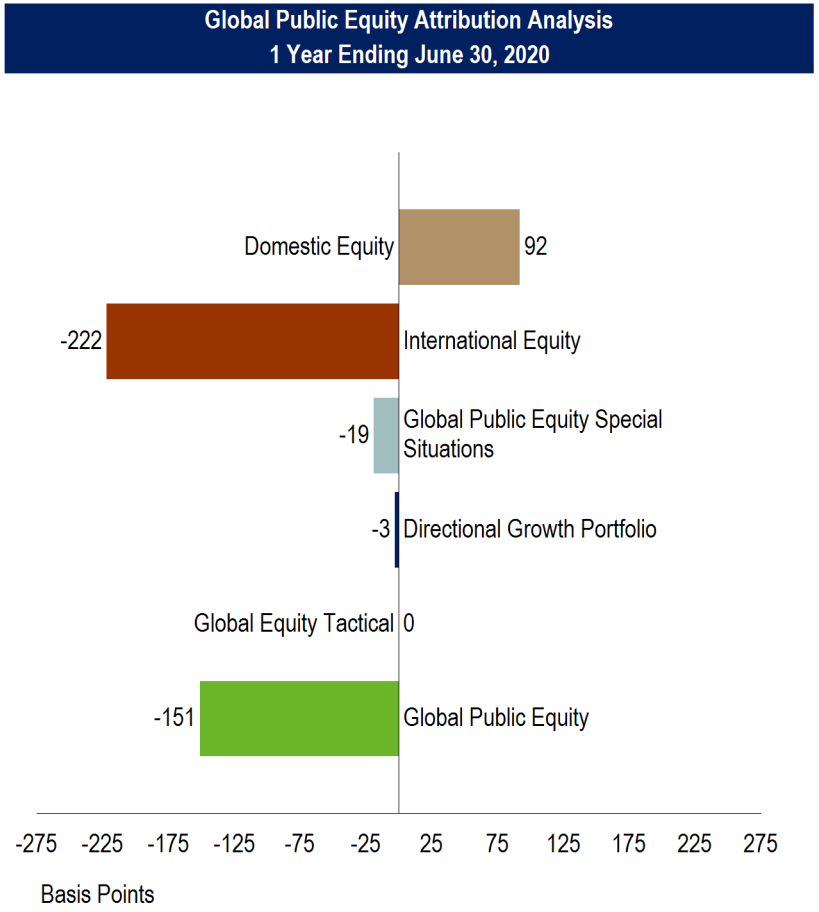


Attribution Summary 3 Months Ending June 30, 2020	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Domestic Equity	21.9%	19.9%	2.0%	0.9%	0.0%	0.9%
International Equity	18.4%	19.9%	-1.5%	-0.7%	0.0%	-0.7%
Global Public Equity Special Situations	19.0%	19.9%	-0.9%	0.0%	0.0%	0.0%
Directional Growth Portfolio	2.4%	19.9%	-17.5%	-1.0%	0.0%	-1.0%
Global Equity Tactical	0.1%	19.9%	-19.9%	0.0%	0.0%	0.0%
Total	**19.1%**	**19.9%**	**-0.8%**	**-0.8%**	**0.0%**	**-0.8%**

* Attribution Analysis by Asset Class uses actual weights.

Employees Retirement System of Texas

GLOBAL PUBLIC EQUITY ATTRIBUTION ANALYSIS



Attribution Summary 1 Year Ending June 30, 2020	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Domestic Equity	3.1%	1.5%	1.6%	0.9%	0.0%	0.9%
International Equity	-3.7%	1.5%	-5.2%	-2.2%	0.0%	-2.2%
Global Public Equity Special Situations	-2.8%	1.5%	-4.3%	-0.2%	0.0%	-0.2%
Directional Growth Portfolio	5.5%	1.5%	4.0%	0.0%	0.0%	0.0%
Global Equity Tactical	--	--	--	0.0%	0.0%	0.0%
Total	**0.0%**	**1.5%**	**-1.5%**	**-1.5%**	**0.0%**	**-1.5%**

* Attribution Analysis by Asset Class uses actual weights.

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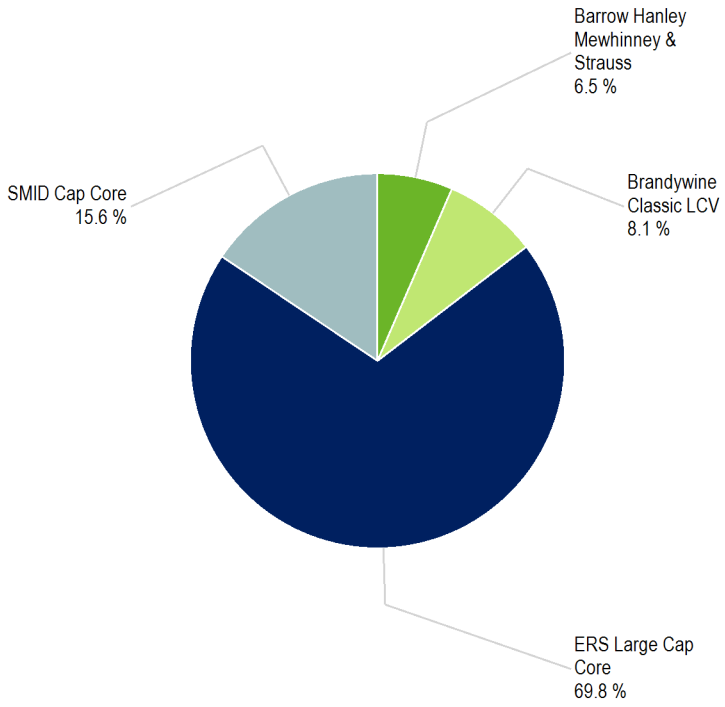
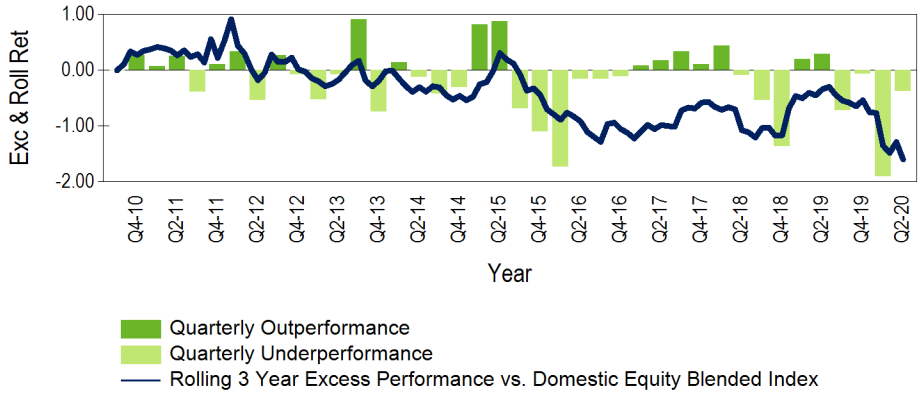
DOMESTIC EQUITY PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Domestic Equity	**$5,220,786,270**	**21.9%**	**-6.0%**	**4.0%**	**3.1%**	**8.6%**	**8.6%**	**13.0%**
Domestic Equity Blended Index		*22.3%*	*-3.3%*	*7.3%*	*6.8%*	*10.2%*	*10.4%*	*13.8%*

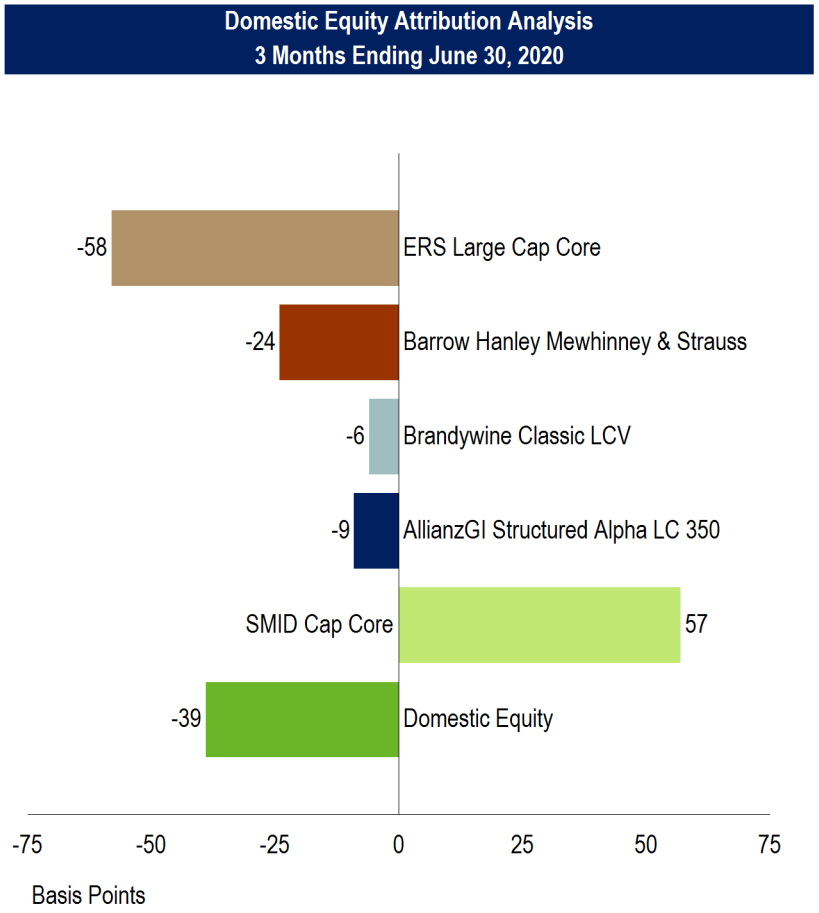
Domestic Equity Asset Allocation



Rolling Annualized Excess Performance



DOMESTIC EQUITY ATTRIBUTION ANALYSIS



Attribution Summary 3 Months Ending June 30, 2020	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
ERS Large Cap Core	21.4%	22.3%	-0.8%	-0.6%	0.0%	-0.6%
Barrow Hanley Mewhinney & Strauss	18.7%	22.3%	-3.6%	-0.2%	0.0%	-0.2%
Brandywine Classic LCV	21.4%	22.3%	-0.9%	-0.1%	0.0%	-0.1%
AllianzGI Structured Alpha LC 350	8.2%	22.3%	-14.1%	-0.1%	0.0%	-0.1%
SMID Cap Core	26.1%	22.3%	3.8%	0.6%	0.0%	0.6%
Total	**21.9%**	**22.3%**	**-0.4%**	**-0.4%**	**0.0%**	**-0.4%**

* Attribution Analysis by Asset Class uses actual weights.

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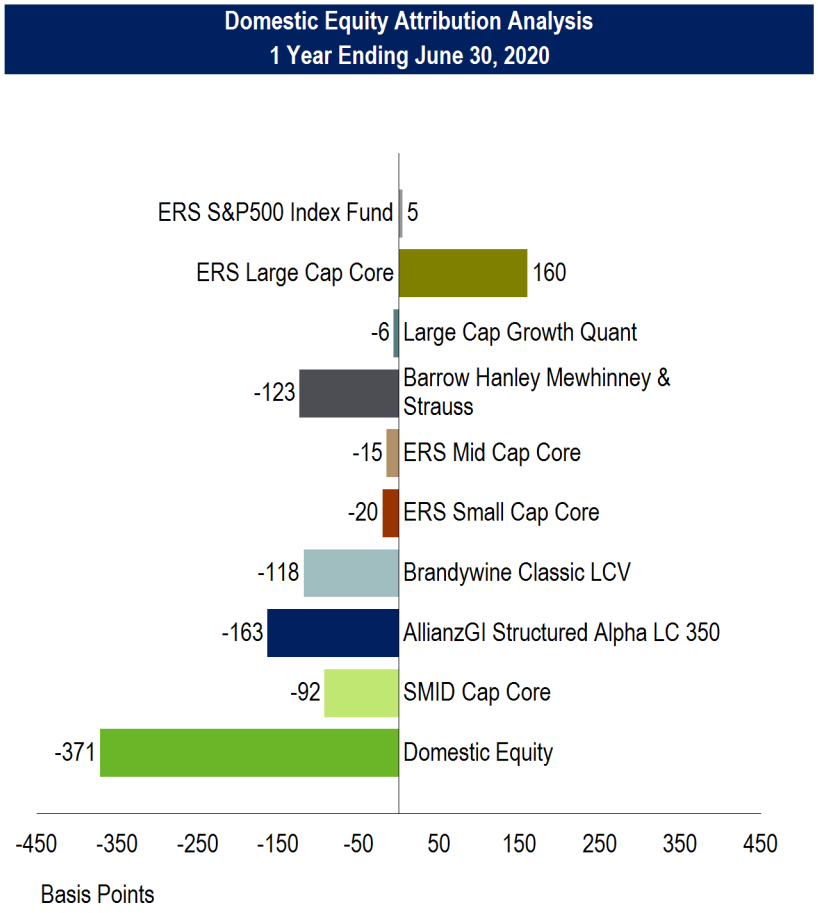
DOMESTIC EQUITY ATTRIBUTION ANALYSIS



Attribution Summary 1 Year Ending June 30, 2020	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
ERS S&P500 Index Fund	--	--	--	0.1%	0.0%	0.1%
ERS Large Cap Core	9.7%	6.8%	2.9%	1.6%	0.0%	1.6%
Large Cap Growth Quant	--	--	--	-0.1%	0.0%	-0.1%
Barrow Hanley Mewhinney & Strauss	-9.2%	6.8%	-16.1%	-1.2%	0.0%	-1.2%
ERS Mid Cap Core	--	--	--	-0.1%	0.0%	-0.1%
ERS Small Cap Core	--	--	--	-0.2%	0.0%	-0.2%
Brandywine Classic LCV	-6.1%	6.8%	-12.9%	-1.2%	0.0%	-1.2%
AllianzGI Structured Alpha LC 350	-49.3%	6.8%	-56.1%	-1.6%	0.0%	-1.6%
SMID Cap Core	--	--	--	-0.9%	0.0%	-0.9%
Total	**3.1%**	**6.8%**	**-3.7%**	**-3.7%**	**0.0%**	**-3.7%**

* Attribution Analysis by Asset Class uses actual weights.

