

2. Joint Meeting of the ERS Board of Trustees and Investment Advisory Committee



August 29, 2018



Public Agenda Item #1.1

Call Meeting to Reconvene of the Board of Trustees



August 29, 2018

Public Agenda Item #1.2

Call Meeting of the Investment Advisory Committee to Order



August 29, 2018

Public Agenda Item #2.1

Review and Approval of the Minutes of the May 23, 2018 Joint Meeting of the Board of Trustees and Investment Advisory Committee – (Action)



August 29, 2018

Questions?
Action Item



Public Agenda Item #3.1

*Consideration of Reappointment of ERS Investment Advisory
Committee Members with terms expiring August 31, 2018 – (Action)*



August 29, 2018

Tom Tull, CFA, Chief Investment Officer

IAC Reappointment



	Term Expiration	Investment Experience	Global Equity	Fixed Income	Private Equity	Real Estate	Hedge Funds	Infrastructure	Derivatives
IAC Chair, Caroline Cooley CIO - Diversified Funds Crestline Investors, Inc.	12/31/2019	33 years					X		X
IAC Vice-Chair, Bob Alley, CFA Retired from AIM Advisors, Inc. as Chief Fixed Income Officer	8/31/2018	42 years	X	X	X				
James Hille, CFA, CAIA CIO Texas Christian University Endowment	8/31/2020	26 years	X	X	X	X	X		
Mari Kooi Retired – Wolf Asset Management International, LLC as Chief Executive Officer	12/31/2020	30 years	X	X	X		X		X
Gene L. Needles, Jr. Chairman, President and CEO American Beacon Advisors	5/31/2020	24 years	X	X	X	X	X		X
Ken Mindell Sr. VP, Treasurer & Director of Investments Rosewood Management Corporation	5/31/2019	37 years	X	X	X	X	X		X
Dr. Laura Starks Charles E. & Sarah M. Seay Regents Chair in Business Administration Director, AIM Investment Center The University of Texas Austin	8/31/2018	29 years	X	X	X	X	X		
Lenore Sullivan Managing Director (Volunteer) TMV Capital Management Formerly, Partner at Perella Weinberg Partners	2/29/2019	37 years			X	X		X	
Didi Weinblatt, Ph.D., CFA Retired from USAA Investment Management Co. as Vice President, Mutual Fund Portfolios	8/31/2020	37 years	X	X					

Questions?
Action Item



Public Agenda Item #4.1

Review of ERS' Investment Policy



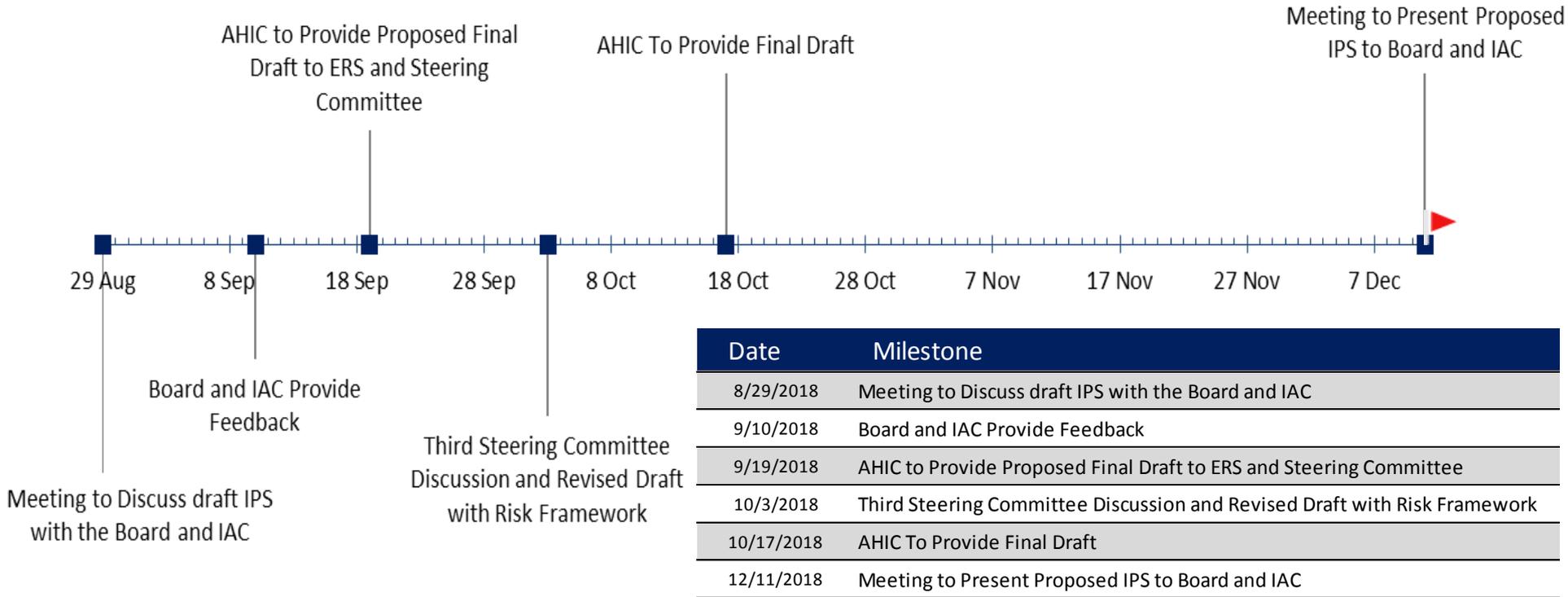
August 29, 2018

Tom Tull, CFA, Chief Investment Officer
Sharmila Kassam, CPA, Deputy Chief Investment Officer
Steve Voss and Michael McCormick, Aon Hewitt

Executive Summary

- Since the May 23rd meeting, the steering committee, ERS staff, and AHIC have been working to create a new investment policy statement
- A draft statement was created and provided to the group for discussion during two steering committee meetings
- A draft of the current document has been provided to you for review
- We are requesting any feedback on the current draft of the IPS be provided by September 10th
 - A third meeting with the steering committee will be conducted to finalize the implementation of any feedback or other outstanding items
- It is expected that the new investment policy statement will be presented to the Board and IAC at the December 11th meeting
 - Additional detail on the proposed timeline is provided on the next slide

IPS Reorganization Timeline



IPS Reorganization Overview

Current Policy Structure	Proposed Policy Structure
Section 1. Scope	Chapter I: Legal Authority and Fiduciary Responsibilities
Section 2. Philosophy and Strategy	
2.1. Investment Philosophy	Chapter II: Investment Philosophy and Performance Objectives
2.2. Investment Strategy	Chapter II: Investment Philosophy and Performance Objectives
2.3. Policy Interpretation and Review	Chapter I: Legal Authority and Fiduciary Responsibilities
Section 3. Performance	
3.1. Performance Evaluation	Chapter II: Investment Philosophy and Performance Objectives
3.2. Advisor Evaluation	Chapter III: Governance
3.3. Internal Portfolio Evaluation	Chapter III: Governance
3.4. Performance Benchmark Objectives	Chapter IV: Asset Allocation
Section 5. Code of Ethics and Personal Investment Activities	Chapter VII: Code of Ethics
Section 6. Investment Objectives and Guidelines for the TEGBP Funds	Chapter VIII: TEGBP FUNDS

- The table to the Above outlines the current structure of the IPS, and the mapping of information into the proposed structure on the right
- Each chapter in the proposed structure is color coded to allow for easier readability
- In addition to the high level reordering noted in the table, the changes also includes removal of redundant elements and language
- Section 4 of the Current Policy is included on the next slide

IPS Reorganization Overview (continued)

Current Policy Structure	Proposed Policy Structure
Section 4. Implementation	
4.1. Duty of Care	Chapter I: Legal Authority and Fiduciary Responsibilities
4.2. Delegation of Authority	Chapter III: Governance
4.3. The Investment Advisory Committee	Chapter III: Governance
4.4. Investment Consultants	Chapter III: Governance
4.5. External Advisors	Chapter III: Governance
4.6. ERS Investments Staff	Chapter III: Governance
4.7. Trade Execution and Commission Sharing	Chapter III: Governance
4.8. Implementation Plan	Chapter IV: Asset Allocation
4.9. Permissible Investments	Chapter V: Asset Classes, Leverage and Risk
4.10. Eligible Securities	Asset Class Guidelines
4.11. Bond Exchanges	Asset Class Guidelines
4.12. Risk Management	Chapter V: Asset Classes, Leverage and Risk
4.13. Securities Lending	Chapter III: Governance
4.14. Divestment of Plan Assets on Non-Economic Factors	ADDENDUM II
4.15. Economically Targeted Investments (ETI's)	Chapter III: Governance
4.16. Emerging Investment Service Providers	Chapter III: Governance
4.17. Securities Litigation Policy	Chapter III: Governance
4.18. Voting of Proxies	Chapter III: Governance
4.19. Reporting Requirements	Chapter VI: Trust Fund Monitoring and Reporting

- The next slide outlines the high level findings of our initial survey
 - Additional findings are included in the appendix

IPS Revision Example – DRAFT/FOR ILLUSTRATIVE PURPOSES ONLY

Current Policy

Investment Philosophy

The assets of ERS are held in trust for the benefit of the trust fund’s members and retirees and may not be diverted. This “exclusive benefit” rule must be followed when making any investment decisions. Moreover, the assets of ERS shall be invested and reinvested without distinction as to their source in accordance with Art. XVI, § 67, Texas Constitution. This “whole portfolio” approach, in addition to the exclusive benefit rule, shall be the basis upon which investment decisions will be made as provided in the Texas Constitution and Texas Government Code § 815.307.

Proposed Policy

Investment Philosophy

Excerpt from the investment beliefs:

The single most important decision the Board makes is the long-term asset allocation decision. Staff is tasked with implementation through sound strategic decisions.

The Board seeks to achieve the objectives of the investment program by supporting a culture that builds upon the input, skills and talents of staff to focus on consistent positive performance over the long-term.

IPS Survey Comments and Findings

Common Theme	Board	IAC	Staff
1 Reduce redundancies within the IPS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2 Move to a more principles based policy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3 Asset class guidelines should be removed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4 The main policy should speak broadly about risk and risk management, and the guidelines should provide detail	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5 Create a duty of care and delegation of authority table outlining the roles and responsibilities of the Board, IAC, staff, and consultants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6 Document that the Board and IAC will review the IPS annually	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7 Creation of a Mission Statement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8 Creation of an Executive Summary	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Next Steps

- Review the attached Investment Policy Statement draft and provide any additional feedback or guidance by September 10th
- ERS investment staff and AHIC will work to finalize investment philosophy, risk language, and risk monitoring to be included in the Investment Policy Statement
- The steering committee, ERS staff, and AHIC will meet in early October to finalize the implementation of any feedback and review investment philosophy and risk additions
- Implement any feedback from the steering committee meeting
- The new investment policy statement will be presented to the Board and IAC prior to the December 11th meeting

Questions?



Public Agenda Item #5.1

Review of Investment Performance for the Second Calendar Quarter of 2018



August 29, 2018

Sharmila Kassam, CPA, Deputy Chief Investment Officer
Steve Voss and Michael McCormick, Aon Hewitt

ERS Trust Fund Dashboard

Performance

Fund	<u>CYTD</u>	<u>FYTD</u>
Performance:	1.9%	7.0%
Benchmark:	0.5%	5.3%
Excess Return:	1.4%	1.7%
3-Yr Tracking error	1.56	

Largest Contributors (quarter):

- Outperformance of the private equity and private real estate components

Largest Detractors (quarter):

- Underperformance of the global public equity component

Profile

Market Value at 6/30/18:
\$28.3 Billion

Actuarial Accrued Liability 8/31/17:
\$37.6 Billion

Retirees and Beneficiaries 8/31/17:
107,530

Retirement Payments Annually 8/31/17:
\$2.2 Billion

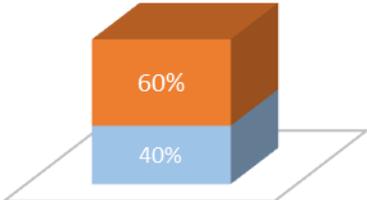
ERS Trust Funding Ratio 8/31/17:
70.1%

Compliance

Asset Allocation Compliance: Yes
Tracking Error Compliance: Yes
Investment Policy Compliance: Yes

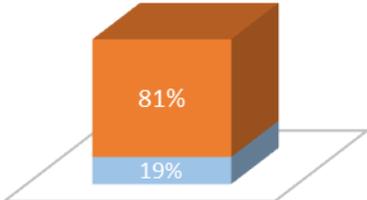
MANAGEMENT

■ External ■ Internal



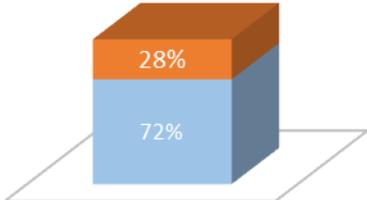
ALLOCATION

■ Risk Reducing ■ Return Seeking



LIQUIDITY

■ Liquid ■ Illiquid

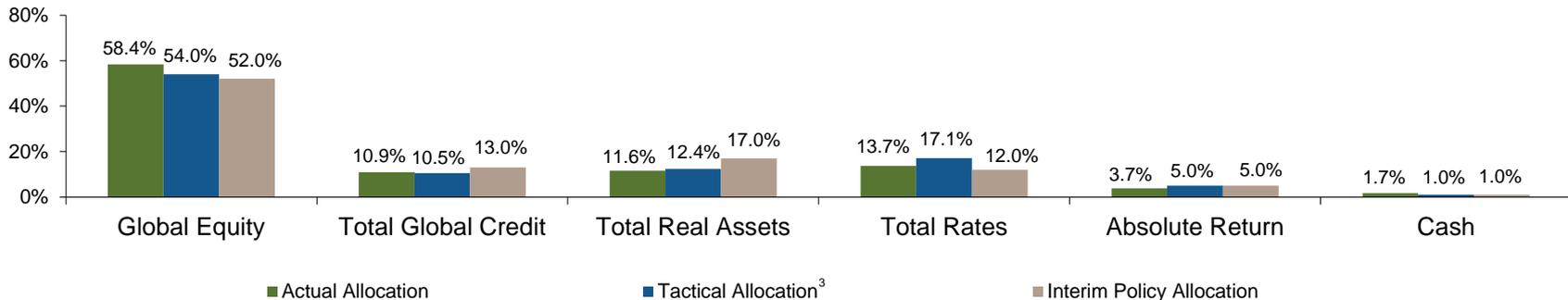


Total Fund: Asset Allocation

Summary of Cash Flow

	1 Quarter	Year To Date	Fiscal YTD	1 Year	3 Years	5 Years
Total Fund						
Beginning Market Value	28,235,322,448	28,554,907,251	27,531,798,643	26,979,126,647	25,896,309,479	23,620,416,097
+ Additions / Withdrawals	-314,255,924	-751,125,633	-1,105,104,655	-1,282,082,482	-3,476,300,519	-6,093,965,806
+ Investment Earnings	417,313,995	534,598,902	1,911,686,532	2,641,336,355	5,918,371,560	10,811,930,229
= Ending Market Value	28,338,380,520	28,338,380,520	28,338,380,520	28,338,380,520	28,338,380,520	28,338,380,520

Employees Retirement System of Texas - Quarterly Asset Allocation Including Risk Management vs. Policy Target as of 6/30/2018



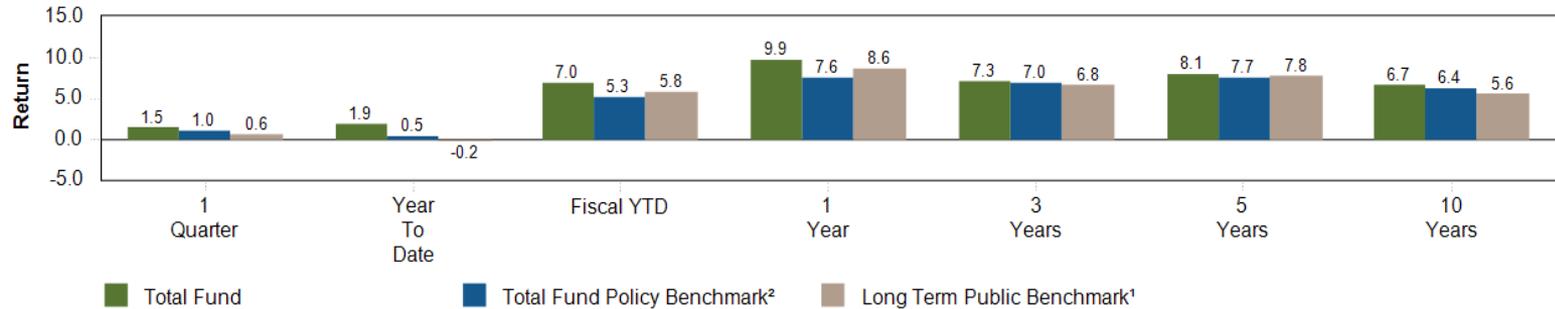
¹ All returns contained in this report are shown net of investment management fees. All returns longer than 1-year are annualized.