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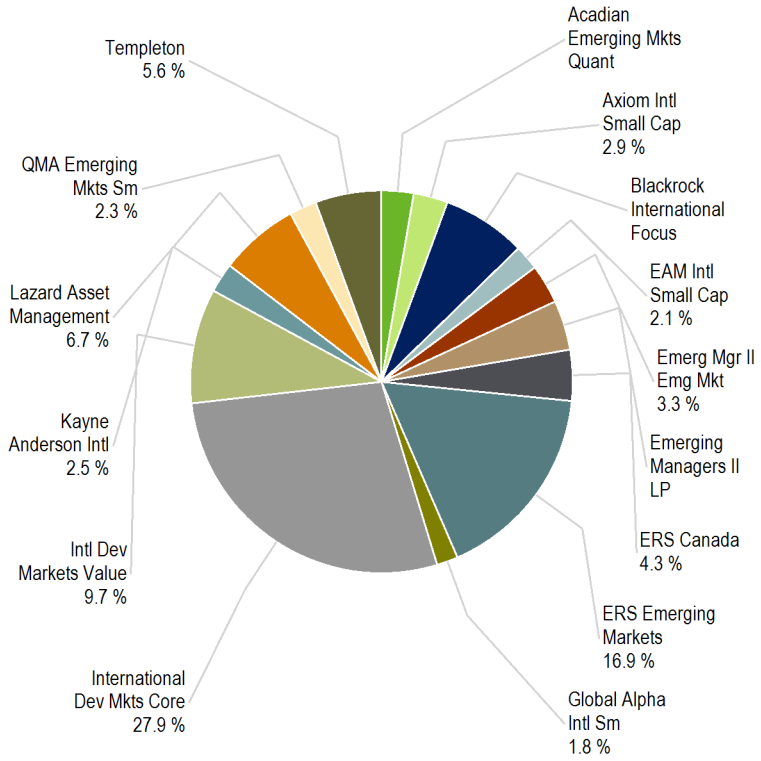
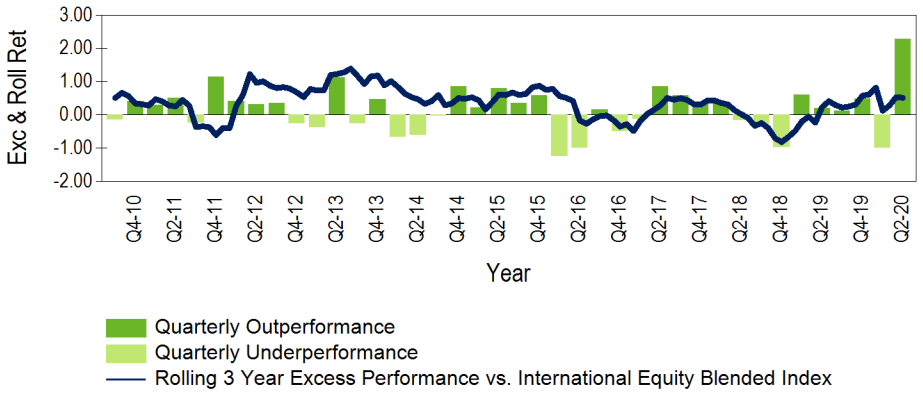
INTERNATIONAL EQUITY PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
International Equity	**$4,375,981,801**	**18.4%**	**-10.4%**	**0.2%**	**-3.7%**	**1.6%**	**2.4%**	**5.5%**
International Equity Blended Index		*16.1%*	*-11.0%*	*-0.6%*	*-4.8%*	*1.1%*	*2.3%*	*5.0%*

International Equity Asset Allocation



Rolling Annualized Excess Performance



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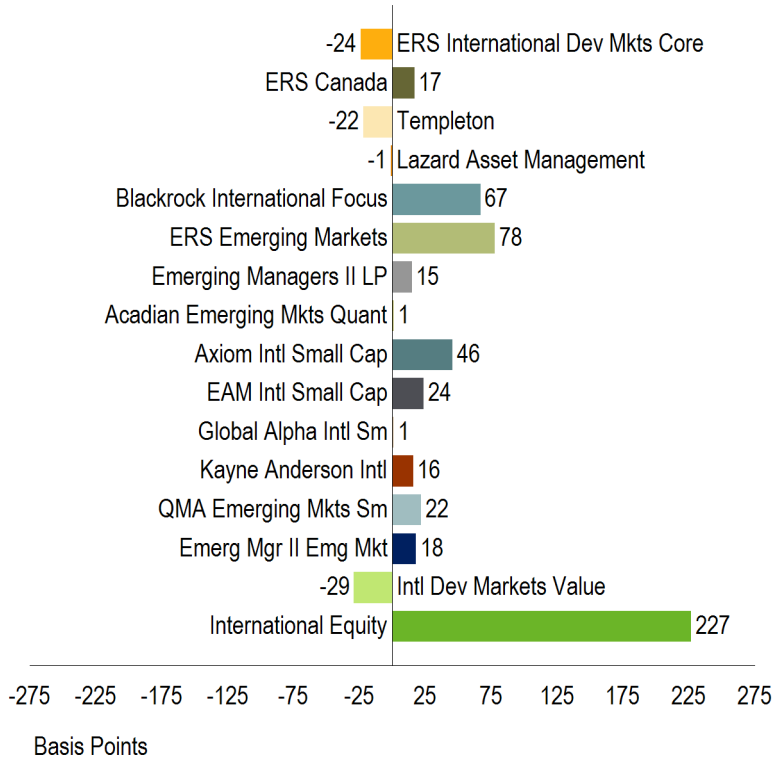
INTERNATIONAL EQUITY ATTRIBUTION ANALYSIS

International Equity Attribution Analysis
3 Months Ending June 30, 2020



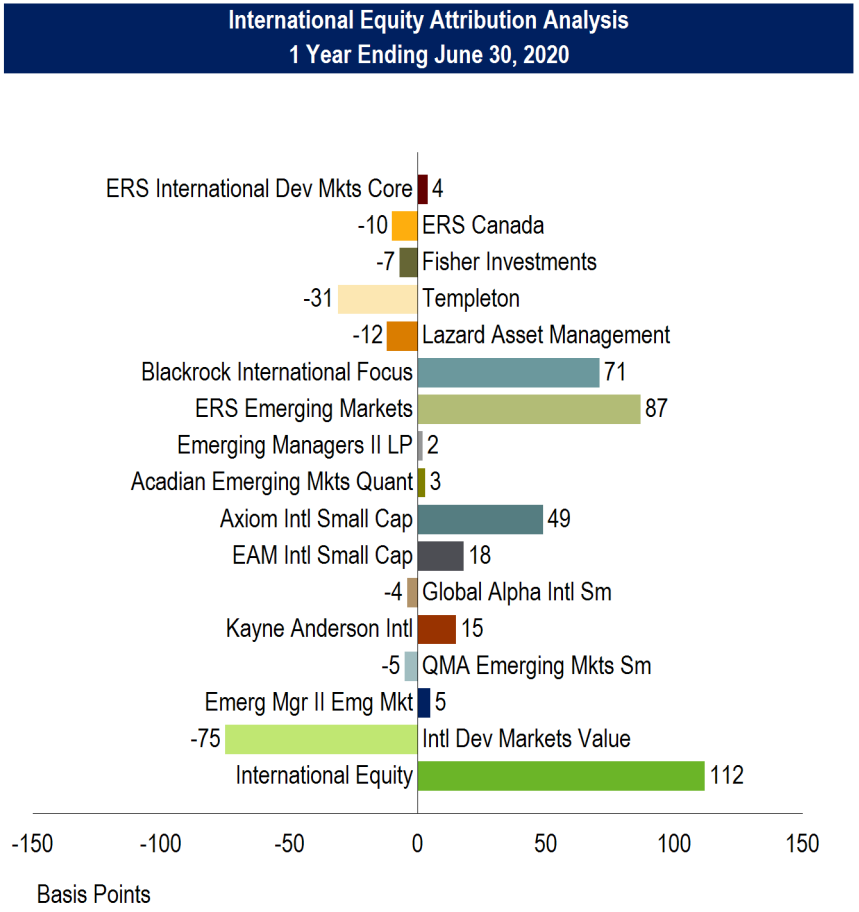
Attribution Summary
3 Months Ending June 30, 2020

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
ERS International Dev Mkts Core	15.3%	16.1%	-0.8%	-0.2%	0.0%	-0.2%
ERS Canada	20.0%	16.1%	3.8%	0.2%	0.0%	0.2%
Templeton	12.4%	16.1%	-3.7%	-0.2%	0.0%	-0.2%
Lazard Asset Management	15.9%	16.1%	-0.2%	0.0%	0.0%	0.0%
Blackrock International Focus	26.1%	16.1%	10.0%	0.7%	0.0%	0.7%
ERS Emerging Markets	20.8%	16.1%	4.7%	0.8%	0.0%	0.8%
Emerging Managers II LP	19.7%	16.1%	3.5%	0.1%	0.0%	0.1%
Acadian Emerging Mkts Quant	16.4%	16.1%	0.3%	0.0%	0.0%	0.0%
Axiom Intl Small Cap	34.5%	16.1%	18.4%	0.5%	0.0%	0.5%
EAM Intl Small Cap	29.1%	16.1%	12.9%	0.2%	0.0%	0.2%
Global Alpha Intl Sm	16.7%	16.1%	0.6%	0.0%	0.0%	0.0%
Kayne Anderson Intl	23.0%	16.1%	6.9%	0.2%	0.0%	0.2%
QMA Emerging Mkts Sm	26.5%	16.1%	10.4%	0.2%	0.0%	0.2%
Emerg Mgr II Emg Mkt	21.8%	16.1%	5.7%	0.2%	0.0%	0.2%
Intl Dev Markets Value	13.2%	16.1%	-2.9%	-0.3%	0.0%	-0.3%
Total	**18.4%**	**16.1%**	**2.3%**	**2.3%**	**0.0%**	**2.3%**

* Attribution Analysis by Asset Class uses actual weights.

Employees Retirement System of Texas

INTERNATIONAL EQUITY ATTRIBUTION ANALYSIS



Attribution Summary
1 Year Ending June 30, 2020

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
ERS International Dev Mkts Core	-4.4%	-4.8%	0.4%	0.0%	0.0%	0.0%
ERS Canada	-7.2%	-4.8%	-2.4%	-0.1%	0.0%	-0.1%
Fisher Investments	--	--	--	-0.1%	0.0%	-0.1%
Templeton	-10.0%	-4.8%	-5.2%	-0.3%	0.0%	-0.3%
Lazard Asset Management	-6.2%	-4.8%	-1.4%	-0.1%	0.0%	-0.1%
Blackrock International Focus	5.9%	-4.8%	10.7%	0.7%	0.0%	0.7%
ERS Emerging Markets	0.3%	-4.8%	5.1%	0.9%	0.0%	0.9%
Emerging Managers II LP	-3.9%	-4.8%	0.9%	0.0%	0.0%	0.0%
Acadian Emerging Mkts Quant	-3.1%	-4.8%	1.7%	0.0%	0.0%	0.0%
Axiom Intl Small Cap	17.1%	-4.8%	21.9%	0.5%	0.0%	0.5%
EAM Intl Small Cap	5.5%	-4.8%	10.3%	0.2%	0.0%	0.2%
Global Alpha Intl Sm	-6.7%	-4.8%	-1.9%	0.0%	0.0%	0.0%
Kayne Anderson Intl	1.7%	-4.8%	6.5%	0.1%	0.0%	0.1%
QMA Emerging Mkts Sm	-8.8%	-4.8%	-4.0%	-0.1%	0.0%	-0.1%
Emerg Mgr II Emg Mkt	--	--	--	0.1%	0.0%	0.1%
Intl Dev Markets Value	--	--	--	-0.8%	0.0%	-0.8%
Total	**-3.7%**	**-4.8%**	**1.1%**	**1.1%**	**0.0%**	**1.1%**

* Attribution Analysis by Asset Class uses actual weights.

RETURN SEEKING (GLOBAL EQUITY) PRIVATE EQUITY SUMMARY

	Valuation ($)	% of Total Fund	1 Year IRR	3 Year IRR	5 Year IRR	IRR Since Inception
Private Equity	4,093,922,396	14.92%	-7.70	4.23	6.76	8.78

Private Equity Program Summary by Fiscal Year as of 6/30/2020

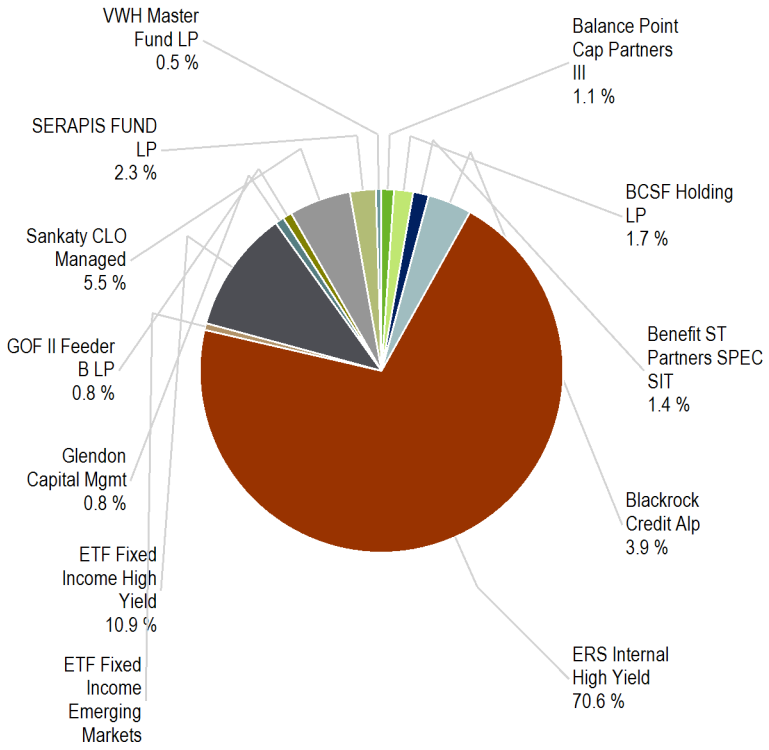
ERS FY	# of Deals	Commitment	Called	Distributions	Valuation
1999	1	100,000,000	88,405,144	129,463,084	0
2007	1	60,585,106	57,225,674	115,248,923	241,079
2008	3	193,357,555	232,824,378	354,564,981	4,362,490
2009	12	851,419,120	1,057,411,375	1,458,517,467	159,329,913
2010	7	435,813,312	495,379,451	532,598,963	49,809,090
2011	9	598,390,308	740,326,037	623,885,328	323,810,073
2012	7	470,956,113	442,051,704	487,197,988	184,683,746
2013	7	411,717,335	456,101,261	351,805,413	209,822,622
2014	13	1,144,853,434	1,113,628,489	551,415,555	762,936,078
2015	11	922,959,726	839,835,505	425,806,940	629,540,796
2016	8	733,205,077	618,614,686	161,360,607	581,496,914
2017	14	807,431,476	715,931,691	206,856,527	623,265,014
2018	7	627,000,000	212,317,584	33,301,350	194,787,961
2019	15	1,468,980,583	362,365,381	510,321	340,925,435
2020	10	534,193,397	16,533,146	-4,332	20,518,214
Grand Total	**125**	**9,360,862,542**	**7,448,951,506**	**5,432,529,115**	**4,085,529,425**

Employees Retirement System of Texas

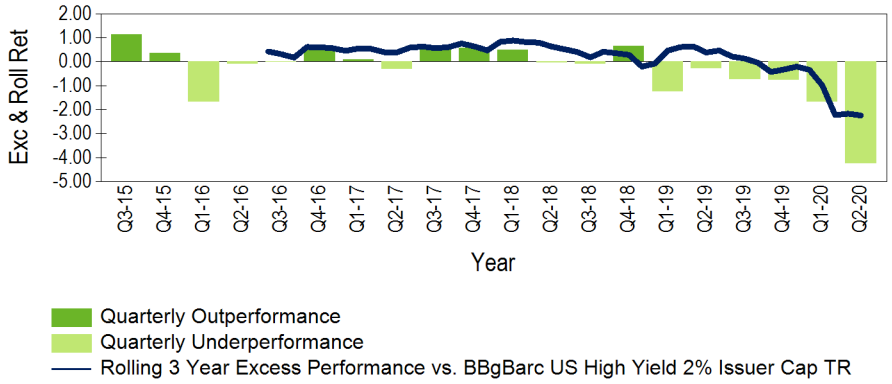
GLOBAL CREDIT PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Global Credit	**$3,419,343,860**	**5.9%**	**-9.3%**	**-7.4%**	**-7.1%**	**1.1%**	**3.4%**
BBgBarc US High Yield 2% Issuer Cap TR		*10.1%*	*-3.8%*	*-1.0%*	*0.0%*	*3.3%*	*4.8%*

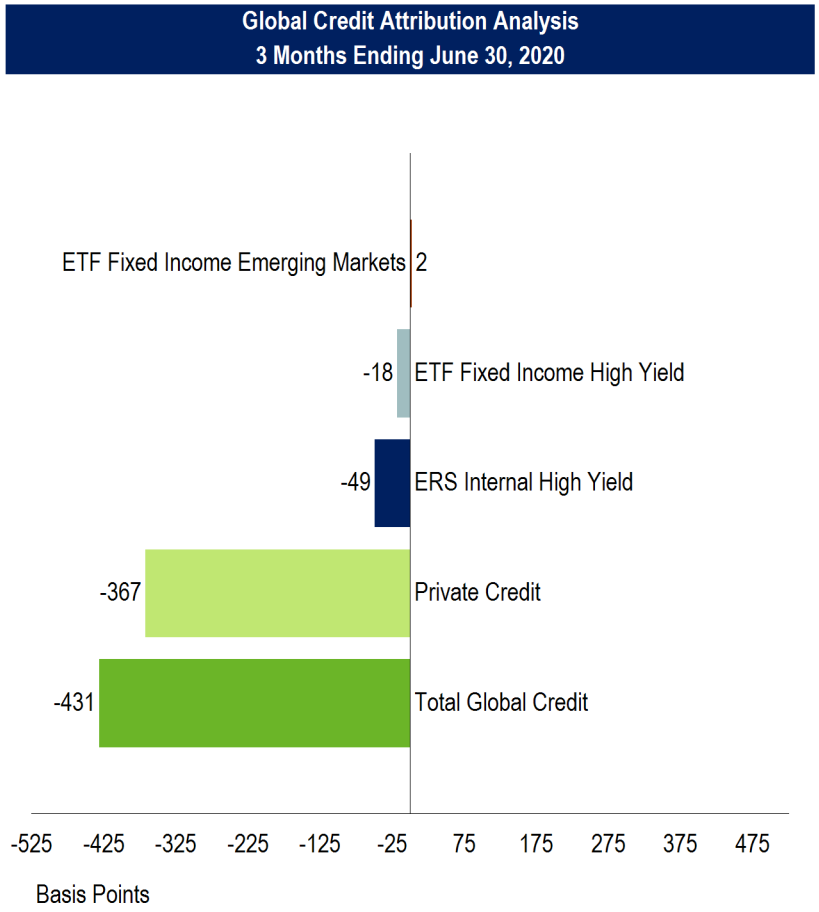
Global Credit Asset Allocation



Rolling Annualized Excess Performance



GLOBAL CREDIT ATTRIBUTION ANALYSIS

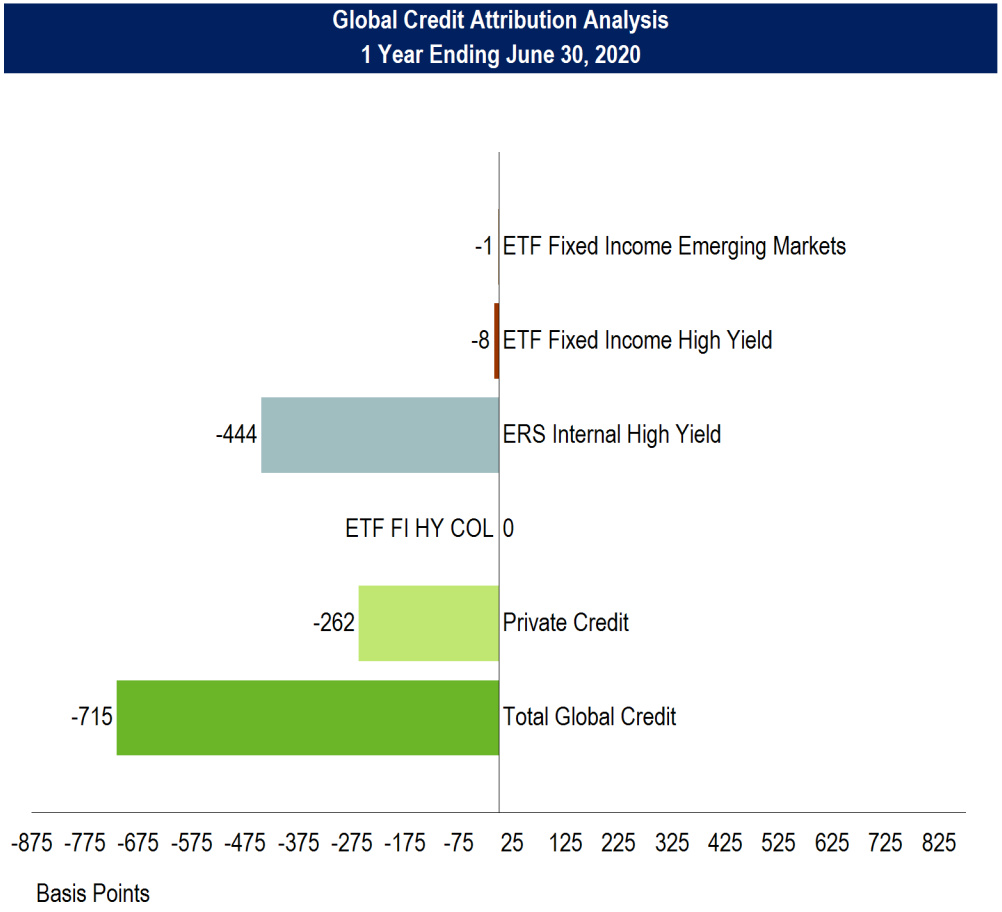


Attribution Summary 3 Months Ending June 30, 2020	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
ETF Fixed Income Emerging Markets	14.3%	10.1%	4.1%	0.0%	0.0%	0.0%
ETF Fixed Income High Yield	8.6%	10.1%	-1.6%	-0.2%	0.0%	-0.2%
ERS Internal High Yield	9.4%	10.1%	-0.8%	-0.5%	0.0%	-0.5%
Sankaty CLO Managed	-15.1%	10.1%	-25.2%	-1.7%	0.0%	-1.7%
Blackrock Credit Alp	4.2%	10.1%	-5.9%	-0.3%	0.0%	-0.3%
Glendon Capital Mgmt	-33.6%	10.1%	-43.8%	-0.6%	0.0%	-0.6%
GOF II Feeder B LP	-15.3%	10.1%	-25.4%	-0.2%	0.0%	-0.2%
BCSF Holding LP	28.8%	10.1%	18.6%	0.2%	0.0%	0.2%
Benefit ST Partners SPEC SIT	-11.8%	10.1%	-21.9%	-0.4%	0.0%	-0.4%
Balance Point Cap Partners III	1.6%	10.1%	-8.6%	-0.1%	0.0%	-0.1%
VWH Master Fund LP	-2.8%	10.1%	-12.9%	-0.1%	0.0%	-0.1%
SERAPIS FUND LP	-10.8%	10.1%	-20.9%	-0.5%	0.0%	-0.5%
Total	**5.8%**	**10.1%**	**-4.4%**	**-4.4%**	**0.0%**	**-4.4%**

* Attribution Analysis by Asset Class uses actual weights.

Employees Retirement System of Texas

GLOBAL CREDIT ATTRIBUTION ANALYSIS



Attribution Summary 1 Year Ending June 30, 2020	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
ETF Fixed Income Emerging Markets	-6.1%	0.0%	-6.1%	0.0%	0.0%	0.0%
ETF Fixed Income High Yield	-0.3%	0.0%	-0.3%	-0.1%	0.0%	-0.1%
ERS Internal High Yield	-6.9%	0.0%	-6.9%	-4.4%	0.0%	-4.4%
ETF FI HY COL	--	--	--	0.0%	0.0%	0.0%
Sankaty CLO Managed	-20.5%	0.0%	-20.5%	-1.4%	0.0%	-1.4%
Blackrock Credit Alp	4.2%	0.0%	4.2%	0.1%	0.0%	0.1%
Glendon Capital Mgmt	-31.1%	0.0%	-31.1%	-0.4%	0.0%	-0.4%
GOF II Feeder B LP	--	--	--	-0.2%	0.0%	-0.2%
BCSF Holding LP	-30.6%	0.0%	-30.6%	-0.4%	0.0%	-0.4%
Benefit ST Partners SPEC SIT	-6.6%	0.0%	-6.6%	-0.2%	0.0%	-0.2%
Balance Point Cap Partners III	9.5%	0.0%	9.5%	0.1%	0.0%	0.1%
VWH Master Fund LP	0.7%	0.0%	0.7%	0.0%	0.0%	0.0%
SERAPIS FUND LP	-9.1%	0.0%	-9.1%	-0.2%	0.0%	-0.2%
Total	**-7.1%**	**0.0%**	**-7.1%**	**-7.1%**	**0.0%**	**-7.1%**

* Attribution Analysis by Asset Class uses actual weights.