² Due to rounding throughout the report, percentage totals displayed may not sum to 100%.

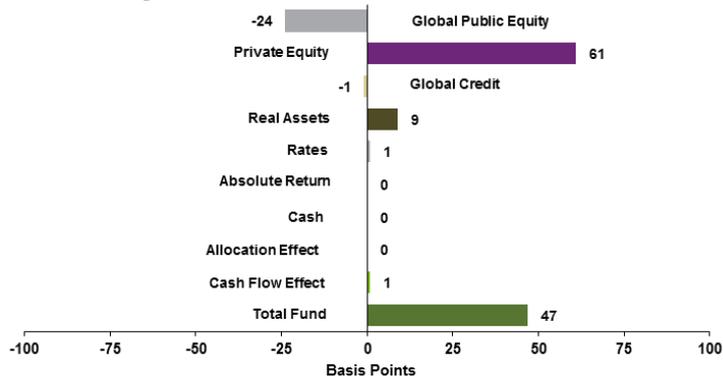
³ Allocation represents the paced allocation during the transition to the new policy allocation.

Total Fund: Performance

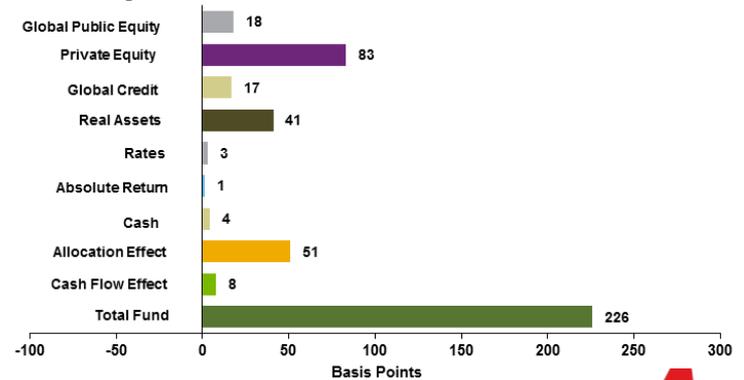
Return Summary



Total Fund Attribution Analysis 3 Months Ending 6/30/18

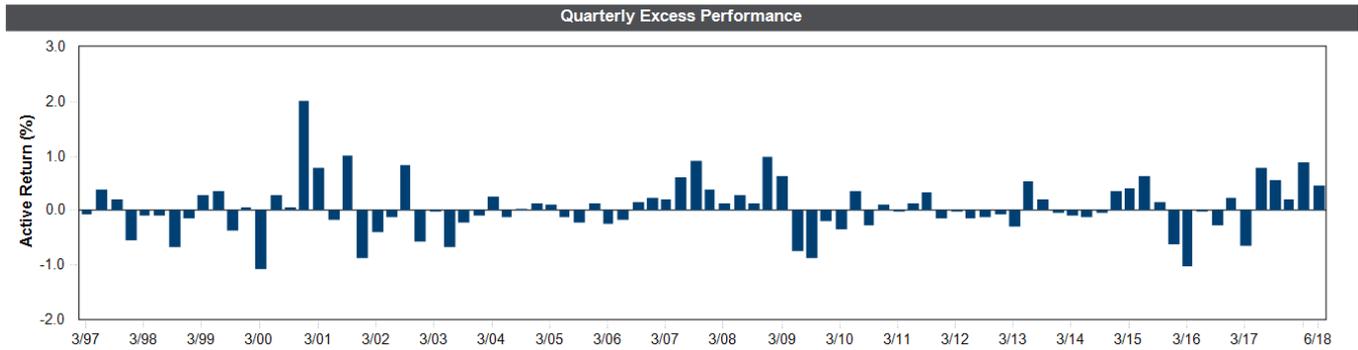
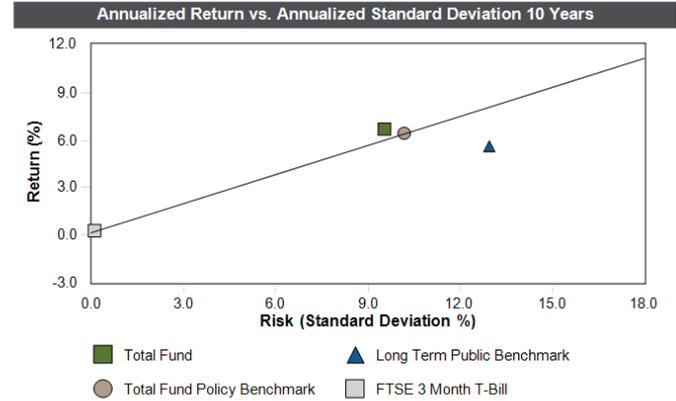
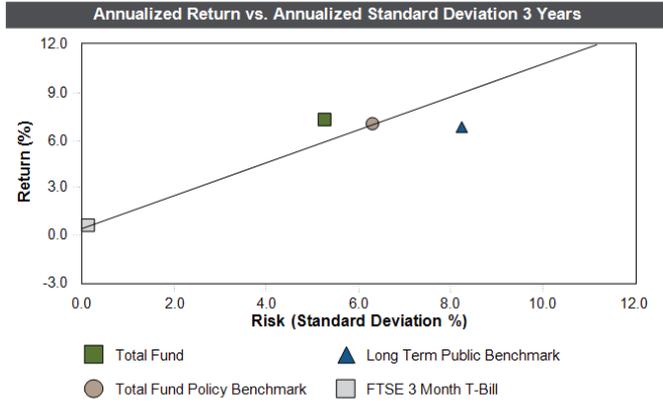


Total Fund Attribution Analysis 1 Year Ending 6/30/18



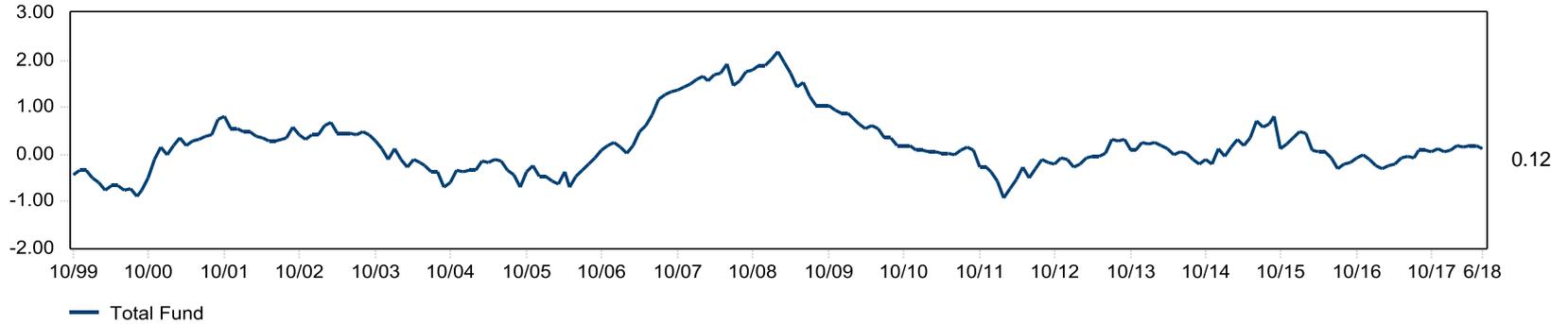
¹The Long Term Public Benchmark is a combination of 79% MSCI ACW IMI and 21% Barclays Intermediate Treasury Index.

Total Fund: Risk

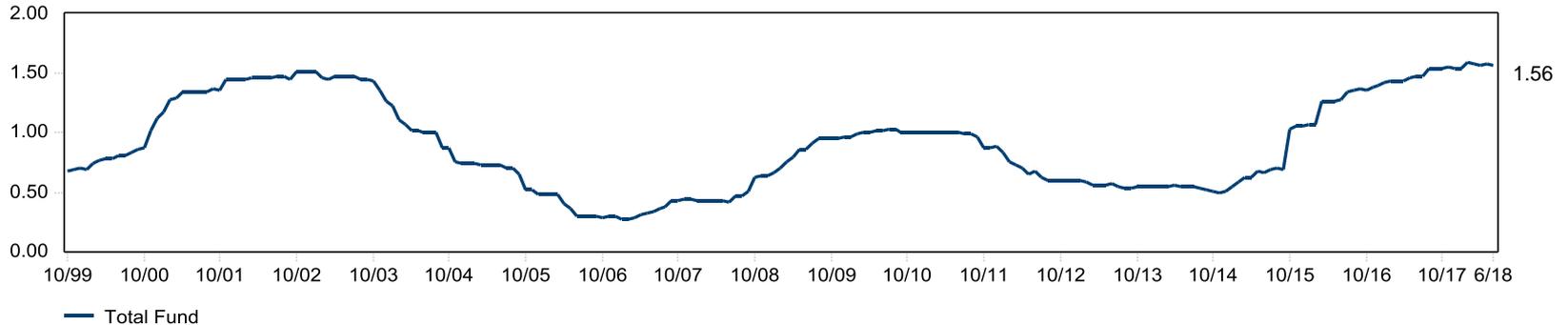


Total Fund: Rolling Information Ratio and Tracking Error (36 months)

Information Ratio (Excess Return Ratio¹)



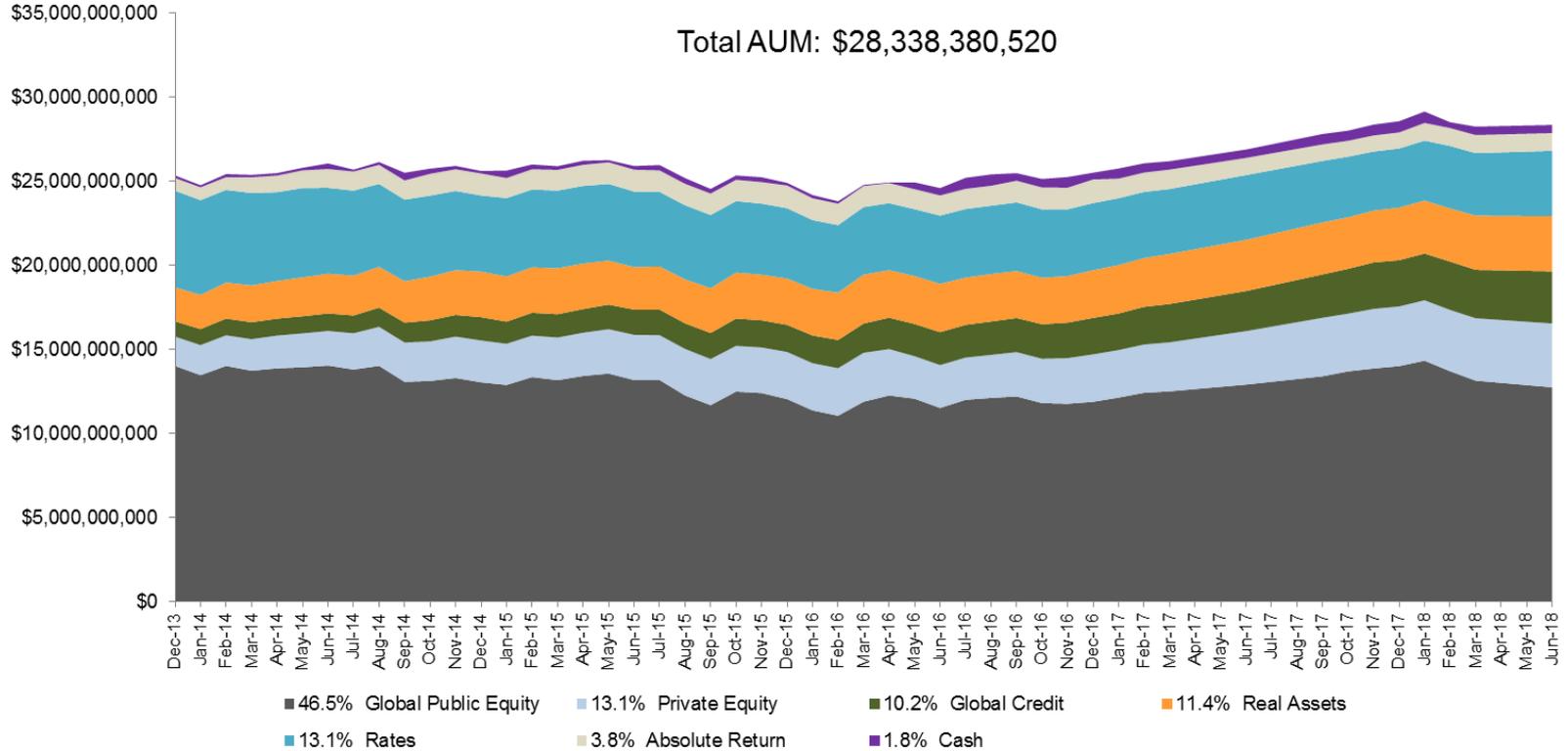
Tracking Error²



¹ Measured by dividing the active rate of return by the tracking error. The higher the Information Ratio, the more value-added contribution by the manager.

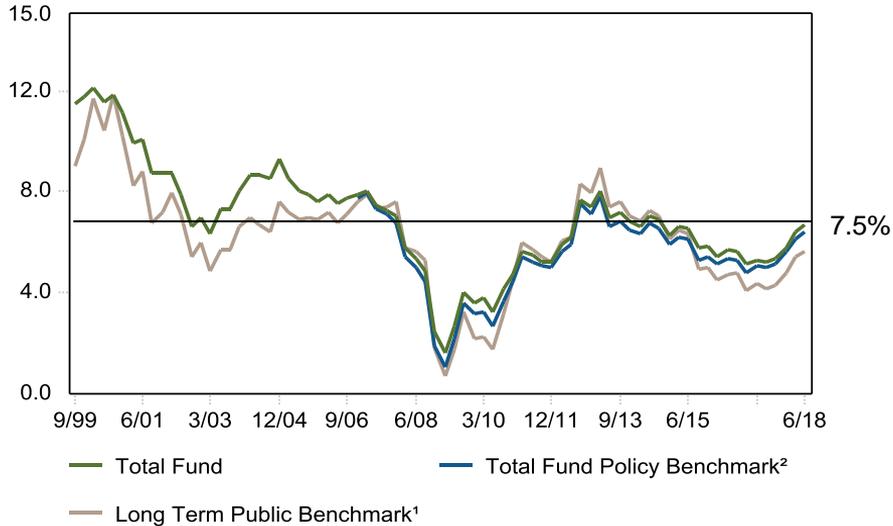
² A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

ERS Asset Allocation Evolution

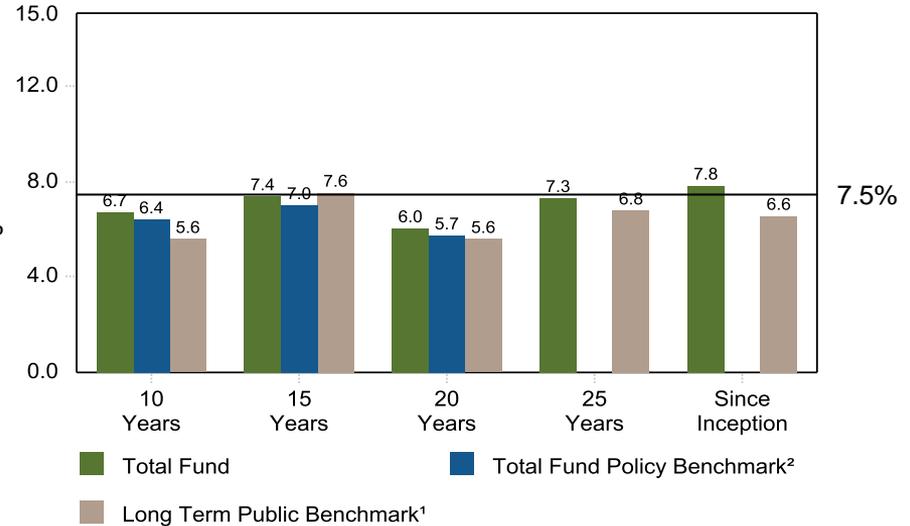


Long Term Investment Results

Rolling 10 Year Return



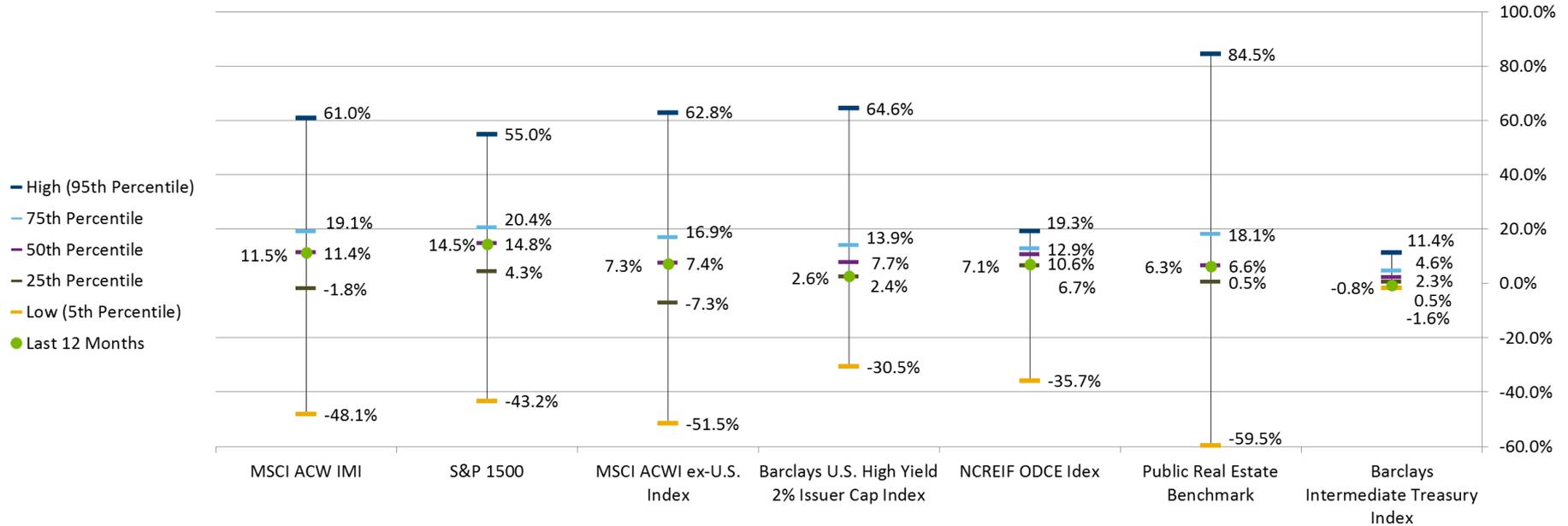
Return Summary



¹The Long Term Public Benchmark is a combination of 79% MSCI ACW IMI and 21% Barclays Intermediate Treasury Index.