RETURN SEEKING PRIVATE DEBT SUMMARY

	Valuation ($)	% of Total Fund	1 Year IRR	3 Year IRR	5 Year IRR	IRR Since Inception
Private Debt	484,617,862	1.77%	-16.11	-2.78	1.12	1.31

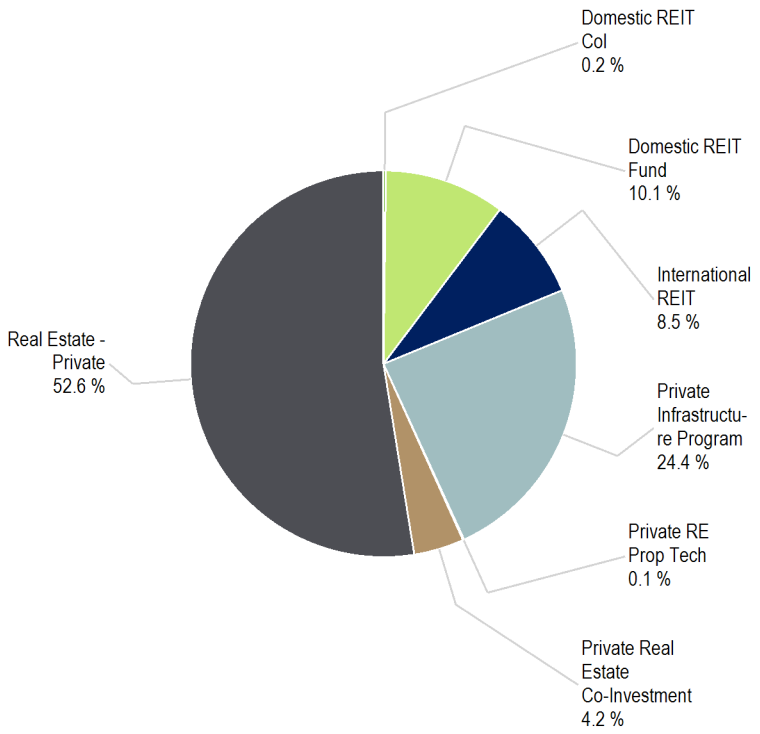
Investment Manager	Valuation	1 Year IRR	3 Year IRR	5 Year IRR	Multiple of Cost	Commitment
Bain Capital CLO Partners LP	0.00	N/A	0.00	9.10	1.23	75,000,000
Bain Capital Credit Managed Account (CLO), L.P.	217,521,405.95	(17.94)	(2.71)	N/A	1.00	250,000,000
Bain Capital Specialty Finance Inc.	-2,344,044.51	0.00	4.65	N/A	1.08	100,000,000
Balance Point Capital Partners III LP	45,429,005.04	8.50	N/A	N/A	1.10	75,000,000
Benefit Street Partners Special Situations Fund LP	54,376,654.00	(10.39)	(2.23)	N/A	0.99	75,000,000
Glendon Opportunities Fund LP	31,203,651.73	(31.42)	(9.54)	(3.63)	0.89	50,000,000
GOF II Feeder B LP	30,490,969.37	N/A	N/A	N/A	0.86	75,000,000
LLSD II LP - CREDIT	-35,175.66	0.00	81.67	17.71	1.30	50,000,000
Serapis Fund LP	89,513,503.44	(12.04)	N/A	N/A	0.94	150,000,000
VWH Master Fund LP	18,461,892.91	(5.21)	N/A	N/A	0.98	50,000,000
Grand Total	**484,617,862.27**	**(16.11)**	**(2.78)**	**1.12**	**1.02**	**950,000,000**

Employees Retirement System of Texas

TOTAL REAL ASSETS PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Real Assets	**$4,144,701,235**	**0.3%**	**-4.7%**	**-2.4%**	**0.0%**	**6.4%**	**7.0%**

Total Real Assets Asset Allocation

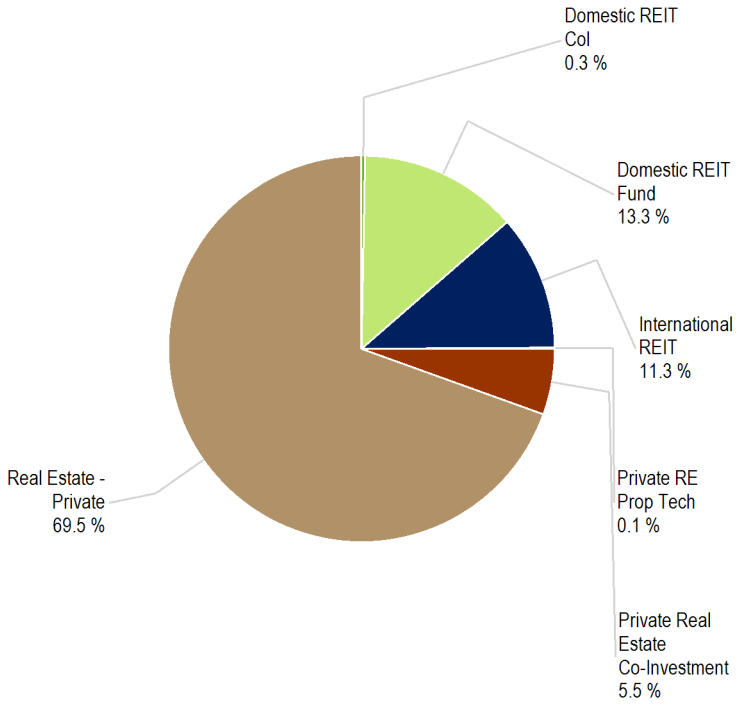


Employees Retirement System of Texas

TOTAL REAL ESTATE PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Real Estate	**$3,133,823,660**	**0.0%**	**-6.5%**	**-4.0%**	**-2.3%**	**6.1%**	**8.0%**

Total Real Assets Asset Allocation

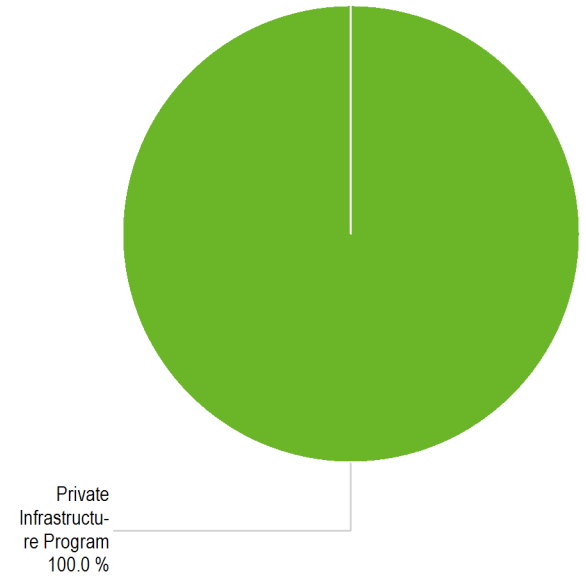


Employees Retirement System of Texas

TOTAL INFRASTRUCTURE PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Infrastructure	**$1,010,877,575**	**1.3%**	**1.4%**	**2.8%**	**8.2%**	**6.6%**	**-0.7%**

Total Real Assets Asset Allocation

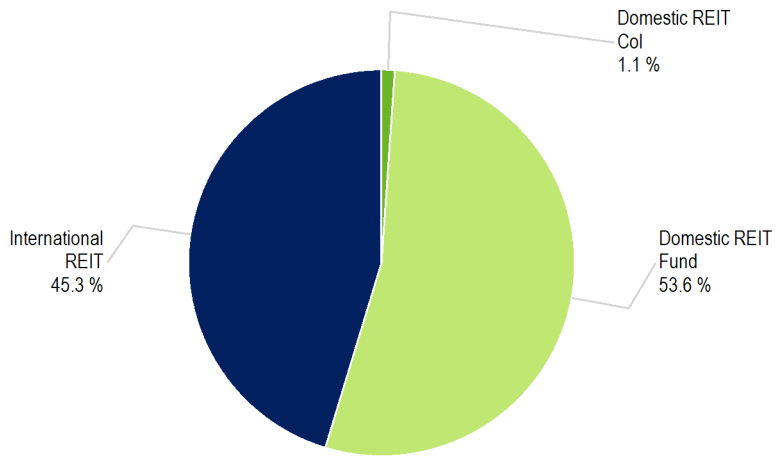


Employees Retirement System of Texas

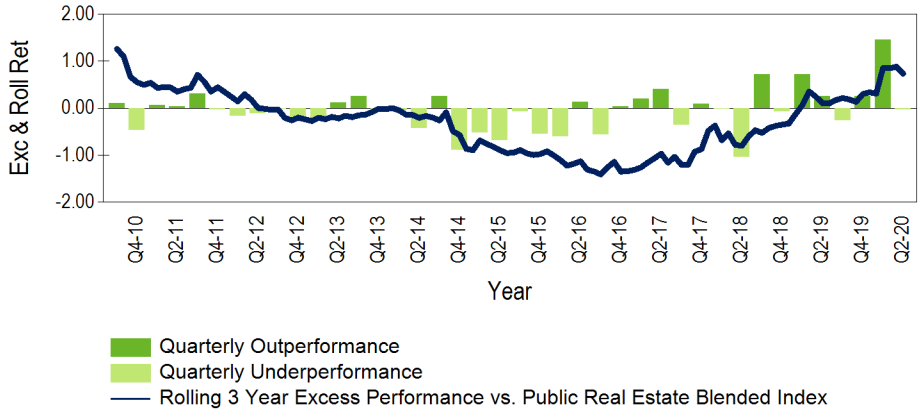
GLOBAL PUBLIC REAL ESTATE PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Global Public Real Estate	**$778,770,271**	**10.2%**	**-19.5%**	**-15.8%**	**-14.0%**	**-0.2%**	**2.0%**	**6.8%**
Public Real Estate Blended Index		*10.2%*	*-21.1%*	*-17.6%*	*-15.7%*	*-1.0%*	*1.8%*	*6.9%*

Global Public Real Estate Asset Allocation



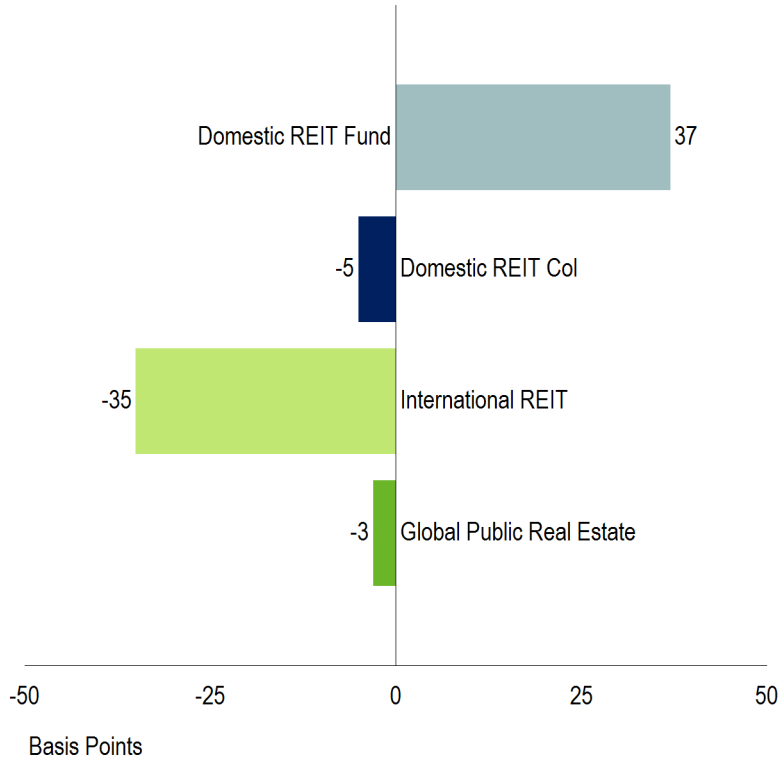
Rolling Annualized Excess Performance



Employees Retirement System of Texas

PUBLIC REAL ESTATE ATTRIBUTION ANALYSIS

Public Real Estate Attribution Analysis
3 Months Ending June 30, 2020

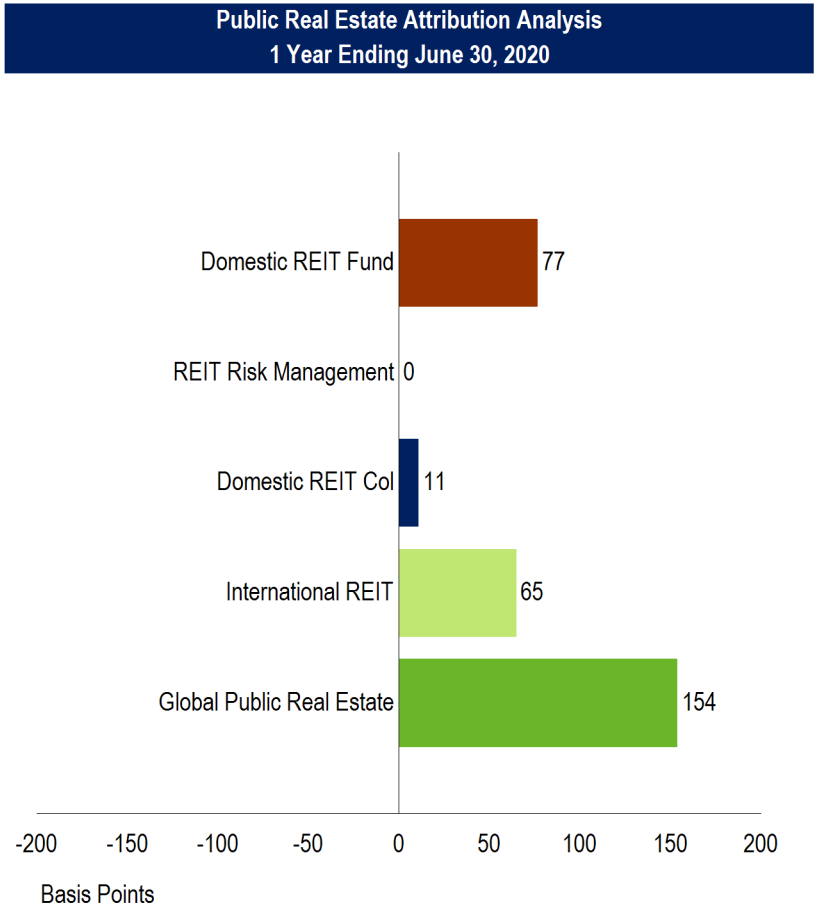


Attribution Summary
3 Months Ending June 30, 2020

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Domestic REIT Fund	10.9%	10.2%	0.7%	0.4%	0.0%	0.4%
Domestic REIT Col	0.0%	10.2%	-10.2%	0.0%	0.0%	0.0%
International REIT	9.5%	10.2%	-0.7%	-0.4%	0.0%	-0.4%
Total	**10.2%**	**10.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

* Attribution Analysis by Asset Class uses actual weights.

PUBLIC REAL ESTATE ATTRIBUTION ANALYSIS



Attribution Summary 1 Year Ending June 30, 2020	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Domestic REIT Fund	-14.4%	-15.7%	1.3%	0.8%	0.0%	0.8%
REIT Risk Management	--	--	--	0.0%	0.0%	0.0%
Domestic REIT Col	--	--	--	0.1%	0.0%	0.1%
International REIT	-14.2%	-15.7%	1.4%	0.7%	0.0%	0.7%
Total	**-14.2%**	**-15.7%**	**1.5%**	**1.5%**	**0.0%**	**1.5%**

* Attribution Analysis by Asset Class uses actual weights.

RETURN SEEKING (REAL ASSETS) PRIVATE REAL ESTATE SUMMARY

	Valuation ($)	% of Total Fund	1 Year IRR	3 Year IRR	5 Year IRR	IRR Since Inception
Real Estate	2,378,553,848	8.67%	1.94	7.79	9.89	11.61

Private Real Estate Program Summary by Fiscal Year as of 6/30/2020

ERS FY	# of Deals	Commitment	Called	Distributions	Valuation
2010	2	136,300,000	135,403,057	90,978,007	143,674,653
2011	7	599,310,250	653,084,168	905,745,544	138,780,770
2012	7	495,467,750	562,718,254	568,574,666	353,487,567
2013	5	368,293,704	366,651,653	404,883,740	139,579,153
2014	10	479,389,000	597,664,559	489,186,885	267,268,145
2015	8	500,800,075	452,912,234	272,095,065	303,237,915
2016	6	245,000,000	286,647,715	108,885,935	263,788,433
2017	4	215,000,000	125,957,573	27,128,864	107,292,379
2018	10	706,500,000	385,929,648	54,181,793	334,641,197
2019	9	683,550,000	289,773,119	7,085,156	276,622,228
2020	12	649,500,000	49,615,850	927,805	46,902,441
Grand Total	**80**	**5,079,110,779**	**3,906,357,830**	**2,929,673,460**	**2,375,274,881**

RETURN SEEKING (REAL ASSETS) PRIVATE INFRASTRUCTURE SUMMARY

	Valuation ($)	% of Total Fund	1 Year IRR	3 Year IRR	5 Year IRR	IRR Since Inception
Infrastructure	1,010,877,573.93	3.68%	2.52	7.08	1.30	2.44

Private Infrastructure Program Summary by Fiscal Year as of 6/30/2020

ERS FY	# of Deals	Commitment	Called	Distributions	Market Values
2012	1	70,000,000	70,000,000	0	0
2013	2	205,000,000	213,819,402	101,039,308	68,525,002
2015	2	105,000,000	150,656,359	96,755,612	108,919,854
2016	2	176,177,461	194,127,073	123,075,592	161,030,393
2017	7	337,392,623	371,905,196	61,123,641	361,558,699
2018	5	470,600,000	273,447,478	38,620,678	237,930,152
2019	4	282,315,000	74,500,687	16,205,207	56,011,094
2020	3	262,640,124	18,690,685	0	16,902,379
Grand Total	**26**	**1,909,125,208**	**1,367,146,880**	**436,820,038**	**1,010,877,573**

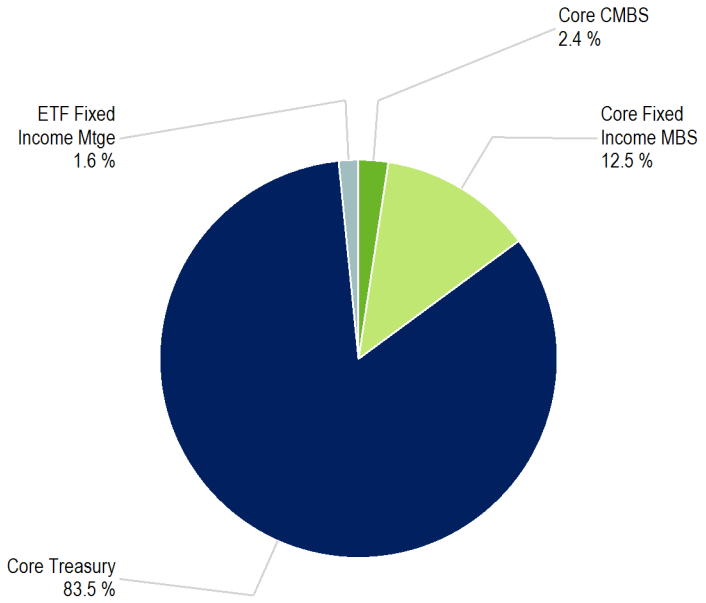
*ERS made an additional commitment in September 2018 to the Actis Long Life Infrastructure Fund, which does not increase the total number of deals for FY 2019.

Employees Retirement System of Texas

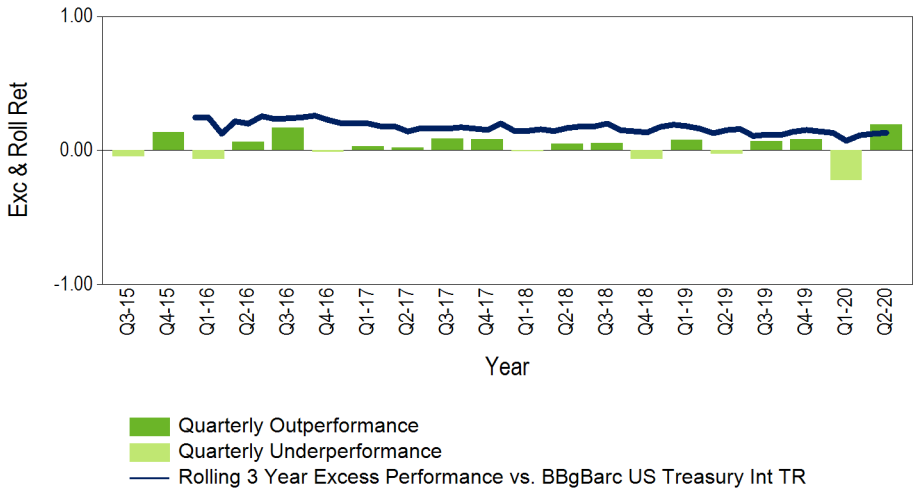
TOTAL RATES PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Rates	**$3,376,516,345**	**0.7%**	**5.8%**	**5.5%**	**7.2%**	**4.2%**	**3.1%**
BBgBarc US Treasury Int TR		*0.5%*	*5.8%*	*5.3%*	*7.1%*	*4.1%*	*3.0%*

Total Rates Asset Allocation



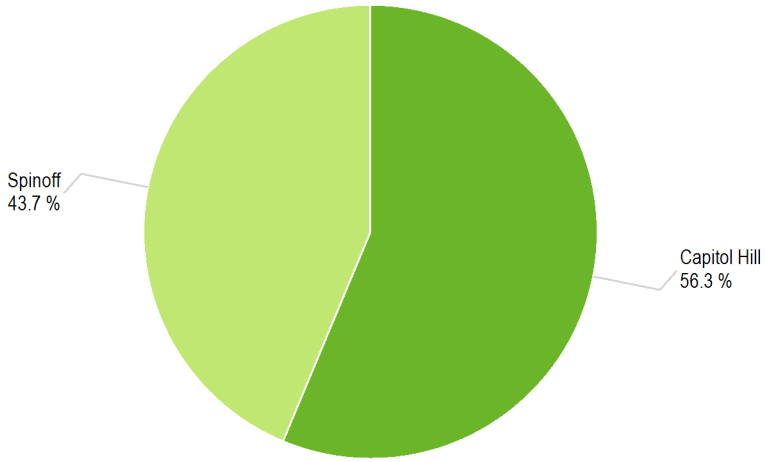
Rolling Annualized Excess Performance



GLOBAL PUBLIC EQUITY SPECIAL SITUATIONS

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs
Global Public Equity Special Situations	$548,164,390	19.0%	-8.7%	-0.7%	-2.8%	4.8%

Global Public Equity Special Situations Asset Allocation

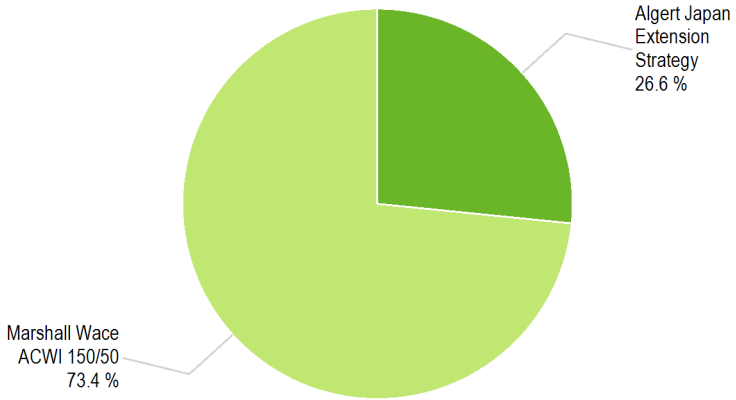


Employees Retirement System of Texas

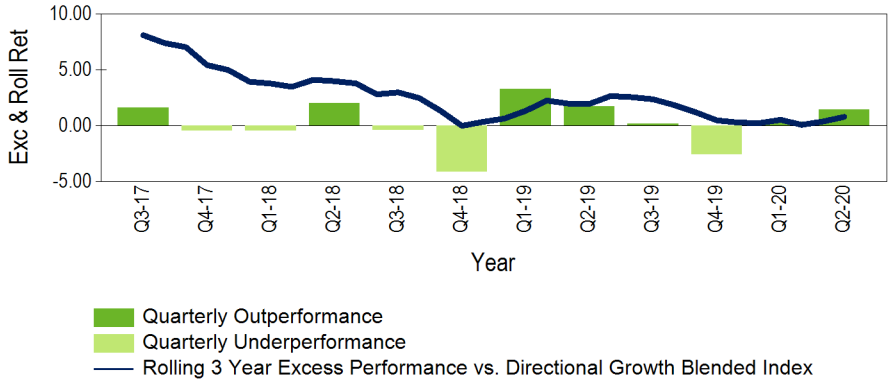
DIRECTIONAL GROWTH PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs
Directional Growth Portfolio	$506,671,553	2.4%	-4.0%	-0.5%	5.5%	5.2%

Directional Growth Asset Allocation



Rolling Annualized Excess Performance

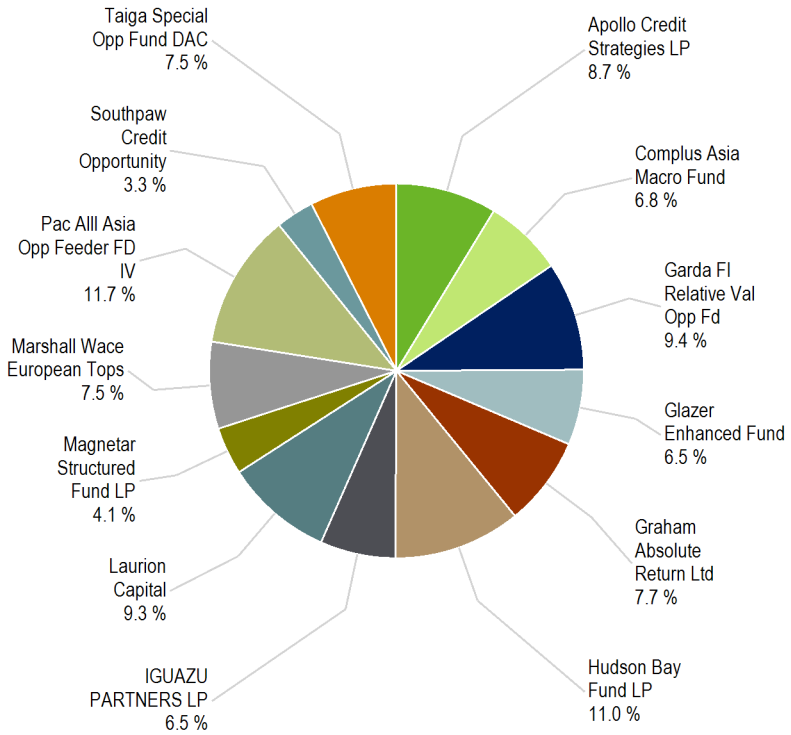


Employees Retirement System of Texas

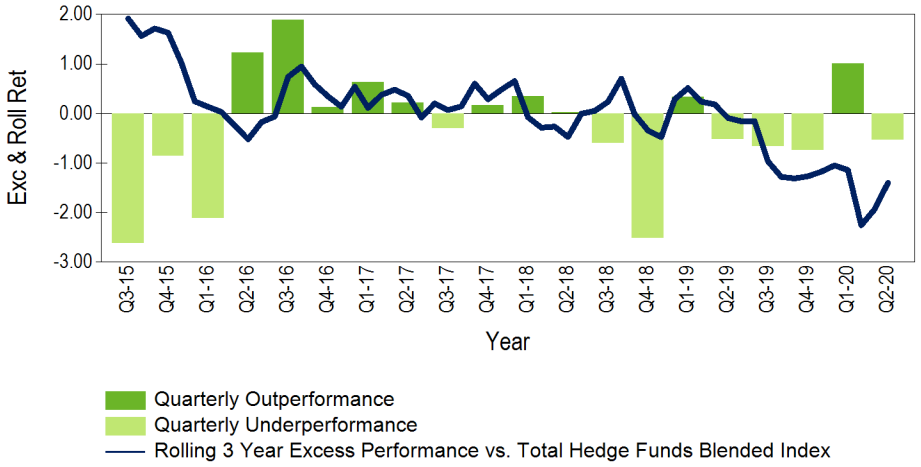
ABSOLUTE RETURN PORTFOLIO PERFORMANCE

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Absolute Return	**$1,228,850,666**	**0.6%**	**2.9%**	**3.5%**	**4.5%**	**4.3%**	**4.0%**
Total Hedge Funds Blended Index		*1.2%*	*2.5%*	*4.4%*	*5.5%*	*5.7%*	*5.2%*