²The Total Fund Policy Benchmark has an inception date of 11/30/1996.

Rolling 12-Month Capital Market Returns (10 Years ending 6/30/18)



- The chart above depicts the dispersion of rolling 12 month returns of various capital markets over the last 10 years.

Summary Analysis

- The Total Fund outperformed its benchmark by 226 bps during the trailing 12 month period.
 - The private equity and real assets components contributed 83 bps and 41 bps, respectively, while the public equity and credit components contributed 18 bps and 17 bps, respectively, of relative performance.
 - The other components contributed marginally for the year.
- At the end of the period global equity was overweight 4.4%, while the total rates component was underweight 3.4% and all other asset classes were slightly overweight or underweight relative to the policy. All allocations were in compliance.
- Longer term investment results continue to be positive, the Total Fund has produced risk adjusted returns superior to the benchmark and the Long Term Public Benchmark over the five and ten year periods.
 - The Total Fund outperformed the benchmark in nominal terms by 45 bps and 28 bps over the trailing five and ten-year periods, respectively.
- Diversification has been effective, the Total Fund Policy Benchmark has produced a return similar to the Long Term Public Benchmark at a meaningfully lower level of risk (volatility) over the trailing five and ten year period.

Questions?



*Public Agenda Item #6.1

Hedge Fund Program Market Update and Program Overview



August 29, 2018

Anthony Curtiss, CFA, Senior Managing Director - Hedge Funds
Nicholas Maffeo, CAIA, Principal - Hedge Funds
Panayiotis Lambropoulos, CFA, CAIA, FRM, Principal - Hedge Funds
John Claisse and Tathata Lohachitkul, Albourne America

Hedge Fund Program Overview – Agenda



- **Staffing Update**
- **Hedge Fund Portfolio Overview**
 - Absolute Return Portfolio
 - Directional Growth Portfolio
 - Other Hedge Fund Allocations
- **Industry Review & Topical Issues presented by Albourne Partners**
- **ERS Absolute Return Portfolio Tactical Plan**

Hedge Fund Program Overview – Staffing Update



- **Current Staff**

- Anthony Curtiss – Senior Managing Director – Hedge Funds
- Panayiotis Lambropoulos – Principal – Hedge Funds
- Nick Maffeo – Principal – Hedge Funds
- Courtney Dunn – Investment Associate – Hedge Funds

- **Consultant**

- Albourne Partners (since inception)

Hedge Fund Program Overview – Hedge Fund Portfolios



- **Absolute Return Portfolio**
 - Risk-Reducing Hedge Fund Portfolio
 - Diversification and low correlation to the Trust
 - Low beta to Trust, low volatility
- **Directional Growth Portfolio**
 - Return-Seeking Hedge Fund Portfolio
 - Complementary to Trust
 - Directional and tactical market beta
- **Other Hedge Funds**
 - Within other asset classes when appropriate

Hedge Fund Program Overview – Current Allocation Summary



Absolute Return Portfolio				
Holding Name	Asset Type	Initial Allocation	Current Value	ITD
(PAX) Pacific Alliance Asia Opp Fund L.P.	HF - Multi-Strategy Event Driven	1/1/2017	\$128,498,523	7.08%
Glazer Enhanced L.P.	HF - Merger Arbitrage	1/1/2016	\$128,181,448	17.00%
Iguazu Partners LP	HF - RV - Emerging Markets	12/1/2013	\$111,071,120	37.51%
Southpaw Credit Opportunity Partners L.P.	HF - Distressed / Stressed	8/1/2012	\$107,885,058	34.86%
Graham Absolute Return Trading Ltd.	HF - Global Macro	2/1/2018	\$99,335,228	-0.66%
Arrowgrass Partnership LP	HF - Multi-Strategy Relative Value	8/1/2012	\$91,343,901	35.73%
Complus Asia Macro Fund Ltd.	HF - Global Macro	10/1/2016	\$90,158,187	12.70%
MW European TOPS (US) Fund	HF - Equity Long/Short	3/1/2013	\$89,479,891	51.86%
Magnetar Structured Credit Fund LP	HF - Structured Credit	1/1/2014	\$85,670,104	32.40%
Taiga Special Opportunities Fund	HF - Opportunistic	7/1/2017	\$47,132,349	15.54%
Aspect Partnership L.P.	HF - Global Macro	12/1/2012	\$36,685,787	22.29%
CC Arb Fund, LLC	HF - Convertible Arbitrage	11/1/2014	\$34,484,526	9.69%
LLSD II L.P.	HF - Opportunistic	3/1/2015	\$3,199,028	65.36%
		Total	\$1,053,125,149	
ERS Directional Growth Portfolio				
Holding Name	Asset Type	Initial Allocation	Current Value	ITD
MW TOPS World Equities (US) Fund	HF - Equity Long/Short	4/1/2014	\$339,497,310	77.45%
Algert Japan 150/50 Fund L.P.	HF - Equity Long/Short	5/1/2018	\$150,217,840	0.15%
OrbiMed Global Healthcare Fund L.P.	HF - Equity Long/Short	6/1/2016	\$113,672,805	13.67%
		Total	\$603,387,955	
Total Hedge Fund Assets			\$1,656,513,104	

Absolute Return Portfolio



Performance Review

Hedge Fund Program Overview – Objectives & Accomplishments



Objectives

- Outperform T-Bills + 4% return benchmark
- Maintain a beta to the Trust of 0.40 or lower
- Maintain a standard deviation (volatility) target of 4% to 8%
- Operate with a low correlation to the Trust

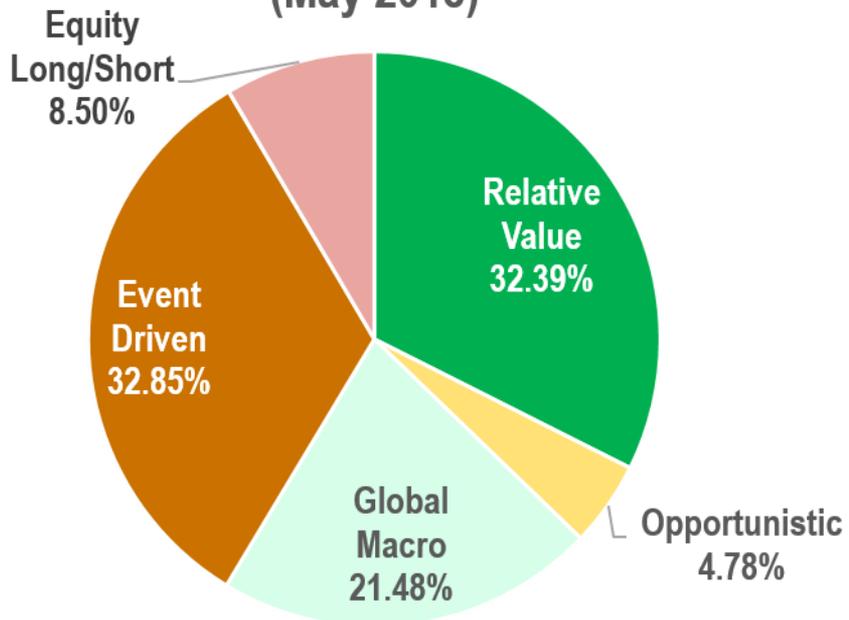
Accomplishments

- Annualized return since inception of 5.58% versus 4.44% for the benchmark
- Beta to the Trust is 0.29 (since inception)
- Current standard deviation (volatility) of 2.34%
- Correlation to the Trust is 0.64

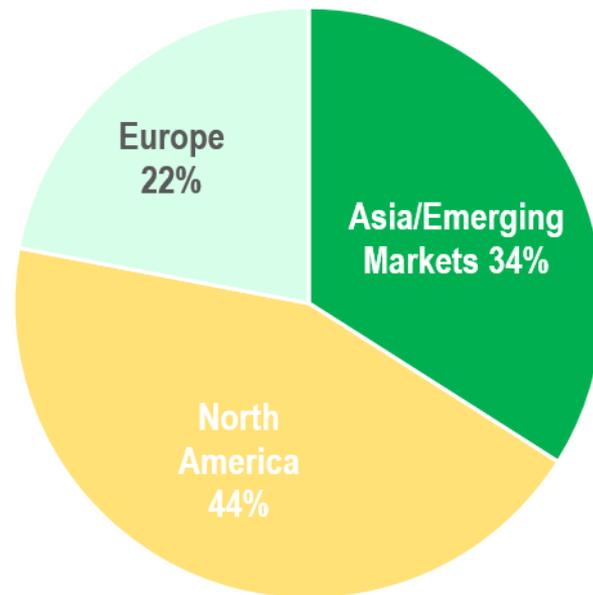
Hedge Fund Program Overview – Current Portfolio



Strategy Exposures – Allocation (May 2018)



Geographic Exposure



- **Relative Value**

- Capitalizes on the mispricing of an asset
- Typically, exposure lacks market directionality (non-directional)

- **Event Driven**

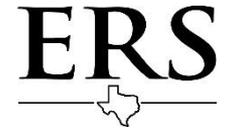
- Identifying and analyzing securities associated with a corporate event
- This can include the following: mergers, divestitures, stressed/distressed, spin-offs.
- This particular strategy often exhibits a longer-bias/higher net market exposure and often carries a higher degree of risk through potential drawdowns.

Strategy Overview & Characteristics



- **Global Macro**
 - Typically, exposure is directional and the manager operates with a significant amount of flexibility around the use of instruments traded (i.e. derivatives, equity, fixed income, and currencies)
- **Equity Long/Short**
 - The manager simply buys one stock long (undervalued) and shorts another stock short (overvalued)
 - Emphasis is placed on stock selection along with managing both net market exposure along with leverage (gross exposure)
- **Opportunistic**
 - Characteristics: portfolio return enhancement, long-bias exposure (in most instances), committed and drawn capital (5 years total term or less), and asymmetric return profile.

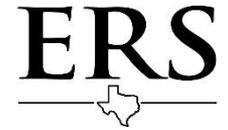
Hedge Fund Program Overview – Performance Metrics – Inception to May 2018



ERS Portfolio & Benchmark	Annualized Return	Annualized Standard Deviation	Sharpe Ratio	Sortino Ratio	Largest Drawdown
Absolute Return Portfolio	5.58%	2.34%	2.22	5.39	-2.57%
90 Day T-Bills + 4%	4.44%	0.14%	32.77	N/A	0.00%
HFRX Global Hedge Fund Index	2.00%	3.52%	0.57	0.83	-8.93%
HFRI Fund of Funds Composite Index	4.18%	3.28%	1.27	2.05	-7.58%

Stated Policy Benchmark	Bloomberg Ticker
90 Day T-Bills + 4%	G001 INDEX (floating component)
Industry Benchmarks	Bloomberg Ticker
HFRX Global Hedge Fund Index	HFRXGL INDEX
HFRI Fund of Funds Composite Index	HFRIFOF INDEX

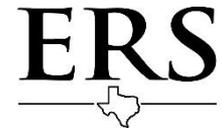
Hedge Fund Program Overview – Performance Metrics – Trailing Performance (May 2018)



	YTD	1 Yr.	2 Yr.	3 Yr.	4 Yr.	5 Yr.	ITD
Absolute Return Portfolio	2.60%	5.64%	13.43%	13.01%	20.68%	26.10%	37.30%
90 Day T-Bills + 4%	2.26%	5.22%	9.87%	14.41%	19.03%	23.84%	28.08%
HFRI Fund of Funds Composite Index	1.29%	5.74%	12.11%	5.44%	11.87%	17.57%	26.91%
HFRX Global Hedge Fund Index	-0.66%	2.88%	9.04%	1.42%	2.55%	5.54%	12.23%

Stated Policy Benchmark	Bloomberg Ticker
90 Day T-Bills + 4%	GOO1 INDEX (floating component)
Industry Benchmarks	Bloomberg Ticker
HFRX Global Hedge Fund Index	HFRXGL INDEX
HFRI Fund of Funds Composite Index	HFRIFOF INDEX

Hedge Fund Program Overview – Performance Metrics – Fiscal Year Returns

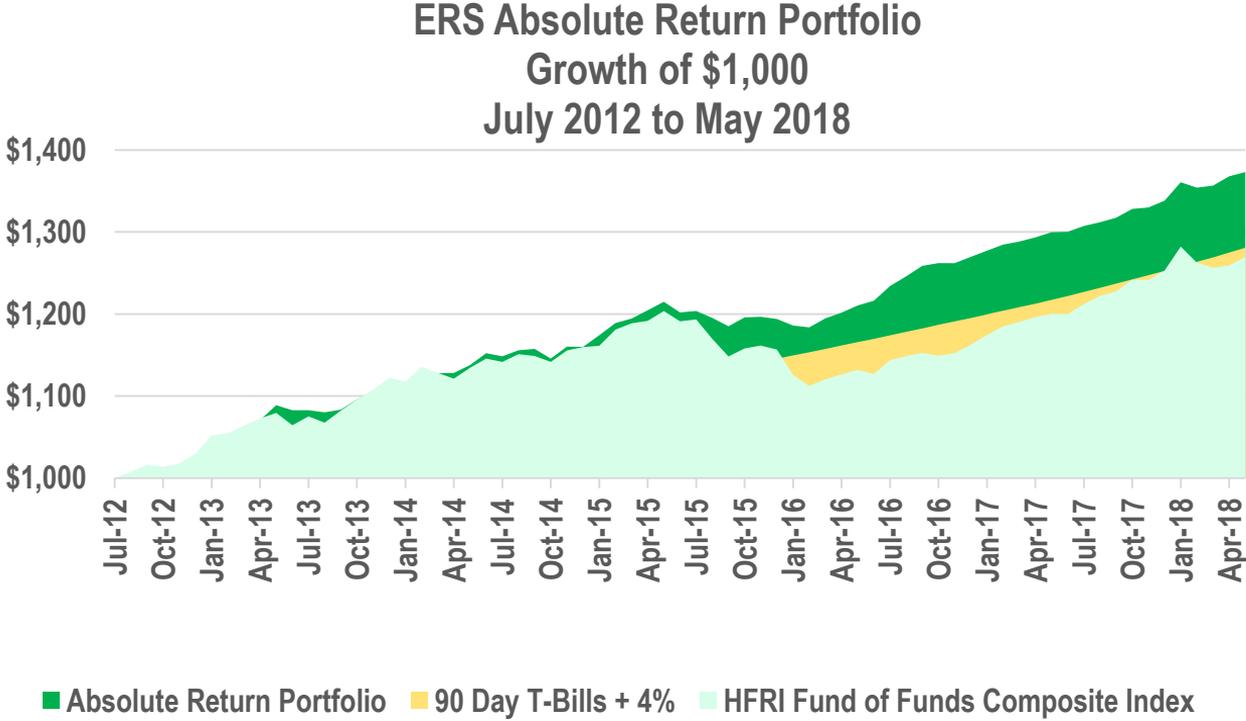


ERS Portfolio & Benchmarks	FYTD	FY2017	FY2016	FY2015	FY2014	FY2013
Absolute Return Portfolio	4.66%	5.29%	4.24%	3.41%	7.01%	8.01%
90 Day T-Bills + 4%	3.97%	4.55%	4.23%	4.02%	4.03%	4.11%
HFRI Fund of Funds Composite Index	3.84%	6.39%	-1.78%	1.61%	7.82%	5.96%
HFRX Global Hedge Fund Index	1.42%	5.59%	-1.91%	-3.47%	5.34%	4.53%

Stated Policy Benchmark	Bloomberg Ticker
90 Day T-Bills + 4%	G001 INDEX (floating component)
Industry Benchmarks	Bloomberg Ticker
HFRX Global Hedge Fund Index	HFRXGL INDEX
HFRI Fund of Funds Composite Index	HFRIFOF INDEX

Partial periods have been excluded from calculations. FYTD ends as of May 2018. The start date of the Absolute Return Portfolio is August of 2012.