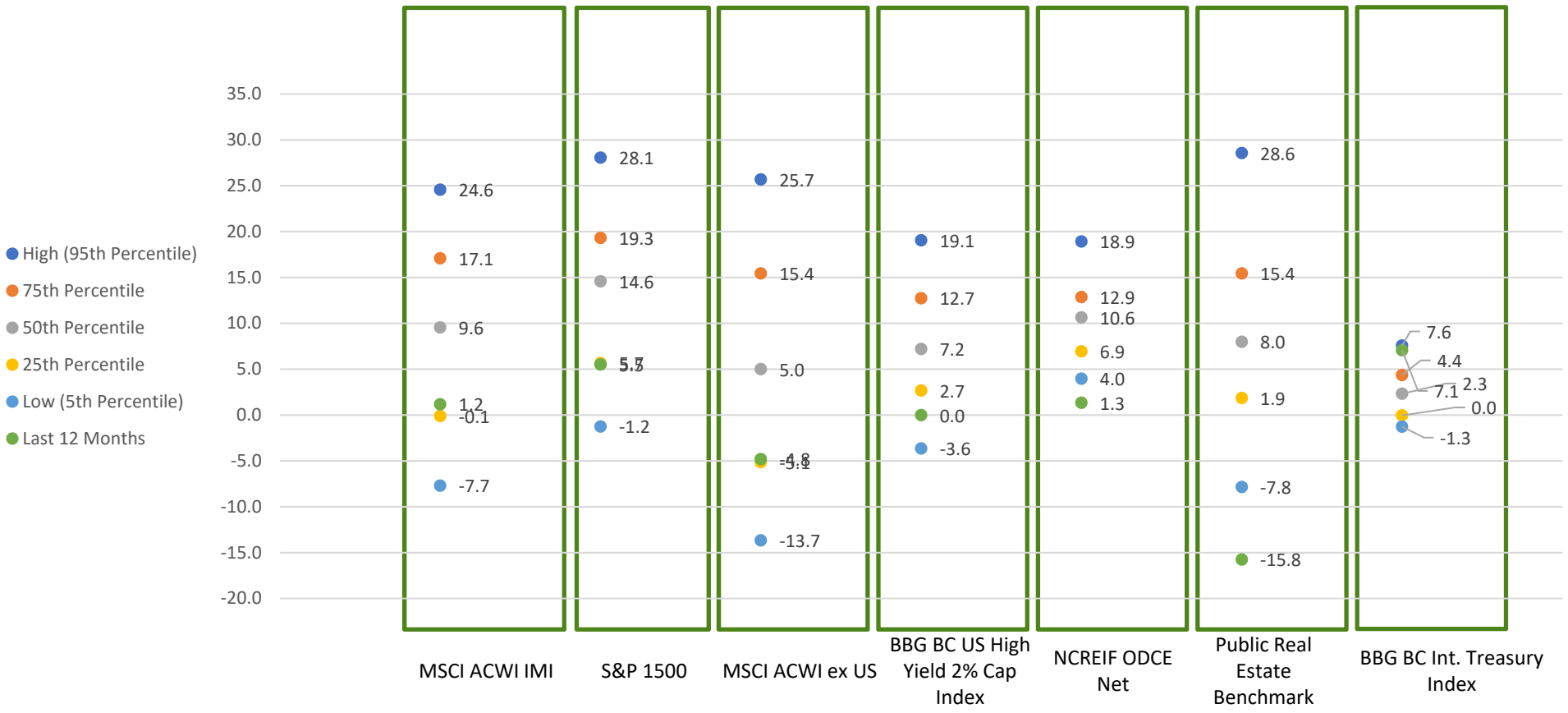
Absolute Return Asset Allocation



Rolling Annualized Excess Performance



ROLLING 1 YEAR CAPITAL MARKET RETURNS (10 YRS ENDED JUNE 30, 2020)



The chart above depicts the dispersion of rolling 1 year returns of various capital markets over the last 10 years.

TOTAL FUND PERFORMANCE SUMMARY

NEPC, LLC

Employees Retirement System of Texas

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	**27,435,810,375**	**100.0**	**6.1**	**-4.5**	**0.1**	**0.3**	**5.1**	**5.4**	**7.8**
Total Fund Policy Index			*8.9*	*-1.6*	*3.6*	*3.2*	*5.6*	*6.0*	*7.9*
Long Term Public Index			*15.6*	*-3.5*	*4.8*	*3.6*	*5.9*	*5.9*	*8.1*
Return Seeking	**22,460,331,707**	**81.9**	**7.5**	**-7.4**	**-1.7**	**-1.8**	**4.9**	**5.8**	**--**
Global Public Equity	**10,651,605,918**	**38.8**	**19.1**	**-8.0**	**1.9**	**0.0**	**5.0**	**5.5**	**9.4**
Global Public Equity Blended Index			*19.9*	*-6.9*	*3.8*	*1.5*	*5.9*	*6.5*	*9.6*
Domestic Equity	**5,220,786,270**	**19.0**	**21.9**	**-6.0**	**4.0**	**3.1**	**8.6**	**8.6**	**13.0**
Domestic Equity Blended Index			*22.3*	*-3.3*	*7.3*	*6.8*	*10.2*	*10.4*	*13.8*
ERS Large Cap Core	3,645,443,979	13.3	21.4	-0.4	9.8	9.7	11.8	10.4	14.0
S&P 500/MSCI USA Large Cap Blended Index			*21.1*	*-1.4*	*9.8*	*9.6*	*11.5*	*11.2*	*14.2*
Barrow Hanley Mewhinney & Strauss	339,291,503	1.2	18.7	-17.2	-8.7	-9.2	2.4	4.5	--
S&P 500 Value/MSCI USA Large Value Blended Index			*11.9*	*-15.4*	*-5.9*	*-6.7*	*2.9*	*5.5*	--
Brandywine Classic LCV	422,447,709	1.5	21.4	-15.2	-2.3	-6.1	1.9	--	--
S&P 500 Value/MSCI USA Large Value Blended Index			*11.9*	*-15.4*	*-5.9*	*-6.7*	*2.9*	*5.5*	--
SMID Cap Core	813,603,080	3.0	26.1	-7.4	1.4	--	--	--	--
MSCI USA SMID Gross			*26.5*	*-9.6*	*-0.7*	--	--	--	--
International Equity	**4,375,981,801**	**15.9**	**18.4**	**-10.4**	**0.2**	**-3.7**	**1.6**	**2.4**	**5.5**
International Equity Blended Index			*16.1*	*-11.0*	*-0.6*	*-4.8*	*1.1*	*2.3*	*5.0*
International Dev Mkts Core	1,219,378,546	4.4	15.3	-10.3	-0.9	--	--	--	--
MSCI EAFE			*14.9*	*-11.3*	*-1.4*	*-5.1*	*0.8*	*2.1*	*5.7*
ERS Canada	190,327,400	0.7	20.0	-12.5	-6.0	-7.2	2.1	2.5	3.6
MSCI Canada			*20.2*	*-12.9*	*-6.6*	*-8.2*	*1.1*	*1.6*	*2.7*
Templeton	246,995,795	0.9	12.4	-14.8	-4.1	-10.0	-3.1	-0.7	4.5
Templeton Blended Index			*16.1*	*-11.0*	*-0.6*	*-4.8*	*1.1*	*2.3*	*5.0*
Lazard Asset Management	294,810,356	1.1	15.9	-10.9	-3.0	-6.2	3.1	2.0	--
MSCI EAFE			*14.9*	*-11.3*	*-1.4*	*-5.1*	*0.8*	*2.1*	*5.7*

Note: Returns are net of investment management fees.
Fiscal year end is August 31.
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Long Term Public Index is comprised of 79% MSCI ACWI IMI and 21% Barclays Intermediate Treasury Index. Index definitions can be found in the appendix.

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Blackrock International Focus	308,585,415	1.1	26.1	-4.6	8.2	5.9	3.5	4.0	--
MSCI ACWI ex USA			*16.1*	*-11.0*	*-0.6*	*-4.8*	*1.1*	*2.3*	*5.0*
ERS Emerging Markets	741,717,693	2.7	20.8	-7.4	5.2	0.3	3.5	4.1	4.1
MSCI Emerging Markets			*18.1*	*-9.8*	*2.8*	*-3.4*	*1.9*	*2.9*	*3.3*
Emerging Managers II LP	182,971,973	0.7	19.7	-13.0	-0.8	-3.9	1.1	--	--
MSCI EAFE Small Cap			*19.9*	*-13.1*	*-0.4*	*-3.5*	*0.5*	*3.8*	*8.0*
Acadian Emerging Mkts Quant	116,802,346	0.4	16.4	-10.9	4.2	-3.1	--	--	--
MSCI Emerging Markets			*18.1*	*-9.8*	*2.8*	*-3.4*	*1.9*	*2.9*	*3.3*
Axiom Intl Small Cap	125,783,204	0.5	34.5	4.1	18.5	17.1	--	--	--
MSCI ACWI ex US Small Cap			*22.8*	*-12.8*	*-0.8*	*-4.3*	*-0.2*	*2.5*	*6.0*
EAM Intl Small Cap	89,871,388	0.3	29.1	-3.4	7.1	5.5	--	--	--
MSCI ACWI ex US Small Cap			*22.8*	*-12.8*	*-0.8*	*-4.3*	*-0.2*	*2.5*	*6.0*
Global Alpha Intl Sm	80,355,836	0.3	16.7	-16.6	-2.8	-6.7	--	--	--
MSCI EAFE Small Cap			*19.9*	*-13.1*	*-0.4*	*-3.5*	*0.5*	*3.8*	*8.0*
Kayne Anderson Intl	109,993,429	0.4	23.0	-9.6	5.6	1.7	--	--	--
MSCI ACWI ex US Small Cap			*22.8*	*-12.8*	*-0.8*	*-4.3*	*-0.2*	*2.5*	*6.0*
QMA Emerging Mkts Sm	98,533,067	0.4	26.5	-11.8	-1.8	-8.8	--	--	--
MSCI Emerging Markets Small Cap			*27.1*	*-12.7*	*-2.6*	*-8.8*	*-3.0*	*-1.4*	*1.8*
Emerg Mgr II Emg Mkt	143,462,121	0.5	21.8	-10.3	--	--	--	--	--
MSCI Emerging Markets			*18.1*	*-9.8*	*2.8*	*-3.4*	*1.9*	*2.9*	*3.3*
Intl Dev Markets Value	426,393,232	1.6	13.2	-17.9	--	--	--	--	--
MSCI EAFE Value			*12.4*	*-19.3*	*-8.8*	*-14.5*	*-4.4*	*-1.6*	*3.5*
Global Public Equity Special Situations	**548,164,390**	**2.0**	**19.0**	**-8.7**	**-0.7**	**-2.8**	**4.8**	**7.1**	**--**
Directional Growth Portfolio	**506,671,553**	**1.8**	**2.4**	**-4.0**	**-0.5**	**5.5**	**5.2**	**6.7**	**--**
Global Equity Tactical	**1,904**	**0.0**							
Private Equity	**4,118,338,008**	**15.0**	**-8.8**	**-7.4**	**-6.3**	**-4.6**	**6.3**	**8.2**	**10.7**

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Fiscal year end is August 31.
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Employees Retirement System of Texas

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Global Credit	**3,419,343,860**	**12.5**	**5.9**	**-9.3**	**-7.4**	**-7.1**	**1.1**	**3.4**	**--**
BBgBarc US High Yield 2% Issuer Cap TR			*10.1*	*-3.8*	*-1.0*	*0.0*	*3.3*	*4.8*	*6.7*
ETF Fixed Income Emerging Markets	18,842,244	0.1	14.3	-9.6	-8.1	-6.1	1.1	4.0	--
ETF Fixed Income EMG Blended Index			*10.1*	*-3.8*	*-1.0*	*0.0*	*3.3*	*4.8*	--
ETF Fixed Income High Yield	373,244,193	1.4	8.6	-4.1	-1.3	-0.3	3.0	4.2	--
ETF Fixed Income High Yield Blended Index			*10.1*	*-3.8*	*-1.0*	*0.0*	*3.3*	*4.8*	--
ERS Internal High Yield	2,415,025,035	8.8	9.4	-10.2	-7.2	-6.9	1.0	3.5	--
BBgBarc US High Yield 2% Issuer Cap TR			*10.1*	*-3.8*	*-1.0*	*0.0*	*3.3*	*4.8*	*6.7*
Private Credit	612,232,388	2.2	-7.6	-9.9	-12.0	-12.1	0.0	2.8	--
BBgBarc US High Yield 2% Issuer Cap TR			*10.1*	*-3.8*	*-1.0*	*0.0*	*3.3*	*4.8*	*6.7*
Total Real Assets	**4,144,701,235**	**15.1**	**0.3**	**-4.7**	**-2.4**	**0.0**	**6.4**	**7.0**	**--**
Real Estate	**3,133,823,660**	**11.4**	**0.0**	**-6.5**	**-4.0**	**-2.3**	**6.1**	**8.0**	**10.7**
Global Public Real Estate	**778,770,271**	**2.8**	**10.2**	**-19.5**	**-15.8**	**-14.0**	**-0.2**	**2.0**	**6.8**
Public Real Estate Blended Index			*10.2*	*-21.1*	*-17.6*	*-15.7*	*-1.0*	*1.8*	*6.9*
Internal Public Real Estate	**778,770,271**	**2.8**	**10.2**	**-19.5**	**-15.8**	**-14.0**	**-0.2**	**2.5**	**7.3**
Internal Public Real Estate Blended Index			*10.2*	*-21.1*	*-17.6*	*-15.7*	*-1.0*	*1.9*	*7.0*
Domestic REIT Composite	425,646,136	1.6	10.8	-19.3	-18.1	-13.9	-0.6	3.2	8.7
Domestic REIT Fund Blended Index			*11.7*	*-20.7*	*-19.3*	*-15.5*	*-1.0*	*3.1*	*8.5*
International REIT	353,124,135	1.3	9.5	-19.7	-13.0	-14.2	0.0	1.7	6.0
FTSE EPRA/NAREIT Developed ex US TR			*8.8*	*-21.2*	*-15.0*	*-15.4*	*-0.3*	*1.3*	*5.9*
Private Real Estate	2,355,053,389	8.6	-2.9	-0.8	1.0	2.7	8.6	10.5	10.9
Private Real Estate Blended Index			*0.8*	*2.0*	*3.1*	*3.9*	*5.9*	*7.5*	*8.1*

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Employees Retirement System of Texas

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Infrastructure	**1,010,877,575**	**3.7**	**1.3**	**1.4**	**2.8**	**8.2**	**6.6**	**-0.7**	**--**
Private Infrastructure	1,010,877,575	3.7	1.3	1.4	2.8	8.2	6.6	-0.7	--
Total Special Situations	**126,342,686**	**0.5**	**2.6**	**3.6**	**0.2**	**--**	**--**	**--**	**--**
ERS Launchpad LLC	126,342,686	0.5	2.6	3.6	0.2	--	--	--	--
HFRI EH Equity Market Neutral 1MA Index			*-1.0*	*-1.5*	*-1.5*	--	--	--	--
Risk Reduction	**4,975,478,668**	**18.1**	**0.7**	**4.9**	**4.9**	**6.3**	**4.2**	**3.3**	**--**
Total Rates	**3,376,516,345**	**12.3**	**0.7**	**5.8**	**5.5**	**7.2**	**4.2**	**3.1**	**--**
BBgBarc US Treasury Int TR			*0.5*	*5.8*	*5.3*	*7.1*	*4.1*	*3.0*	*2.6*
Absolute Return	**1,228,850,666**	**4.5**	**0.6**	**2.9**	**3.5**	**4.5**	**4.3**	**4.0**	**--**
Total Hedge Funds Blended Index			*1.2*	*2.5*	*4.4*	*5.5*	*5.7*	*5.2*	--
Total Cash	**370,111,656**	**1.3**							

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Employees Retirement System of Texas

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)
Total Fund	**27,435,810,375**	**100.0**	**3.0**	**9.5**	**12.1**	**5.3**	**0.4**	**14.6**	**9.9**	**8.0**	**12.4**	**6.5**	**-6.7**
Total Fund Policy Index			*3.1*	*7.9*	*11.1*	*7.2*	*-1.0*	*15.0*	*9.5*	*8.1*	*12.0*	*6.8*	*-7.5*
Long Term Public Index			*1.2*	*8.9*	*13.1*	*7.1*	*-4.3*	*17.2*	*12.0*	*6.2*	*12.5*	*5.4*	*-10.7*
Return Seeking	**22,460,331,707**	**81.9**	**2.0**	**11.6**	**15.2**	**6.0**	**-0.2**	**18.1**	**12.7**	**9.3**	**--**	**--**	**--**
Global Public Equity	**10,651,605,918**	**38.8**	**-1.6**	**11.9**	**17.7**	**4.8**	**-3.5**	**20.0**	**16.5**	**9.5**	**16.2**	**4.4**	**-16.6**
Global Public Equity Blended Index			*-1.1*	*12.1*	*17.5*	*7.7*	*-6.3*	*21.4*	*16.3*	*8.6*	*15.2*	*4.5*	*-16.5*
Domestic Equity	**5,220,786,270**	**19.0**	**-0.1**	**20.9**	**15.8**	**8.4**	**1.5**	**24.2**	**19.2**	**17.5**	**19.6**	**5.9**	**-18.4**
Domestic Equity Blended Index			*1.7*	*20.1*	*15.9*	*12.5*	*0.5*	*24.9*	*19.4*	*17.5*	*19.1*	*5.6*	*-18.4*
ERS Large Cap Core	3,645,443,979	13.3	3.0	20.2	17.7	6.8	0.7	26.2	18.9	18.3	18.6	6.4	-17.7
S&P 500/MSCI USA Large Cap Blended Index			*2.9*	*19.7*	*16.2*	*12.6*	*0.5*	--	--	--	--	--	--
Barrow Hanley Mewhinney & Strauss	339,291,503	1.2	0.6	18.4	11.5	8.4	1.0	21.8	24.7	16.1	--	--	--
S&P 500 Value/MSCI USA Large Value Blended Index			*2.1*	*13.2*	*12.4*	*13.2*	*-3.3*	*22.8*	*22.9*	*17.3*	--	--	--
Brandywine Classic LCV	422,447,709	1.5	-8.3	17.3	--	--	--	--	--	--	--	--	--
S&P 500 Value/MSCI USA Large Value Blended Index			*2.1*	*13.2*	*12.4*	*13.2*	*-3.3*	*22.8*	*22.9*	*17.3*	--	--	--
SMID Cap Core	813,603,080	3.0	--	--	--	--	--	--	--	--	--	--	--
MSCI USA SMID Gross			--	--	--	--	--	--	--	--	--	--	--
International Equity	**4,375,981,801**	**15.9**	**-3.1**	**3.6**	**19.2**	**1.3**	**-10.0**	**16.1**	**13.8**	**-0.1**	**11.8**	**2.2**	**-14.3**
International Equity Blended Index			*-3.3*	*3.2*	*18.9*	*2.9*	*-12.4*	*17.8*	*13.0*	*-1.9*	*10.3*	*2.9*	*-14.4*
ERS International Dev Mkts Core	1,219,378,546	4.4	-3.0	4.5	17.4	-0.9	-6.3	14.5	18.3	2.0	11.1	-0.3	-14.3
MSCI EAFE			*-3.3*	*4.4*	*17.6*	*-0.1*	*-7.5*	*16.4*	*18.7*	*0.0*	*10.0*	*-2.3*	*-14.9*
ERS Canada	190,327,400	0.7	2.0	6.4	13.4	8.3	-24.9	24.5	3.5	-4.5	17.4	--	--
MSCI Canada			*0.6*	*5.8*	*12.1*	*7.9*	*-25.3*	*23.2*	*2.0*	*-5.7*	*17.0*	*12.2*	*-20.4*
Templeton	246,995,795	0.9	-10.2	3.8	18.1	-2.6	-8.0	15.6	19.5	3.6	10.0	-0.7	-14.3
Templeton Blended Index			*-3.3*	*3.2*	*18.9*	*2.9*	*-12.4*	*17.8*	*13.0*	*-1.9*	*10.3*	*2.9*	*-13.8*
Lazard Asset Management	294,810,356	1.1	-0.1	9.0	13.0	-1.6	-5.0	18.8	23.3	--	--	--	--
MSCI EAFE			*-3.3*	*4.4*	*17.6*	*-0.1*	*-7.5*	*16.4*	*18.7*	*0.0*	*10.0*	*-2.3*	*-14.9*

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TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)
Blackrock International Focus	308,585,415	1.1	-2.7	-0.2	23.0	-0.8	--	--	--	--	--	--	--
MSCI ACWI ex USA			*-3.3*	*3.2*	*18.9*	*2.9*	*-12.4*	*17.7*	*13.0*	*-1.9*	*10.3*	*2.9*	*-14.4*
ERS Emerging Markets	741,717,693	2.7	-3.5	0.2	25.7	10.9	-19.2	18.8	1.3	-7.0	9.6	19.9	--
MSCI Emerging Markets			*-4.4*	*-0.7*	*24.5*	*11.8*	*-22.9*	*20.0*	*0.5*	*-5.8*	*9.1*	*18.0*	*-9.9*
Emerging Managers II LP	182,971,973	0.7	-6.9	8.1	--	--	--	--	--	--	--	--	--
MSCI EAFE Small Cap			*-9.2*	*7.5*	*22.0*	*5.4*	*-1.8*	*18.7*	*24.3*	*-3.6*	*17.4*	*1.8*	*-8.9*
Acadian Emerging Mkts Quant	116,802,346	0.4	-4.9	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets			*-4.4*	*-0.7*	*24.5*	*11.8*	*-22.9*	*20.0*	*0.5*	*-5.8*	*9.1*	*18.0*	*-9.9*
Axiom Intl Small Cap	125,783,204	0.5	--	--	--	--	--	--	--	--	--	--	--
MSCI ACWI ex US Small Cap			*-9.0*	*5.4*	*19.6*	*7.5*	*-9.1*	*19.7*	*16.8*	*-5.5*	*15.5*	*10.0*	*-7.4*
EAM Intl Small Cap	89,871,388	0.3	--	--	--	--	--	--	--	--	--	--	--
MSCI ACWI ex US Small Cap			*-9.0*	*5.4*	*19.6*	*7.5*	*-9.1*	*19.7*	*16.8*	*-5.5*	*15.5*	*10.0*	*-7.4*
Global Alpha Intl Sm	80,355,836	0.3	--	--	--	--	--	--	--	--	--	--	--
MSCI EAFE Small Cap			*-9.2*	*7.5*	*22.0*	*5.4*	*-1.8*	*18.7*	*24.3*	*-3.6*	*17.4*	*1.8*	*-8.9*
Kayne Anderson Intl	109,993,429	0.4	--	--	--	--	--	--	--	--	--	--	--
MSCI ACWI ex US Small Cap			*-9.0*	*5.4*	*19.6*	*7.5*	*-9.1*	*19.7*	*16.8*	*-5.5*	*15.5*	*10.0*	*-7.4*
QMA Emerging Mkts Sm	98,533,067	0.4	--	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets Small Cap			*-10.4*	*-0.9*	*16.4*	*11.2*	*-18.9*	*21.1*	*4.6*	*-8.6*	*5.5*	*27.6*	*3.9*
Emerg Mgr II Emg Mkt	143,462,121	0.5	--	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets			*-4.4*	*-0.7*	*24.5*	*11.8*	*-22.9*	*20.0*	*0.5*	*-5.8*	*9.1*	*18.0*	*-9.9*
Intl Dev Markets Value	426,393,232	1.6	--	--	--	--	--	--	--	--	--	--	--
MSCI EAFE Value			*-7.4*	*0.6*	*20.0*	*-3.9*	*-10.6*	*18.8*	*19.1*	*0.1*	*6.8*	*-6.6*	*-10.7*
Global Public Equity Special Situations	**548,164,390**	**2.0**	**-4.4**	**17.8**	**18.3**	**12.2**	**-1.7**	**--**	**--**	**--**	**--**	**--**	**--**
Directional Growth Portfolio	**506,671,553**	**1.8**	**2.5**	**10.1**	**19.8**	**1.6**	**20.2**	**--**	**--**	**--**	**--**	**--**	**--**
Global Equity Tactical	**1,904**	**0.0**											
Private Equity	**4,118,338,008**	**15.0**	**5.0**	**16.6**	**17.3**	**5.8**	**11.0**	**20.8**	**17.1**	**2.3**	**14.7**	**-3.7**	**-23.6**