Hedge Fund Program Overview – Growth of \$1,000

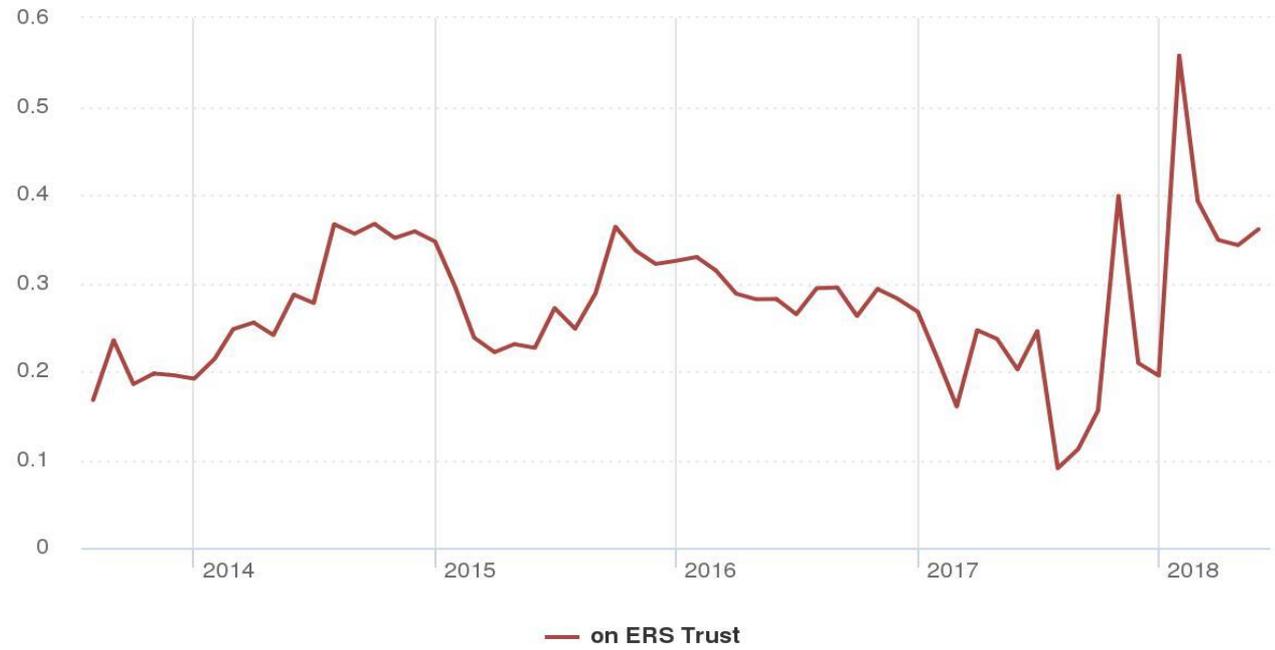


Hedge Fund Program Overview – Beta to the Trust

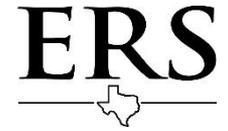


- Beta to Trust since inception remains below 0.40
- Rolling 1 year beta hit 0.40 in October of 2017
- Rolling 1 year beta breached 0.40 in January of 2018

Rolling 1-Year Beta
July-13 to May-18 (monthly)



Hedge Fund Program Overview – Beta to the Trust Continued



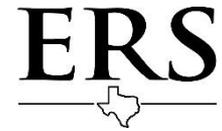
- A declining standard deviation for the Trust relative to the Absolute Return Portfolio
- The return of volatility will further demonstrate that the Absolute Return Portfolio is a “hedged” portfolio
- Additional allocations to strategies that exhibit either a low net market exposure or are uncorrelated will be beneficial

Rolling 1-Year Standard Deviation (pa)

July-13 to May-18 (monthly)

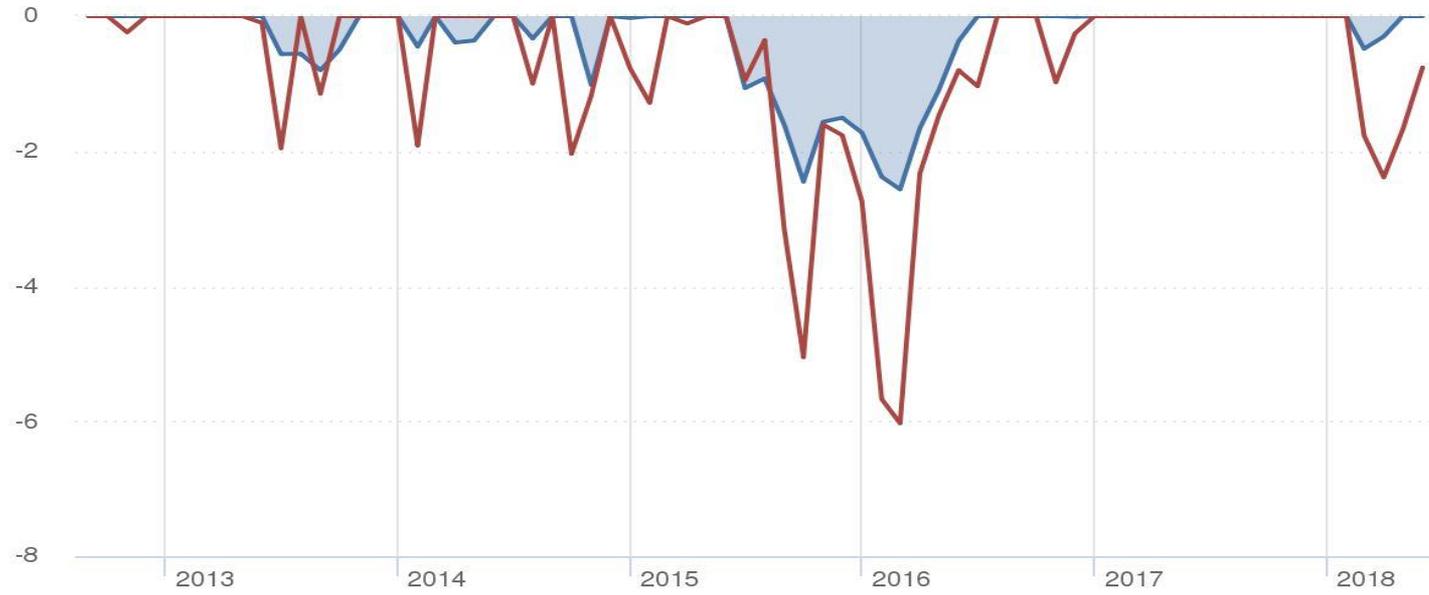


Hedge Fund Program Overview – Relative Down Period Performance



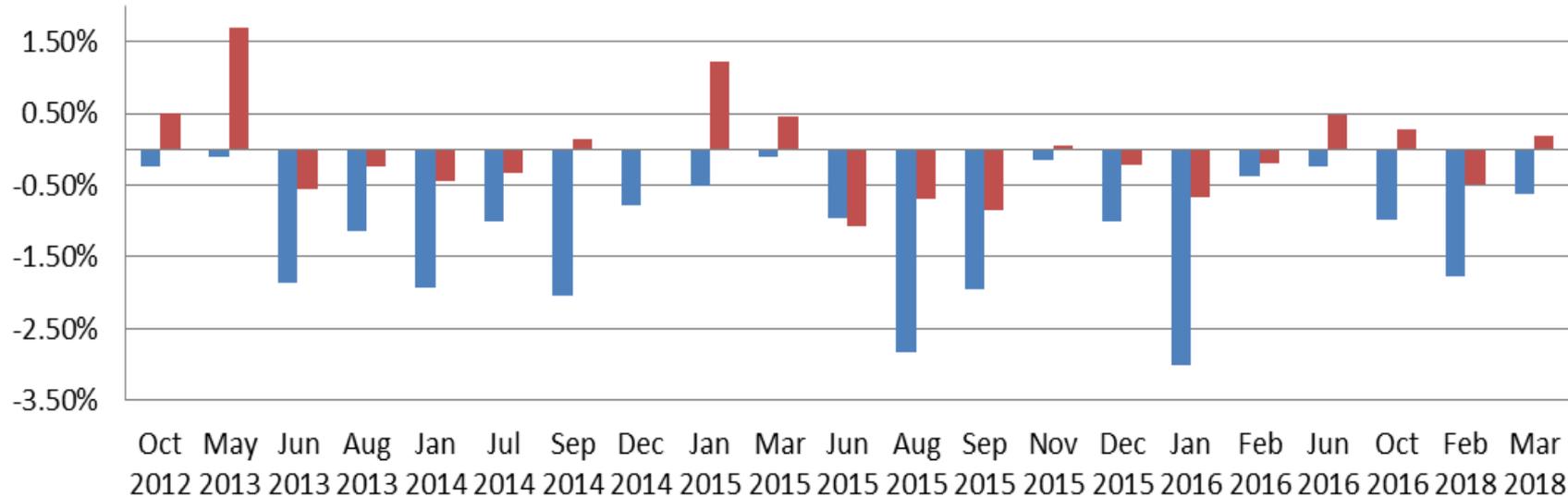
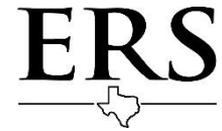
Down Period Performance

August-12 to May-18 (monthly)



● Absolute Return Portfolio – Pension Plan Sleeve — ERS Trust

Hedge Fund Program Overview – Performance to Down Period of ERS Trust



■ ERS Trust ■ Absolute Return Portfolio

Hedge Fund Program Overview – Portfolio Construction



- The largest allocations remain focused on Relative Value and Event Driven strategies (65%)
- Global Macro exposure has increased given the desire to allocate to less correlated strategies
- The portfolio remains diversified based both on geography and by strategy
- Liquidity remains a focus for all allocations. Approximately, 80% can be redeemed within 12 months
- New allocations will be focused on Relative Value and Opportunistic strategies. Emphasis will be on low net and market neutral strategies

Hedge Fund Program Overview – Performance Overview – By Strategy



Investment Strategy	Current Allocation	MTD	QTD	YTD	3 Yr	5 Yr	ITD
Relative Value	\$341,146,961.53	0.86%	1.19%	3.34%	11.44%	20.82%	32.78%
HFRX Relative Value Arbitrage Index		0.58%	0.81%	1.80%	0.65%	0.26%	4.65%
Event Driven	\$345,987,717.76	0.65%	1.15%	2.17%	11.90%	26.15%	39.59%
HFRX Event Driven Index		0.36%	0.79%	-4.05%	3.08%	6.24%	18.41%
Equity Long/Short	\$89,479,890.63	1.74%	2.84%	3.95%	13.77%	40.01%	44.33%
HFRX Equity Hedge Index		0.30%	-0.26%	0.92%	5.10%	14.71%	17.76%
Global Macro	\$226,179,202.36	-1.49%	0.37%	2.21%	16.65%	21.88%	27.27%
HFRX Macro Index		-0.36%	0.10%	-1.93%	-5.59%	-0.71%	-1.77%
Opportunistic	\$50,331,377.15	1.43%	2.88%	6.01%	38.75%	N/A	56.06%

Benchmark	Symbol
HFRX Relative Value Arbitrage Index	HFRXRVA
HFRX Event Driven Index	HFRXED
HFRX Equity Hedge Index	HFRXEH
HFRX Macro Index	HFRXM

Hedge Fund Program Overview – Historical Attribution – Fiscal Year



Fiscal Year Historical Strategy Attribution

Period	HF - Equity Long/Short	HF - Event Driven	HF - Global Macro	HF - Opportunistic	HF - Relative Value	Portfolio Return
Cumulative	4.53%	11.88%	3.03%	3.04%	10.73%	37.30%
FY 2012	0.00%	0.28%	-0.11%	0.00%	-0.17%	0.00%
FY 2013	0.81%	3.58%	0.65%	0.02%	2.77%	8.01%
FY 2014	1.19%	2.61%	0.29%	0.55%	2.25%	7.03%
FY 2015	1.38%	-0.13%	0.94%	0.49%	0.69%	3.39%
FY 2016	0.55%	1.38%	0.40%	0.51%	1.35%	4.24%
FY 2017	-0.06%	2.29%	0.32%	1.00%	1.67%	5.29%
FY 2018	0.58%	1.36%	0.49%	0.44%	1.74%	4.66%

Hedge Fund Program Overview – Historical Attribution – Calendar Year



Historical Strategy Attribution						
Period	HF - Equity Long/Short	HF - Event Driven	HF - Global Macro	HF - Opportunistic	HF - Relative Value	Portfolio Return
Cumulative	4.53%	11.88%	3.03%	3.04%	10.73%	37.30%
2012	0.00%	1.50%	0.40%	0.00%	0.75%	2.66%
2013	2.31%	3.28%	0.61%	0.16%	2.25%	8.83%
2014	0.21%	1.37%	0.43%	0.45%	1.33%	3.82%
2015	1.17%	0.37%	0.47%	0.37%	0.53%	2.93%
2016	-0.17%	1.94%	0.39%	1.43%	2.63%	6.34%
2017	0.60%	2.15%	0.59%	0.34%	1.62%	5.40%
2018	0.34%	0.73%	0.10%	0.26%	1.17%	2.60%

Hedge Fund Program Overview – Correlations by Sub-Strategies



Strategy Correlation	Relative Value	Event Driven	Global Macro	Equity Long/Short	Opportunistic
Relative Value					
Event Driven	0.66				
Global Macro	0.15	0.04			
Equity Long/Short	0.19	0.33	0.32		
Opportunistic	0.27	0.15	-0.21	-0.13	

Directional Growth Portfolio



Performance Review

Hedge Fund Program Overview – Objectives & Accomplishments



Objectives

- Strive to outperform each underlying benchmark
- Maintain a tight beta and correlation to each respective benchmark
- Acts as a complement to Trust

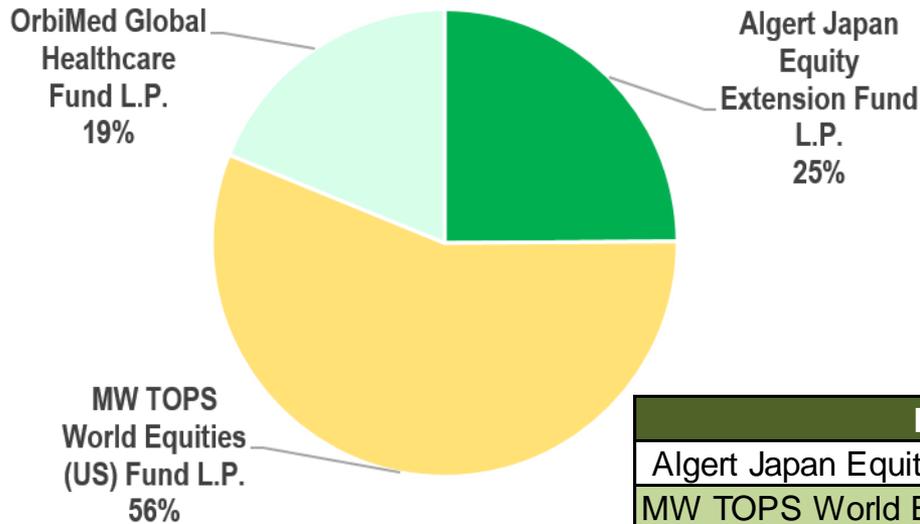
Accomplishments

- Generally, relative performance has been strong and has met internal objectives
- Able to meet beta and correlation guidelines for each underlying manager
- Able to continually source unique sector and geographic exposures for the Trust

Hedge Fund Program Overview – Portfolio Allocations



Directional Growth Portfolio



Fund	Current Allocation	Inception Date
Algert Japan Equity Extension Fund L.P.	\$150,217,839.69	05/01/18
MW TOPS World Equities (US) Fund L.P.	\$339,497,309.94	04/01/14
OrbiMed Global Healthcare Fund L.P.	\$113,672,805.00	06/01/16
Total Value	\$603,387,954.63	

Hedge Fund Program Overview – Performance Metrics – Inception to May 2018



Fund Names & Benchmarks	Annualized Return	Annualized Standard Deviation	Sharpe Ratio	Sortino Ratio	Largest Drawdown
Algert Japan 150/50 Fund L.P.	N/A	N/A	N/A	N/A	N/A
MSCI Japan (Net)	N/A	N/A	N/A	N/A	N/A
MW TOPS World Equities (US) Fund	14.76%	9.31%	1.58	2.76	-8.98%
MSCI AC World Daily Net Local (Total Return)	9.24%	8.97%	1.03	1.72	-12.01%
OrbiMed Global Healthcare Fund L.P. Total	6.62%	13.48%	0.49	0.83	-12.10%
MSCI World Healthcare Net Return (USD)	7.04%	10.22%	0.69	1.09	-10.89%

N/A - Due to less than 12 months of data.