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)
Total Global Credit	**3,419,343,860**	**12.5**	**5.0**	**4.4**	**9.9**	**8.1**	**-1.4**	**11.2**	**--**	**--**	**--**	**--**	**--**
BBgBarc US High Yield 2% Issuer Cap TR			*6.6*	*3.4*	*8.6*	*9.1*	*-2.9*	*10.6*	*7.6*	*13.8*	*8.3*	*21.4*	*7.0*
ETF Fixed Income Emerging Markets	18,842,244	0.1	14.8	-5.3	4.9	15.5	1.4	16.4	-7.5	--	--	--	--
ETF Fixed Income EMG Blended Index			*6.6*	*3.4*	*8.6*	*9.1*	*-2.9*	*10.6*	*-2.8*	--	--	--	--
ETF Fixed Income High Yield	373,244,193	1.4	6.8	2.6	8.2	6.9	-2.6	10.0	5.2	--	--	--	--
ETF Fixed Income High Yield Blended Index			*6.6*	*3.4*	*8.6*	*9.1*	*-2.9*	*10.6*	*7.6*	--	--	--	--
ERS Internal High Yield	2,415,025,035	8.8	5.2	3.6	8.7	9.8	-1.6	--	--	--	--	--	--
BBgBarc US High Yield 2% Issuer Cap TR			*6.6*	*3.4*	*8.6*	*9.1*	*-2.9*	*10.6*	*7.6*	*13.8*	*8.3*	*21.4*	*7.0*
Private Credit	612,232,388	2.2	2.0	10.0	16.6	1.6	2.3	--	--	--	--	--	--
BBgBarc US High Yield 2% Issuer Cap TR			*6.6*	*3.4*	*8.6*	*9.1*	*-2.9*	*10.6*	*7.6*	*13.8*	*8.3*	*21.4*	*7.0*
Total Real Assets	**4,144,701,235**	**15.1**	**9.2**	**10.0**	**6.7**	**10.1**	**6.2**	**14.7**	**9.6**	**11.2**	**--**	**--**	**--**
Real Estate	**3,133,823,660**	**11.4**	**9.2**	**10.1**	**10.2**	**13.4**	**7.2**	**14.9**	**8.7**	**11.2**	**18.2**	**15.0**	**-22.0**
Global Public Real Estate	**778,770,271**	**2.8**	**9.5**	**5.7**	**0.8**	**15.5**	**-5.6**	**19.6**	**6.5**	**12.6**	**15.0**	**15.4**	**-22.0**
Public Real Estate Blended Index			*8.8*	*6.2*	*0.5*	*16.8*	*-3.6*	*20.1*	*6.6*	*12.6*	*15.5*	*15.1*	*-23.1*
Internal Public Real Estate	**778,770,271**	**2.8**	**9.5**	**5.7**	**0.8**	**18.2**	**-3.9**	**19.7**	**6.9**	**12.6**	**15.4**	**15.4**	**-22.0**
Internal Public Real Estate Blended Index			*8.8*	*6.2*	*0.5*	*18.0*	*-4.2*	*20.1*	*6.6*	*12.6*	*15.5*	*15.1*	*-23.1*
Domestic REIT Composite	425,646,136	1.6	12.0	6.7	-4.8	25.4	0.8	24.3	1.0	20.0	18.5	33.1	-33.0
Domestic REIT Fund Blended Index			*11.7*	*7.0*	*-3.2*	*25.5*	*0.1*	*24.3*	*0.7*	*20.0*	*18.5*	*32.6*	*-33.8*
International REIT	353,124,135	1.3	6.2	4.4	7.4	10.4	-8.6	15.9	12.2	6.7	13.0	6.0	-14.0
FTSE EPRA/NAREIT Developed ex US TR			*6.0*	*6.0*	*5.8*	*10.6*	*-8.1*	*16.6*	*12.0*	*6.8*	*13.2*	*5.7*	*-15.6*
Private Real Estate	2,355,053,389	8.6	9.0	11.9	14.1	12.8	14.1	12.5	10.1	10.7	13.0	--	--
Private Real Estate Blended Index			*5.5*	*7.5*	*6.9*	*10.8*	*13.4*	*4.0*	*4.1*	*11.6*	*14.1*	--	--

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)
Total Infrastructure	**1,010,877,575**	**3.7**	**9.4**	**9.3**	**-10.3**	**-16.3**	**0.7**	**12.0**	**17.9**	**--**	**--**	**--**	**--**
Private Infrastructure	1,010,877,575	3.7	9.4	9.3	-10.3	-16.3	0.3	9.0	17.9	--	--	--	--
Total Special Situations	**126,342,686**	**0.5**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
ERS Launchpad LLC	126,342,686	0.5	--	--	--	--	--	--	--	--	--	--	--
HFRI EH Equity Market Neutral 1MA Index			--	--	--	--	--	--	--	--	--	--	--
Risk Reduction	**4,975,478,668**	**18.1**	**6.3**	**0.7**	**1.8**	**2.7**	**2.5**	**2.9**	**-0.9**	**2.8**	**--**	**--**	**--**
Total Rates	**3,376,516,345**	**12.3**	**7.5**	**-1.1**	**0.1**	**3.3**	**2.1**	**2.5**	**--**	**--**	**--**	**--**	**--**
BBgBarc US Treasury Int TR			*7.5*	*-1.3*	*0.0*	*3.1*	*1.9*	*2.2*	*-1.6*	*2.8*	*3.9*	*6.8*	*5.7*
Absolute Return	**1,228,850,666**	**4.5**	**3.0**	**5.9**	**7.2**	**1.5**	**4.8**	**5.8**	**8.0**	**--**	**--**	**--**	**--**
Total Hedge Funds Blended Index			*6.4*	*5.5*	*4.6*	*4.2*	*4.0*	*4.0*	*4.1*	--	--	--	--
Total Cash	**370,111,656**	**1.3**											

Note: Returns are net of investment management fees.
Fiscal year end is August 31.
End notes can be found in the Appendix and Disclosures section of this report.
For detailed benchmark information please refer to the Investment Policy Statement.

APPENDIX & DISCLOSURES

Employees Retirement System of Texas

BENCHMARK NOTES

*Returns are net of fees. Fiscal year ends August 31st.

1. Total Fund Policy Index is currently comprised of the MSCI ACWI IMI USA Gross, Bloomberg Barclays US High Yield 2% Issuer Cap, FTSE EPRA/NAREIT Blend, NCREIF ODCE NET (1 month in arrears), Bloomberg Barclays Intermediate Treasury, BofA Merrill Lynch 3 Month Treasury Bill + 3.5% (lagged 1 month), BofA Merrill Lynch 3 Month Treasury Bill, Wilshire TUCS >$5B Median, and the CPI + 4%.

2. Long Term Public Index is comprised of 79% MSCI ACW IMI and 21% Barclays Intermediate Treasury Index.

3. Global Public Equity Blended Index consists of the S&P 1500 and MSCI ACWI ex US Net using actual portfolio weights through 8/31/14 and the MSCI All Country World Net from 9/1/14 through 8/31/15. Starting 9/1/15 benchmark is the MSCI ACWI IMI USA Gross.

4. Total Domestic Public Equity Blended Index consists of the S&P 500 from inception through August 2008 and S&P 1500 from September 2008 through August 2019 and the MSCI USA IMI Gross thereafter.

5. Total International Public Equity Blended Index consists of the MSCI EAFE Net January 1999 through August 2008 and the MSCI ACWI ex US Net thereafter.

6. Fisher Investments Blended Index consists of the MSCI EAFE Net from July 2006 through September 2008 and MSCI ACWI ex US Net thereafter.

7. Templeton Blended Index consists of the MSCI EAFE Net from April 2003 through September 2008 and MSCI ACWI ex US Net thereafter.

8. ETF Fixed Income EMG Blended Index consists of the Bloomberg Barclays Emerging Market from July 2012 through August 2013 and the Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped thereafter.

9. ETF Fixed Income High Yield Blended Index consists of the Bloomberg Barclays Corporate U.S. High Yield from July 2012 through August 2013, and the Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped thereafter.

10. Total Public Real Estate Blended Index consists of the MSCI REIT from March 2005 - March 2007, a floating weight benchmark comprised of the EPRA/NAREIT US and EPRA/NAREIT US Global ex US from April 2007 through December 2007, the EPRA NAREIT Global Index from January 2008 through August 2013, the FTSE EPRA/NAREIT Developed Net from September 2013 through August 2014, and a MV weighted blend of the Total Internal Public RE Benchmark and the Wells St. Partner custom benchmark from September 2

11. Internal Public Real Estate Blended Index consists of the MSCI REIT from March 2005 - March 2007, a floating weight benchmark comprised of the EPRA/NAREIT US and EPRA/NAREIT US Global ex US from April 2007 through December 2007, the EPRA NAREIT Global Index from January 2008 through August 2013, the FTSE EPRA/NAREIT Developed Net from September 2013 thereafter.

12. Domestic REIT Fund Blended Index consists of the MSCI REIT from May 2000 - March 2007 and the FTSE EPRA/NAREIT thereafter.

13. Private Real Estate Blended index consists of the 91 Day T-Bill + 4% RE benchmark from 9/1/2012 through 8/31/14 and the NCREIF NFI-ODCE Net 1 month lagged beginning 9/1/14.

14. Hedge Fund Blended Index consists of the 91 Day T-Bill + 4% through 8/31/14, the 91 Day T-Bill + 4% (1 month lagged) from 9/1/14 through 8/31/19, and the 91 Day T-Bill + 3.5% 1 month lagged beginning 9/1/19.

15. The Global Private Equity Benchmark is the actual gross of fees return of the Global Private Equity Composite from 9/1/11 through 8/31/15, the MSCI All Country World IMI with USA Gross Index Net plus 300 bps from 9/1/15 through 8/31/2019 and the Wilshire TUCS >$5B Median thereafter.

BENCHMARK NOTES

16. S&P 500/MSCI USA Large Cap Blended Index consists of S&P 500 Value from April 2011 through August 2019 and MSCI USA Large Value USD Gross thereafter.

GLOSSARY OF INVESTMENT TERMINOLOGY

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula: (Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return – Period Benchmark Return). To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.

R-Squared – Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

*Formula: Calculation Average (X-Y)/Downside Deviation (X-Y) * 2 Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)*

Standard Deviation - The standard deviation is a statistical term that de-scribes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula: (Annualized Return of Portfolio – Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula: Tracking Error = $\sqrt{\frac{\sum_{i=1}^{n}(Rp-Rb)\text{^}2}{N-1}}$

Where X = periods portfolio return and Y = the period's benchmark return For monthly returns, the periods per year = 12 For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula: (Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta

Up/Down Capture Ratio - A measure of what percentage of a market's re-turns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0

UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0

Employees Retirement System of Texas

TOTAL FUND RISK STATISTICS

	3 Years Ending June 30, 2020						
	% of Tot	Anlzd Ret	Anlzd Std Dev	Anlzd AJ	Sharpe Ratio	Sortino Ratio RF	Tracking Error
Total Fund	100.00%	5.06%	7.30%	0.05%	0.47	0.46	1.92%
Total Fund Policy Index	--	5.62%	8.44%	0.00%	0.47	0.53	0.00%
Global Public Equity	38.82%	5.02%	16.51%	-0.79%	0.20	0.22	1.36%
Global Public Equity Blended Index	--	5.87%	16.72%	0.00%	0.25	0.29	0.00%
Private Equity	15.01%	6.28%	6.46%	4.76%	0.72	0.57	13.18%
Private Equity Blended Index	--	6.52%	11.18%	0.00%	0.44	0.48	0.00%
Total Global Credit	12.46%	1.07%	8.84%	-2.19%	-0.07	-0.05	2.61%
BBgBarc US High Yield 2% Issuer Cap TR	--	3.32%	8.73%	0.00%	0.19	0.15	0.00%
Global Public Real Estate	2.84%	-0.23%	17.22%	0.64%	-0.11	-0.09	1.21%
Public Real Estate Blended Index	--	-0.97%	17.86%	0.00%	-0.15	-0.12	0.00%
Private Real Estate	8.58%	8.60%	3.38%	7.10%	2.05	2.16	4.27%
Private Real Estate Blended Index	--	5.85%	2.51%	0.00%	1.67	23.00	0.00%
Total Infrastructure	3.68%	6.55%	4.83%	10.54%	1.01	1.83	5.09%
CPI + 4% (Seasonally Adjusted)	--	5.84%	0.83%	0.00%	5.04	6.66	0.00%
Total Rates	12.31%	4.24%	2.49%	0.24%	1.04	2.80	0.17%
BBgBarc US Treasury Int TR	--	4.11%	2.60%	0.00%	0.94	2.61	0.00%
Absolute Return	4.48%	4.32%	2.68%	27.39%	0.99	1.01	2.80%
Total Hedge Funds Blended Index	--	5.72%	0.22%	0.00%	18.30	--	0.00%
Total Cash	1.35%	2.26%	0.85%	0.57%	0.72	1.21	0.86%
ICE BofA 91 Days T-Bills TR	--	1.77%	0.22%	0.00%	0.50	3.41	0.00%

Employees Retirement System of Texas

TOTAL FUND RISK STATISTICS

	5 Years Ending June 30, 2020						
	% of Tot	Anlzd Ret	Anlzd Std Dev	Anlzd AJ	Sharpe Ratio	Sortino Ratio RF	Tracking Error
Total Fund	100.00%	5.43%	6.70%	0.18%	0.64	0.69	1.81%
Total Fund Policy Index	--	6.05%	7.85%	0.00%	0.63	0.77	0.00%
Global Public Equity	38.82%	5.48%	14.56%	-0.86%	0.30	0.33	1.33%
Global Public Equity Blended Index	--	6.46%	14.83%	0.00%	0.36	0.41	0.00%
Private Equity	15.01%	8.23%	5.68%	6.87%	1.25	1.09	12.01%
Private Equity Blended Index	--	9.20%	10.90%	0.00%	0.74	0.89	0.00%
Total Global Credit	12.46%	3.44%	7.62%	-1.07%	0.30	0.24	2.30%
BBgBarc US High Yield 2% Issuer Cap TR	--	4.79%	7.88%	0.00%	0.46	0.43	0.00%
Global Public Real Estate	2.84%	2.01%	15.09%	0.27%	0.06	0.06	1.11%
Public Real Estate Blended Index	--	1.76%	15.59%	0.00%	0.04	0.04	0.00%
Private Real Estate	8.58%	10.51%	2.96%	9.49%	3.17	2.92	4.52%
Private Real Estate Blended Index	--	7.48%	3.36%	0.00%	1.89	26.91	0.00%
Total Infrastructure	3.68%	-0.71%	13.63%	12.20%	-0.14	-0.11	13.78%
CPI + 4% (Seasonally Adjusted)	--	5.66%	0.75%	0.00%	6.03	7.20	0.00%
Total Rates	12.31%	3.12%	2.40%	0.21%	0.83	1.56	0.16%
BBgBarc US Treasury Int TR	--	2.98%	2.49%	0.00%	0.74	1.47	0.00%
Absolute Return	4.48%	3.98%	2.56%	10.66%	1.12	1.32	2.62%
Total Hedge Funds Blended Index	--	5.15%	0.26%	0.00%	15.40	--	0.00%
Total Cash	1.35%	1.96%	1.10%	0.80%	0.76	1.18	1.10%
ICE BofA 91 Days T-Bills TR	--	1.19%	0.27%	0.00%	0.23	1.69	0.00%

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.