Hedge Fund Program Overview – Performance Metrics – Trailing Returns



Fund Name	YTD	12-Months	24-Months	36-Months	ITD
Algert Japan 150/50 Fund L.P.	0.15%	N/A	N/A	N/A	0.15%
MSCI Japan (Net)	-0.99%	N/A	N/A	N/A	-0.99%
MW TOPS World Equities (US) Fund	2.24%	13.83%	41.01%	41.97%	77.45%
MSCI AC World Daily Net Local (Total Return)	0.80%	11.04%	30.68%	24.15%	44.49%
OrbiMed Global Healthcare Fund L.P. Total	-0.48%	12.58%	13.67%	N/A	13.67%
MSCI World Healthcare Net Return (USD)	0.19%	6.31%	14.58%	N/A	14.58%

Benchmark	Bloomberg Ticker
MSCI Japan (Net)	M1JP Index
MSCI AC World Daily Net Local (Total Return)	NDLEACWF Index
MSCI World Healthcare Net Return (USD)	M1WO0HC Index

Hedge Fund Program Overview – Performance Metrics – Fiscal Year Returns



Fund Name	FYTD	FY2017	FY2016	FY2015	FY2014
Algert Japan 150/50 Fund L.P.	0.15%	N/A	N/A	N/A	N/A
MSCI Japan (Net)	-0.99%	N/A	N/A	N/A	N/A
MW TOPS World Equities (US) Fund	10.28%	23.31%	10.81%	8.93%	8.11%
MSCI AC World Daily Net Local (Total Return)	8.42%	16.17%	6.81%	0.59%	6.78%
OrbiMed Global Healthcare Fund L.P.	0.46%	15.53%	-2.06%	N/A	N/A
MSCI World Healthcare Net Return (USD)	2.42%	10.77%	1.00%	N/A	N/A

Disclosure: Fiscal year data may not be inclusive of full time period

Other Hedge Fund Allocations



General Update

Hedge Fund Program Overview – Emerging Manager Program (Enhancement)



- ERS and Pacific Alternative Asset Management Company, LLC (“PAAMCO”) announced the creation of PAAMCO Launchpad.
- ERS, alongside PAAMCO, created a co-investment platform for seeding and supporting emerging hedge funds.
- ERS is looking to invest today, with tomorrow's successful hedge fund managers.
- Due diligence for the new joint venture took place in the last 12-18 months.

Hedge Fund Program Overview – Emerging Manager Program: Paths of Consideration



Stay Internal	Partnership via Seeding Venture	Go External
<p>Pros – Seek out managers suited for ERS’ investment objective by continuing to build on existing internal database and intellectual capital</p>	<p>Objective – Customized venture to align internal goals & external resources through a true Partnership</p>	<p>Pros – Leverage additional investment and operational resources (especially internationally)</p>
<p>Cons – Limited bandwidth and sourcing capability (especially internationally)</p>	<p>Opportunities – Benefit from a global network of external resources without sacrificing economics/control</p> <ul style="list-style-type: none"> • Build an internal farm team • Create another source of “alpha” • Synthetically extend internal staff bandwidth 	<p>Cons – Less customized for ERS (mainly off the shelf products)</p>
<p>Limited operational infrastructure related to managed accounts</p>	<p>Challenges – Define and execute new model accomplishing the objective</p> <ul style="list-style-type: none"> • Integrate new and innovative value-centric model on the heels of a bold and visionary direction 	<p>Structures/Products are typically more expensive fund of funds</p>

Hedge Fund Program Overview – Emerging Manager Program: Accomplishments



Goals

To create a customized venture that aligns internal goals & external resources through a true Partnership.

ERS to benefit from a global network of external resources.

Synthetically extend internal staff bandwidth

ERS to retain control on investment decisions and due diligence process.

ERS to create another source of “alpha”.

Results

Created and entered a true joint venture with heightened alignment of interests and shared economics. Investments are made through client-driven, customized structures.

PAAMCO is headquartered in Irvine, California, but has a global footprint that extends across North and South America, Europe and Asia.

PAAMCO has over 200 employees in 8 different cities in 7 different countries.

The new venture will be a flat and collaborative effort between ERS and PAAMCO.

ERS will have the ability to make investment recommendations and retains all veto rights along any part of the due diligence process.

ERS will negotiate preferred terms and seek revenue sharing agreements with all seeding managers.

Hedge Fund Program Overview – Emerging Manager Program: Looking Ahead



Years 1-3

Migrate from theory to execution - Make sure infrastructure and jointly driven process functions as planned.

Target 1-3 manager investments.

Target a meaningful initial aggregate commitment within the Trust.

Beyond Year 3

Continue to review and enhance jointly driven due diligence process.

Target a total of 7-10 total investments.

Dependent on various factors such as opportunity set, past success etc.

In aggregate, target a sizeable allocation within the Trust.

Albourne Annual Hedge Fund Update

Employees Retirement System of Texas

August 29, 2018

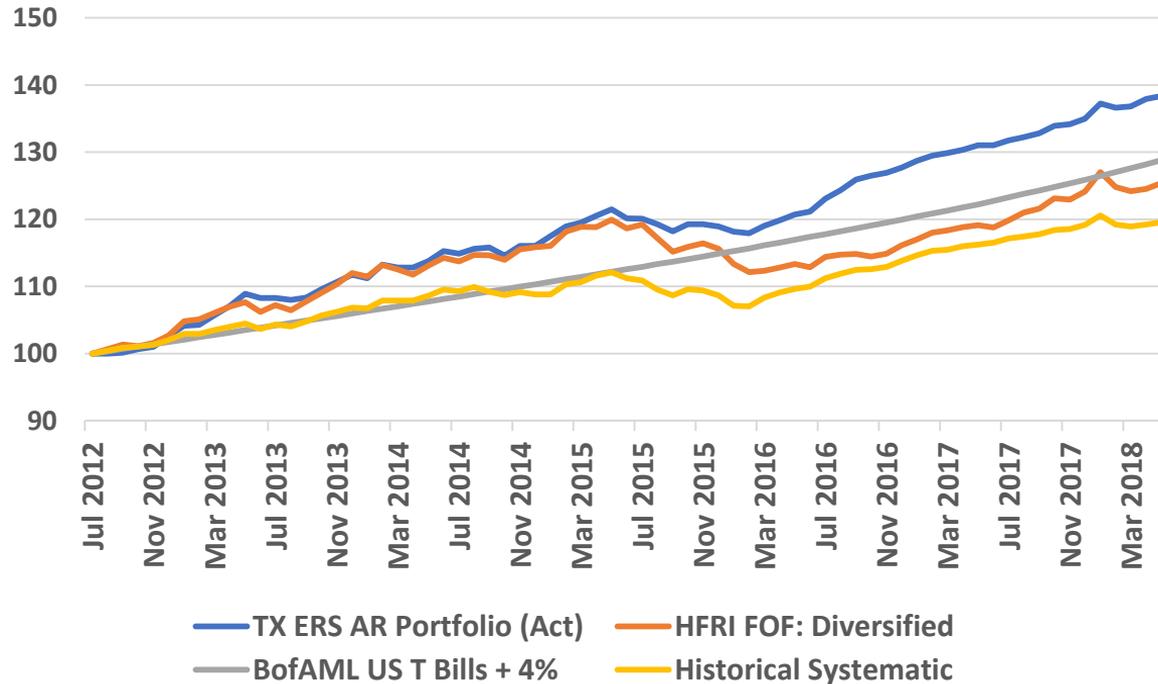


Overview

- **ERS Absolute Return Program Comments**
 - Performance
 - Implementation consistent with policy
- **Market Update**
 - Observations
 - Outlook
- **Fees**
 - Industry fee developments
 - Types of fee adjustments
 - TX ERS fee Savings

TX ERS Absolute Return Performance*

TX ERS Absolute Return VAMI



• Performance

- Exceeds Strategic & Tactical Benchmark over last fiscal year, 12 months, 5 years and since inception
- With less volatility than the Tactical Benchmark since inception

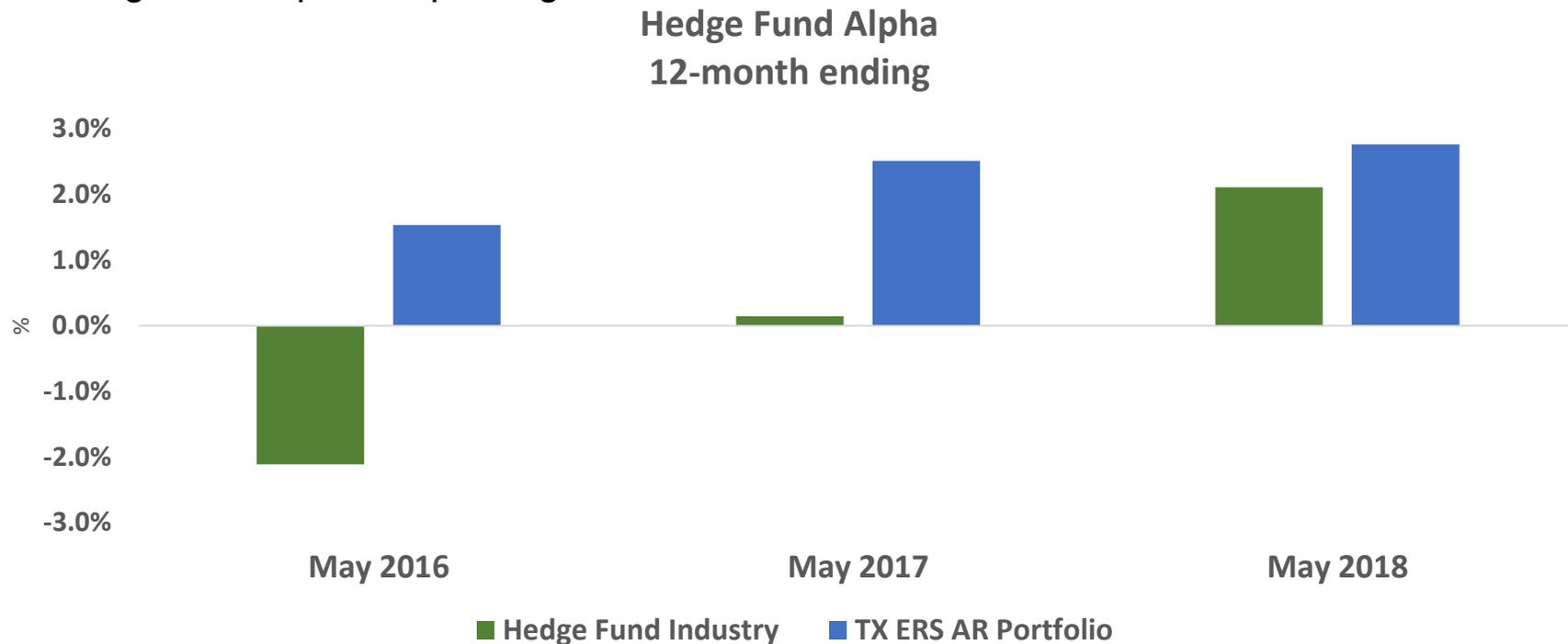
• Implementation consistent with policy

- Realized beta to TX ERS Trust <0.4
- Super-strategy mix within stated policy guidelines

*As of May 31, 2018. Historical Systematic is Albourne's forecasting model constructed from asset class and hedge fund style factors.

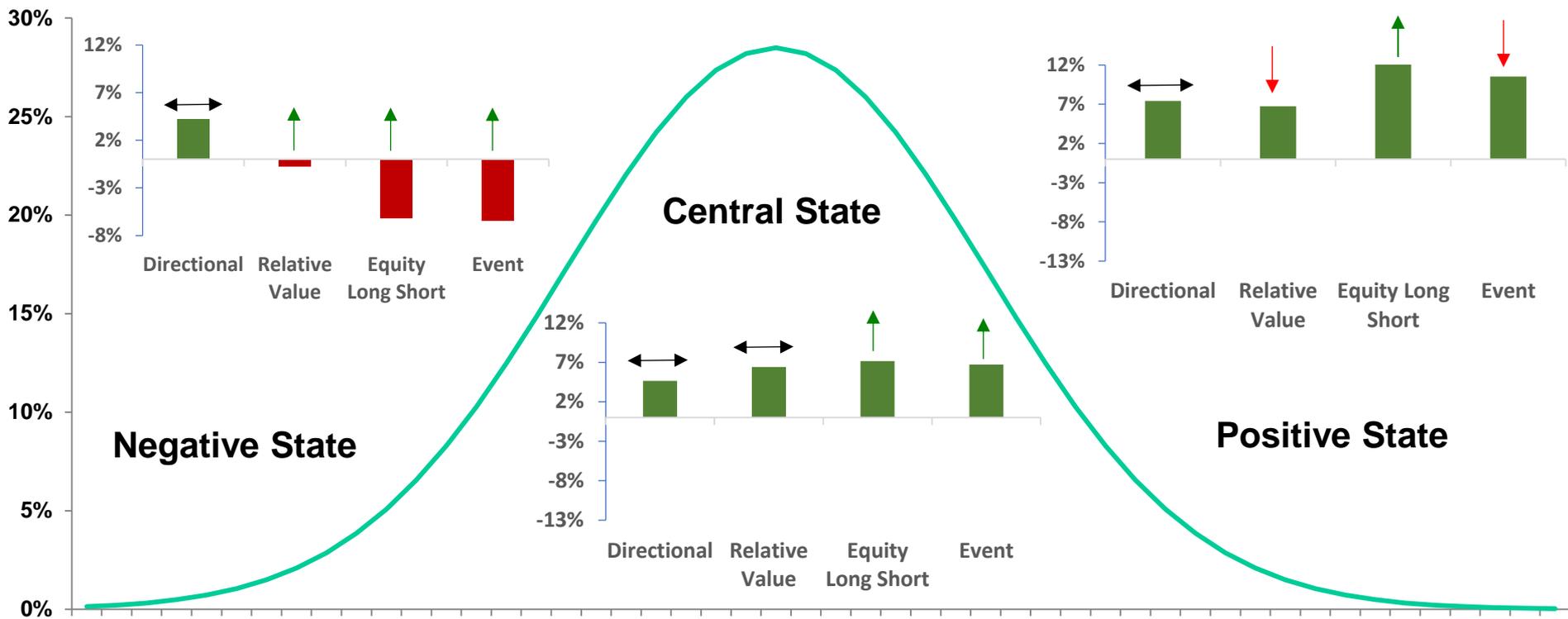
Observations

- Hedge fund alpha* improving



**Source: Albourne. HF Industry alpha is measured based on Albourne's forecasting models, and then aggregated using the long-term weights used for the Albourne Moderate Model Portfolio. TX ERS alpha is measured relative to Albourne's forecasting model (historical systematic).*

Outlook: State Based Expectations*



Outlook: Strategies*

- **TX ERS recently added top quartile HF strategies**

- Global Macro
- Fixed Income Arb

- **Cautious outlook on HF Credit**

- Distressed and RV Credit in bottom quartile given relatively rich valuations and unconvincing opportunity set

- **Positive outlook on Opportunistic Credit:**

- Positive on Asia-based private lending and distressed

Rank	Super-Strategy		
1	Directional		
2	Relative Value		
3	Equity Long Short		
4	Event		
Quartile	Rank	Strategy	Super-Strategy
1	1	Fixed Income Arbitrage	Relative Value
	2	Insurance	Directional
	3	CTA	Directional
	4	Global Macro	Directional
	5	Statistical Arbitrage	Relative Value
4	16	Convertible Bond Arbitrage	Relative Value
	17	Structured Credit RV	Relative Value
	18	Distressed	Event
	19	Relative Value Credit	Relative Value
	20	EM Fixed Income	Event

Update on Fees

- **Industry fee developments**
 - Over 200 funds Albourne monitors have changed their fees within the last 24 months
 - Over 230 funds are now offering “1 or 30” structures or are actively considering this
- **Types of fee adjustments**
 - Universal, loyalty and AUM based discounts
 - Performance fee tiers and hurdles
 - Est. Management Fee: 1.46%
 - Est. Incentive Fee: 18.75%
 - 5 out of 13 investments have hurdle rates
- **TX ERS has negotiated fee savings on 10 out of 14 of its hedge fund managers**
 - FY 2017, estimated savings from fee negotiations was over \$13m*
 - FYTD through June 2018, estimated savings from fee negotiations was over \$9m

**Fiscal year 2017 is September 2016-August 2017*

Questions?



Public Agenda Item #6.2

Hedge Fund Program

Consideration of the Proposed Hedge Fund Annual Tactical Plan for Fiscal Year 2019 – (Action)



August 29, 2018

Anthony Curtiss, CFA, Senior Managing Director – Hedge Funds

Absolute Return Portfolio



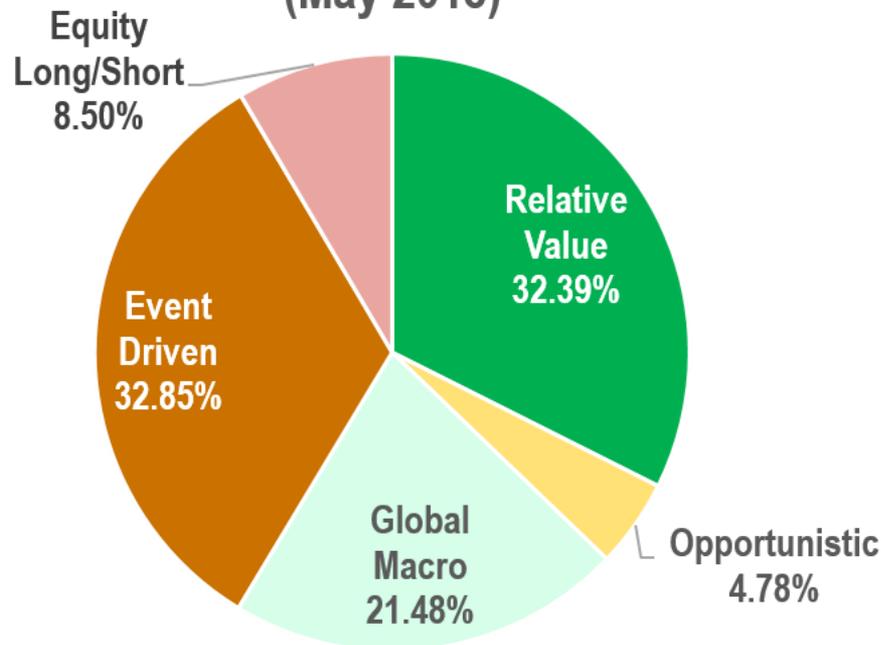
Tactical Plan Fiscal Year 2019

Hedge Fund Program: Tactical Plan FY2019 – Exposures



Strategy Class	Targeted Range	
Relative Value	20%	60%
Event Driven	0%	60%
Equity Long/Short	0%	30%
Global Macro	10%	40%
Opportunistic	0%	30%

Strategy Exposures – Allocation
(May 2018)



Hedge Fund Program: Tactical Plan FY2019



- Currently, the Absolute Return Portfolio is approximately 3.70% of the Trust's assets
- The targeted allocation remains at 5%
- Expectations are for 1-3 new investments during FY2019
- New opportunities reside in both Opportunistic and Relative Value strategies
- Additional consideration will be given to low net and market neutral strategies
- Emphasis remains on liquid strategies within developed markets

Questions?
Action Item



*Public Agenda Item #7.1

Private Equity Program Market Update and Program Overview



August 29, 2018

Wesley Gipson, Senior Managing Director – Public Equity
Ricky Lyra, Director – Private Equity
Davis Peacock, Director – Private Equity
Brad Young and William Charlton, Pavilion Financial Corporation

ERS Private Equity Program Overview



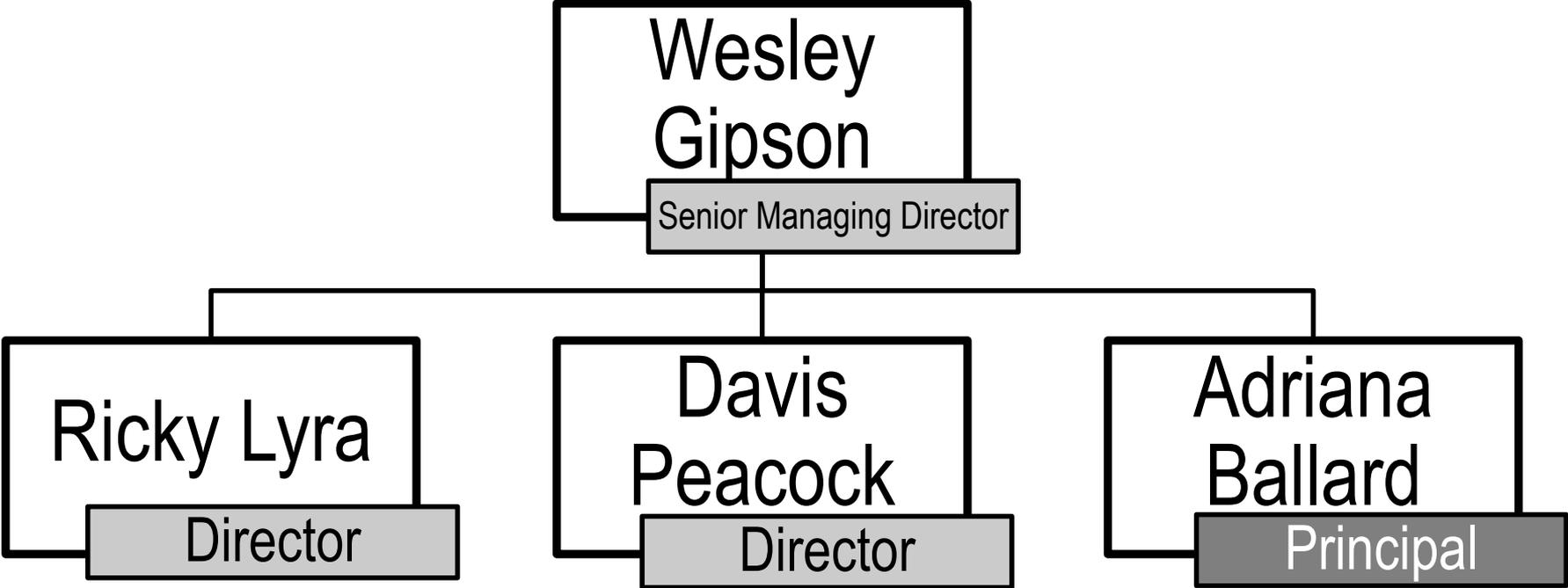
Agenda

- Team Update
- Program Summary
- Cash Flows
- Performance
- Underlying Portfolio Metrics
- Program Economics
- Diversification Metrics
- Goals and Objectives for Fiscal Year 2018 and 2019

ERS Private Equity Program Overview



Team



Private Equity Program Overview

Portfolio Update (June 30, 2018)



	Inception - FY17	FYTD 18	Inception - FY18
Committed	\$7.2 billion	\$612 million	\$7.8 billion
Called	\$5.0 billion	\$747 million	\$5.7 billion
Distributed	\$3.2 billion	\$778 million	\$4.0 billion
Net Asset Value (NAV)	\$3.4 billion	\$409 million	\$3.8 billion
% of Trust	12.3%	100 bps	13.3%
Total Value to Paid in Capital (TVPI)¹	1.32x	0.03x	1.35x
Distributed to Paid in Capital (DPI)²	0.64x	0.05x	0.69x
Internal Rate of Return (IRR)³	11.9%	39 bps	12.3%

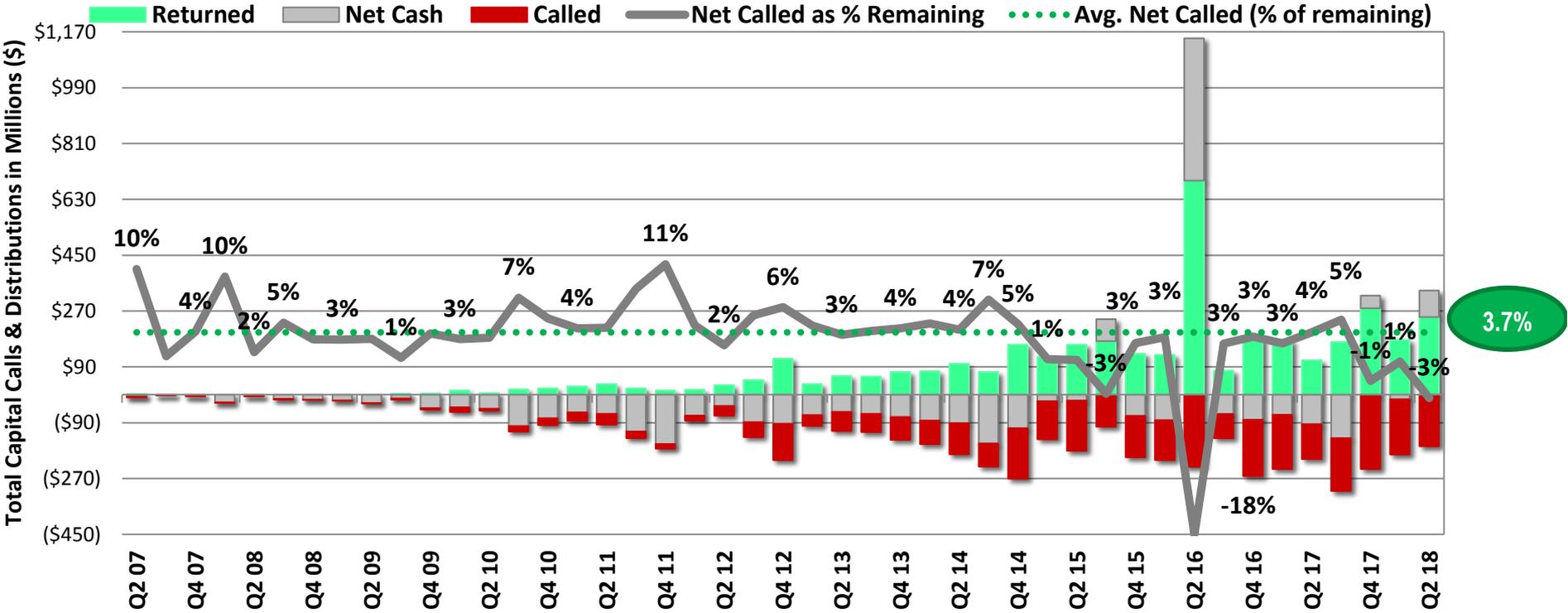
1. TVPI, Total Value to Paid in Capital, is equal to (NAV + Distributions) / Paid in Capital;

2. DPI, Distributions Paid in Capital, is equal to Distributions / Paid in Capital;

3. IRR, Internal Rate of Return, is equal to the discount rate that will bring a series of cash flows to a net present value (NPV) of zero (or to the current value of cash invested)

Private Equity Program Overview

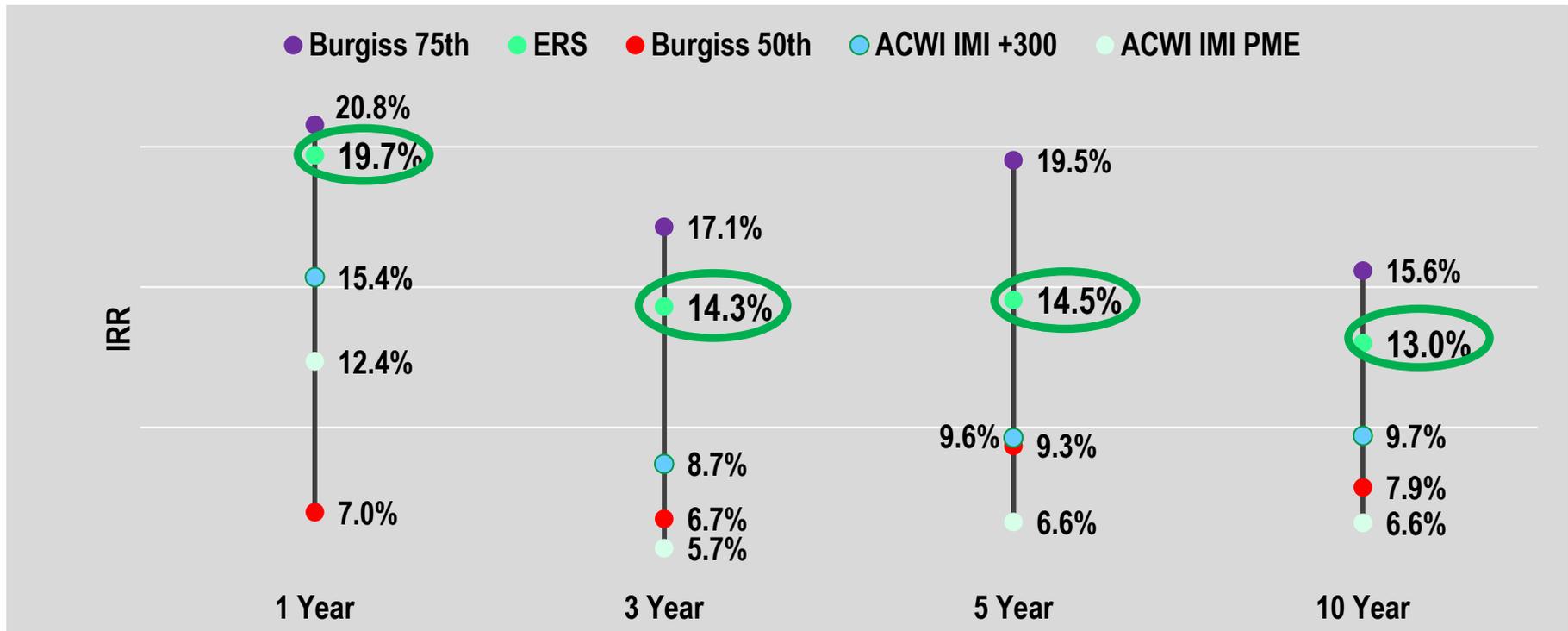
Cash Flow Summary (June 30, 2018)



Agenda item 7.1 - Meeting book dated August 29, 2018

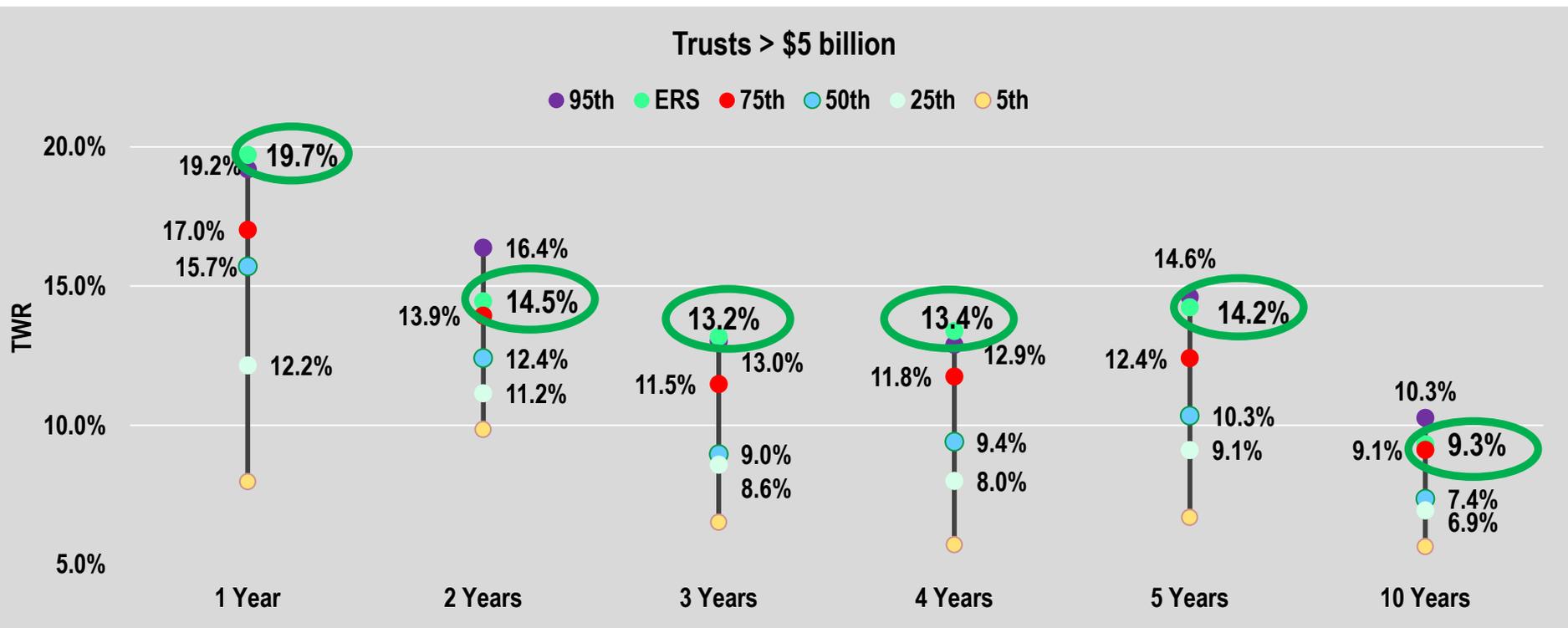
Private Equity Program Overview

Benchmark IRR Comparison (March 31, 2017)



Private Equity Program Overview

Wilshire Trust Comparison (March 31, 2018)

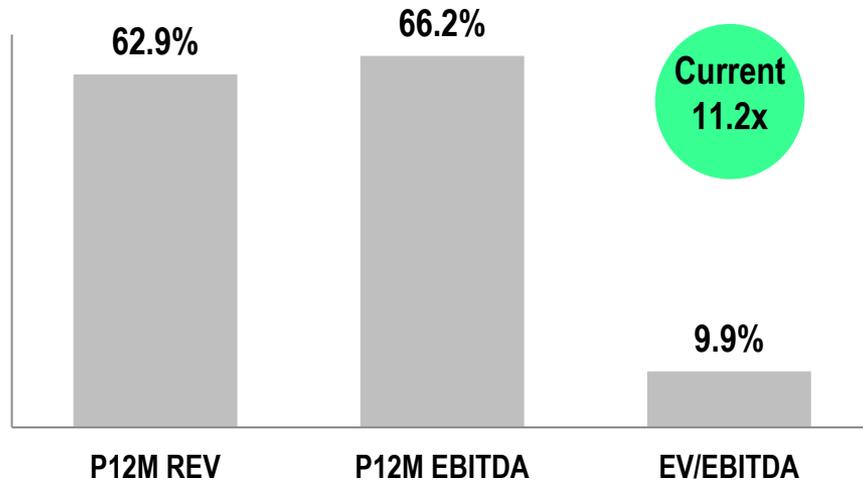


Private Equity Program Overview

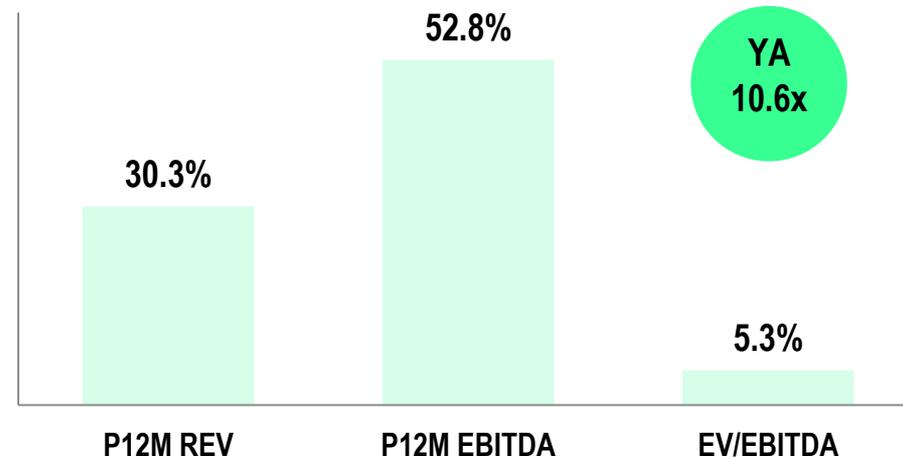
Portfolio Company Aggregate Metrics (March 31, 2018)



CURRENT VS ENTRY



CURRENT VS YEAR AGO



Notes: 1. Revenue and EBITDA figures are arithmetic averages of local currency calculations

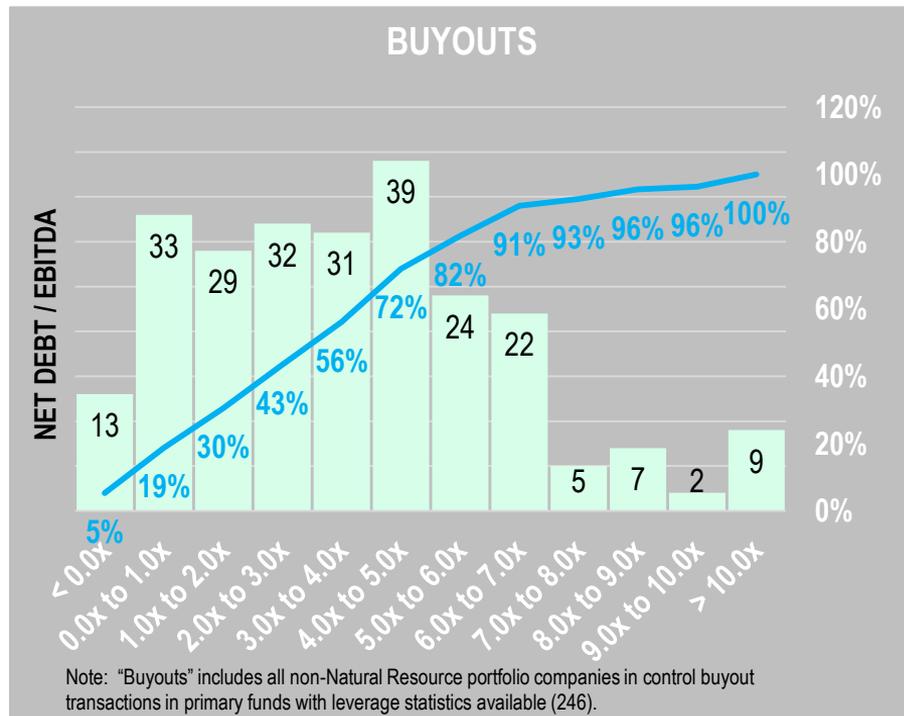
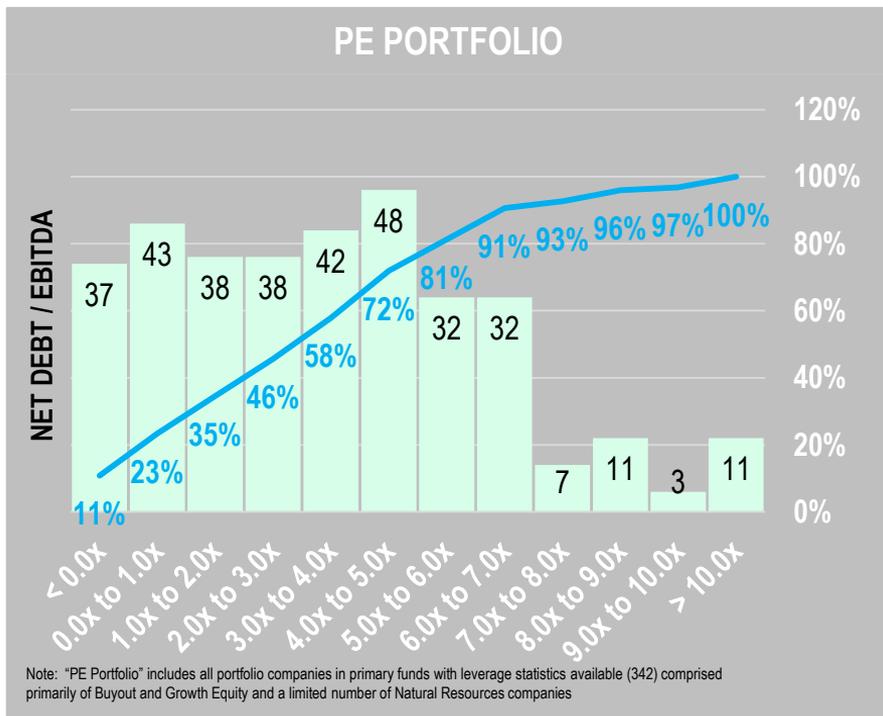
2. EV/EBITDA averages are dollar weighted local currency calculations

3. Includes all portfolio companies in primary funds with operating statistics available (322) comprised primarily of Buyout and Growth Equity and smaller number of Natural Resources companies

Agenda item 7.1 - Meeting book dated August 29, 2018

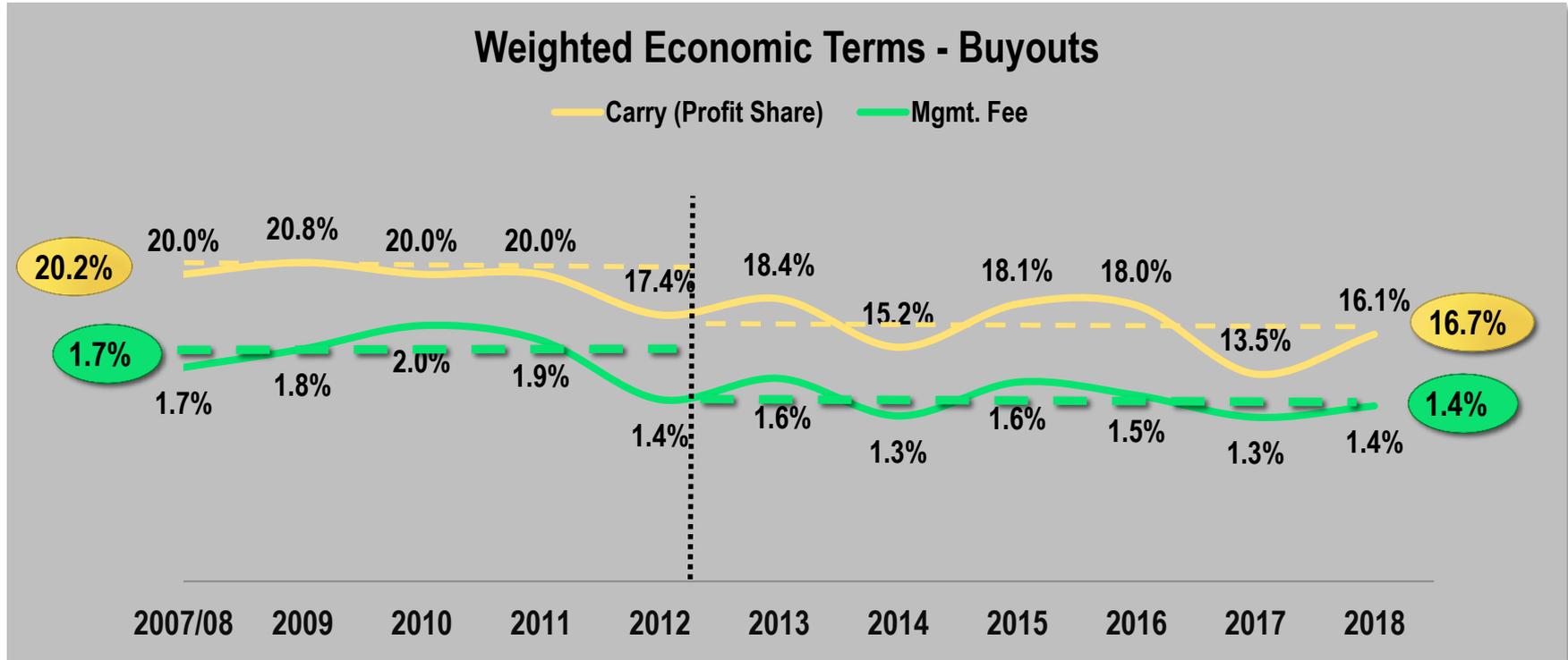
Private Equity Program Overview

Portfolio Leverage (March 31, 2018)



Private Equity Program Overview

Terms Evolution by Fiscal Year



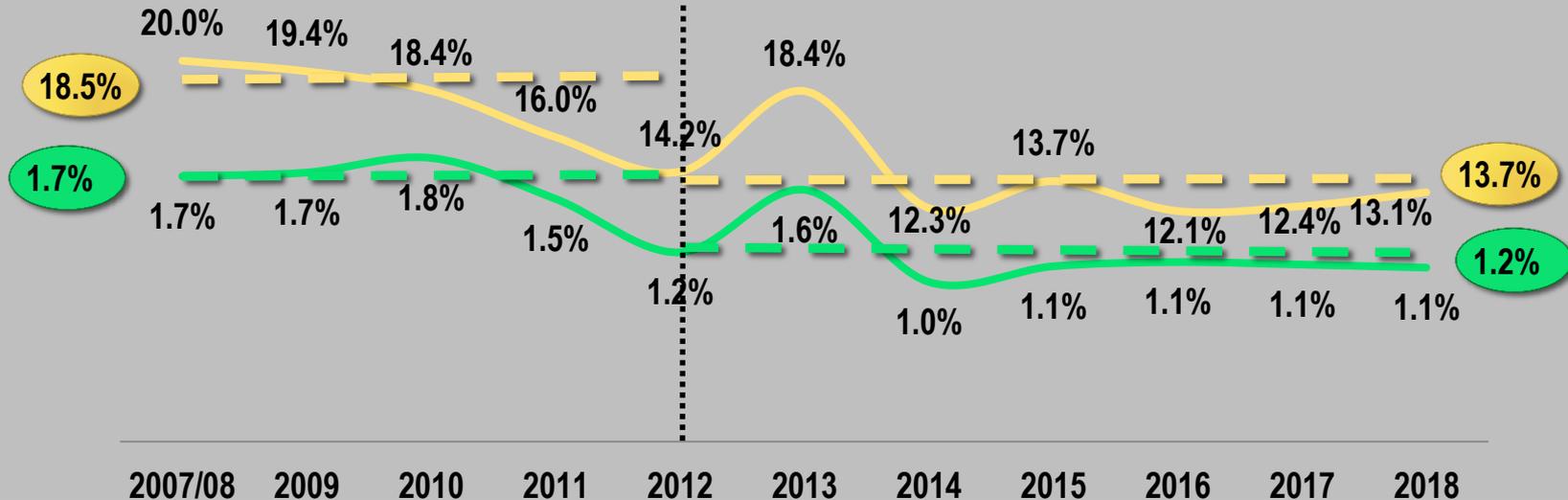
Private Equity Program Overview

Terms Evolution by Fiscal Year



Weighted Economic Terms - All PE

— Carry (Profit Share) — Mgmt. Fee

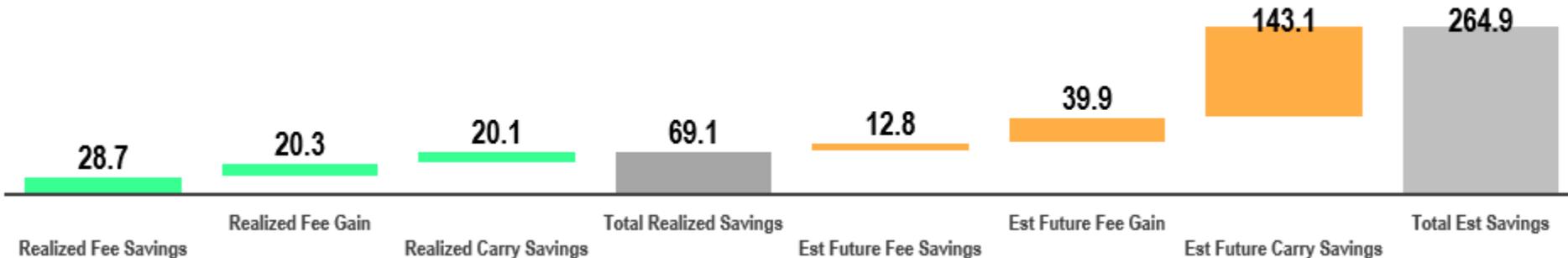


Private Equity Program Overview

Program Savings (June 30, 2018)



Co-investment Savings



Negotiated Savings



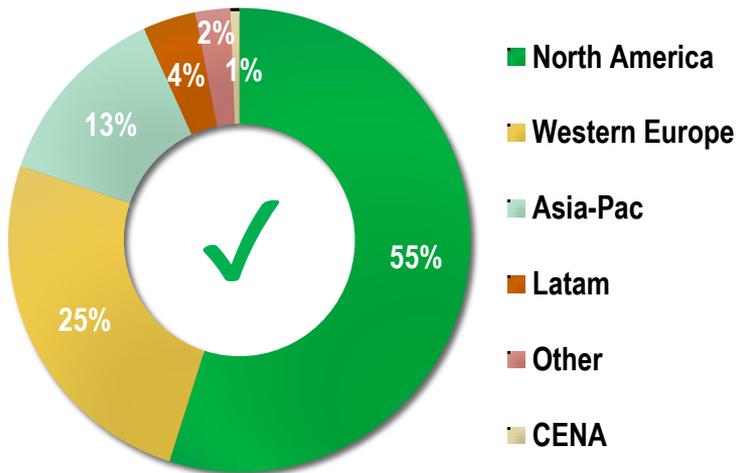
ERS Private Equity Program Overview



Diversification Metrics

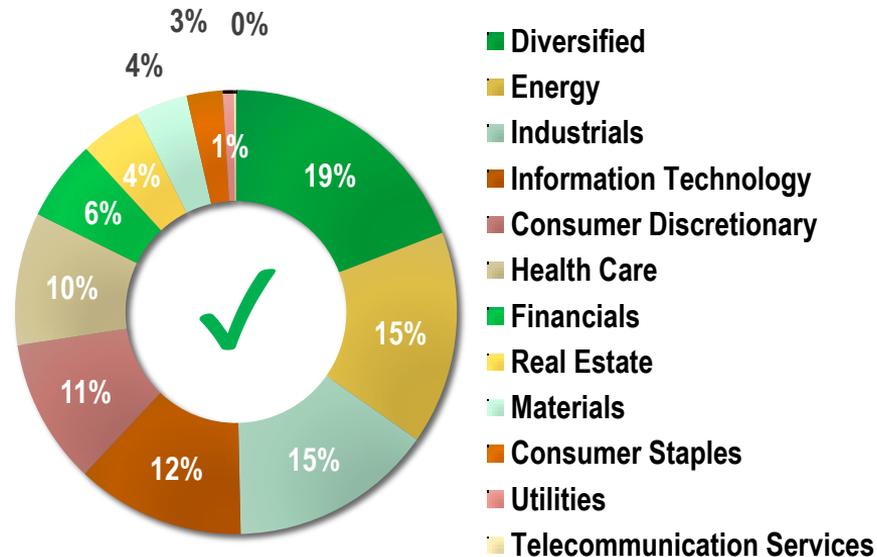
NAV BY GEOGRAPHY (3-31-18)

Guideline: US \geq 50%



NAV BY SECTOR (3-31-18)

Guideline: $<$ 20%



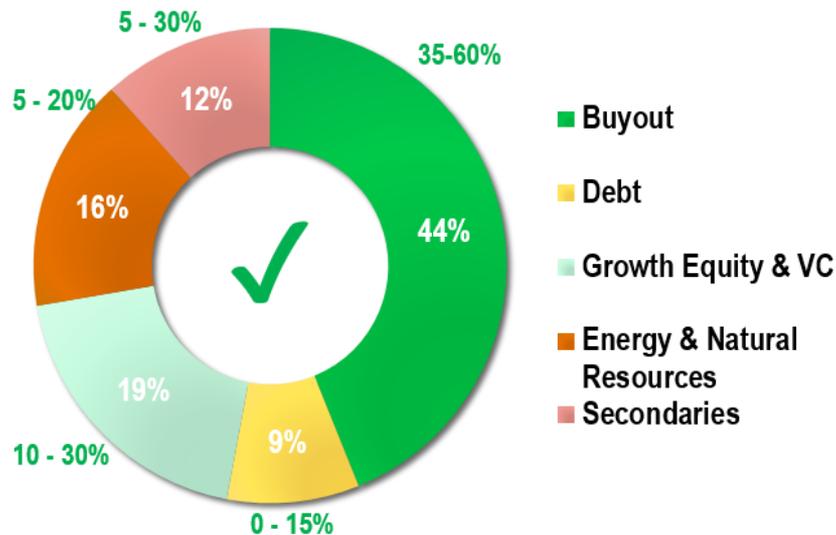
ERS Private Equity Program Overview



Diversification Metrics

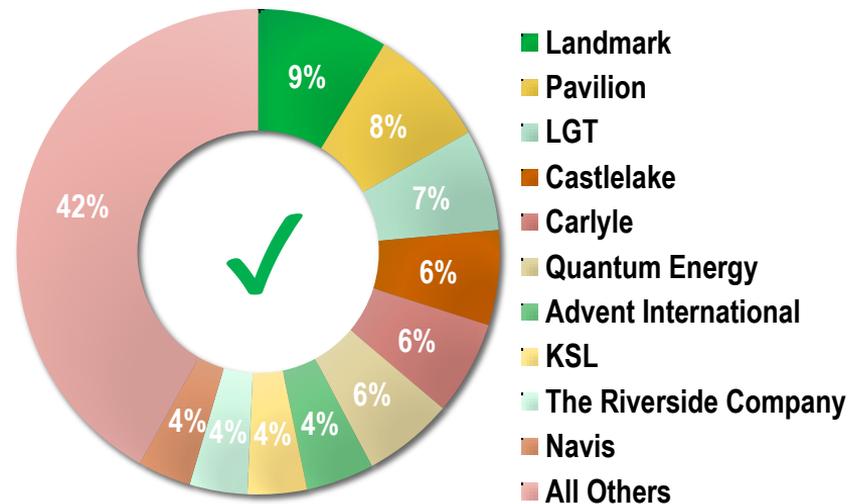
NAV BY STRATEGY (6-30-18)

Guidelines:



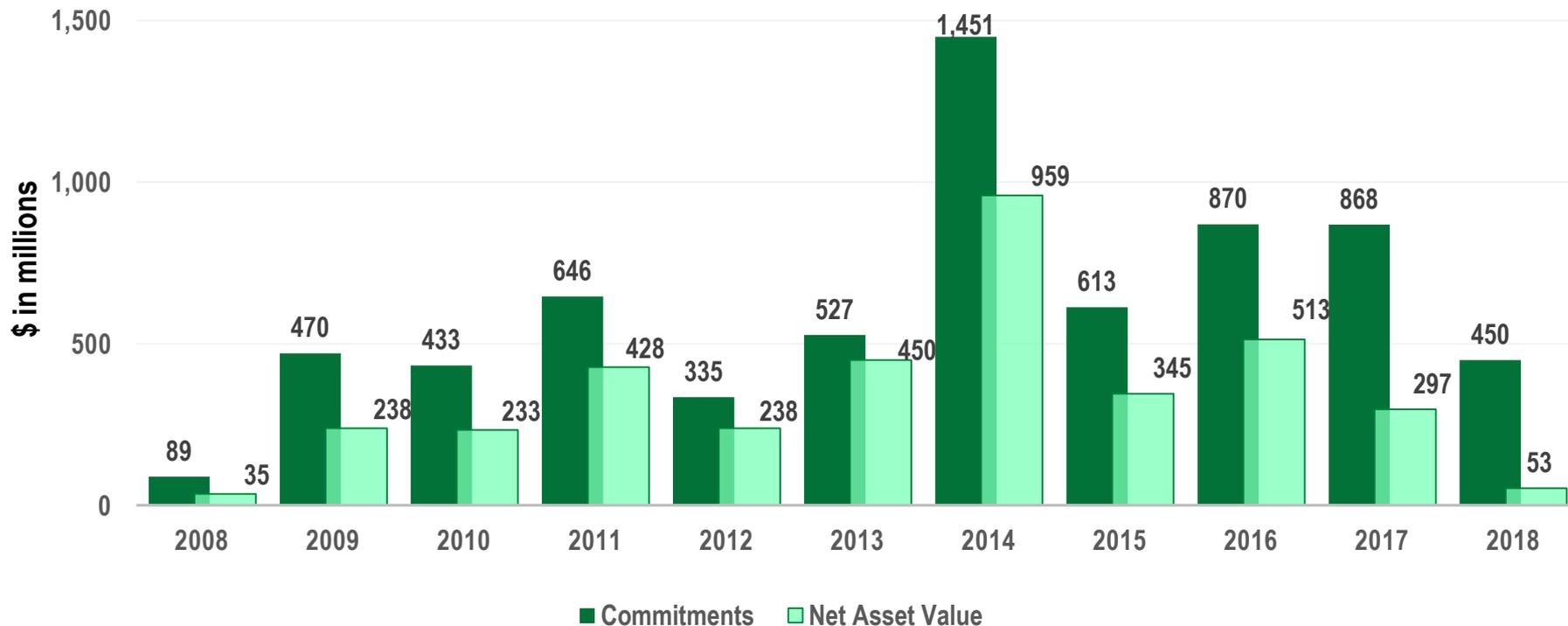
ECONOMIC EXPOSURE BY GP (6-30-18)

Guideline: < 20%



Private Equity Program Overview

Portfolio Diversification by Vintage Year



Private Equity Program Overview

Goals and Objectives for FYs 2018 & 2019



FY 2018

- Secondaries Program
- Enhance Data & Reporting
- Execute Tactical plan

FY 2019

- Execute on Tactical plan
- Strategy Shift

Employees Retirement System of Texas

Private Equity Program Review & Market Outlook 2019

Brad Young

Managing Director, Head of Global Advisory



8/29/2018

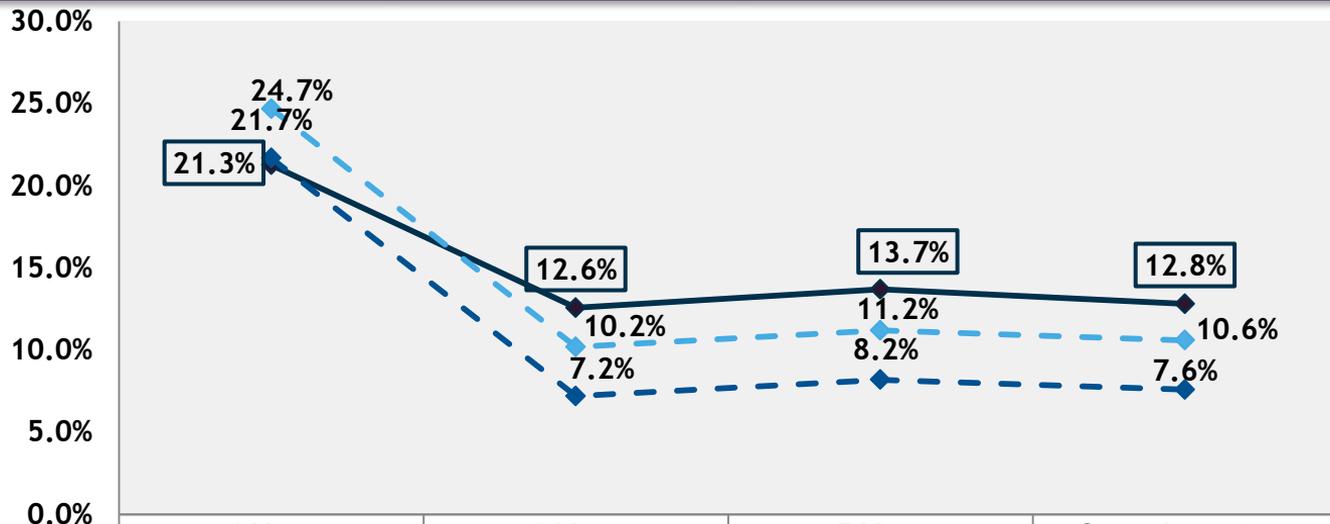
Agenda

- I. ERS Private Equity Program Update
- II. Private Equity Market Statistics & Outlook
- III. Summary
- IV. Appendix

Comparison to Public Markets

The ERS private equity portfolio has outperformed public market equivalents over the longer investment horizons

Portfolio Performance Compared to Public Market Equivalents (PME)



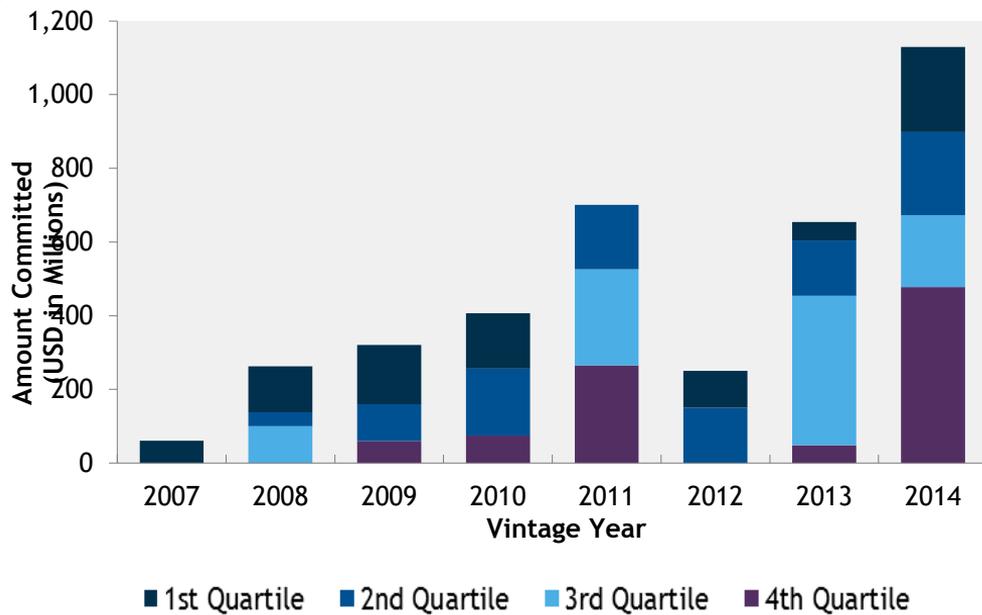
	1 Year	3 Year	5 Year	Since Inception
◆ Portfolio IRR	21.3%	12.6%	13.7%	12.8%
■ PE MSCI ACWI IMI	21.7%	7.2%	8.2%	7.6%
◆ PE MSCI ACWI IMI + 300 bps	24.7%	10.2%	11.2%	10.6%
Differential Over (Under) Benchmark	(3.4%)	2.4%	2.5%	2.2%

Figures use the Long Nickels PME method. This method runs an IRR using the original cash flows, but the ending value is the total of all the public market adjusted cash flows. The time frame used is since the inception of the Private Equity program on July 31, 2007. All 1, 3, 5, and 10 year figures are using cash flows from December 31, 2017 back until April 1 on the corresponding time frame. All figures are calculated using monthly aggregated cash flows as of December 31, 2017. The portfolio performance and PME analysis is based on NAVs as of December 31, 2017.

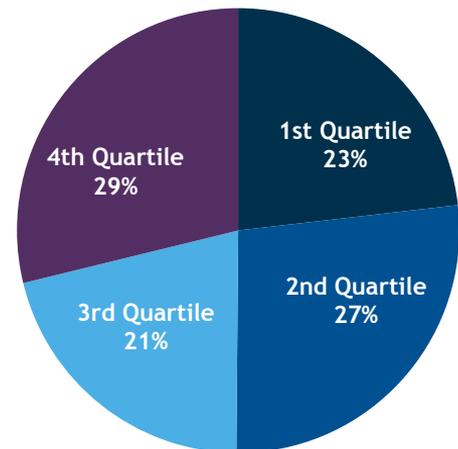
Portfolio Performance: Private Equity Funds

For the 2007-2014 vintage years, approximately 50% of funds in the ERS portfolio are ranked in the 1st or 2nd quartile as measured by total dollars committed

Portfolio Performance by Amount Committed, Quartile Ranking, and Vintage Year



Ranking by Amount Committed

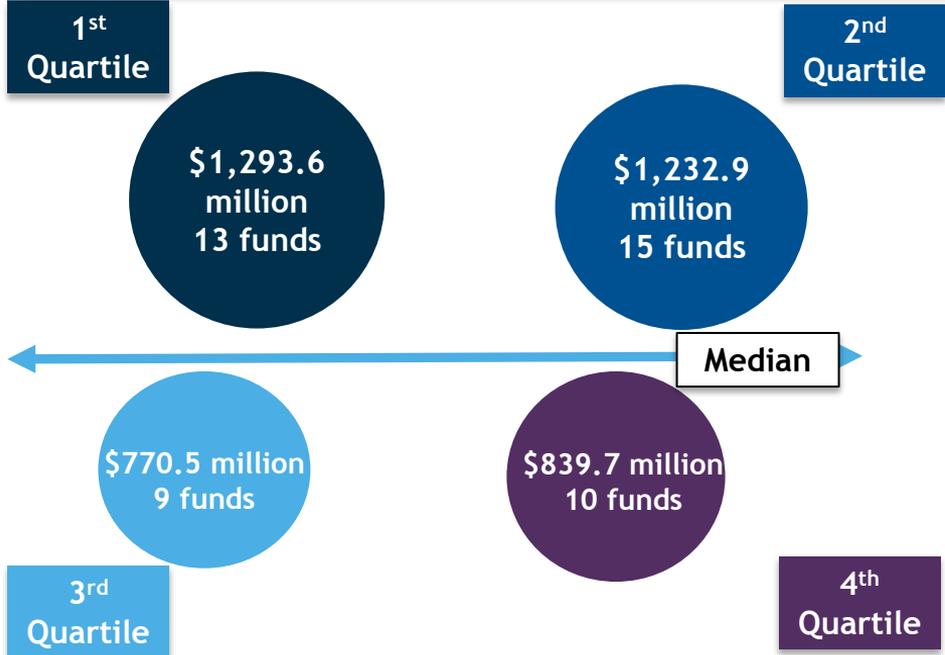


All figures as of December 31, 2017, and benchmark is Burgiss PrivateIQ measured by TVPI. Only includes private equity funds with vintage years 2007-2014. Excludes direct co-investments.

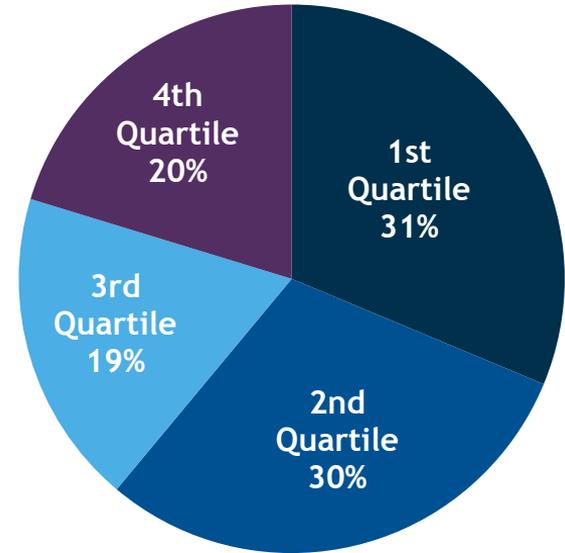
Portfolio Performance: Private Equity Funds

As measured by total value, approximately 61% of the funds in the ERS portfolio with vintages of 2007-2014 are in either the 1st or 2nd quartile

Portfolio Performance by Total Value and Quartile Ranking



Ranking by Total Value

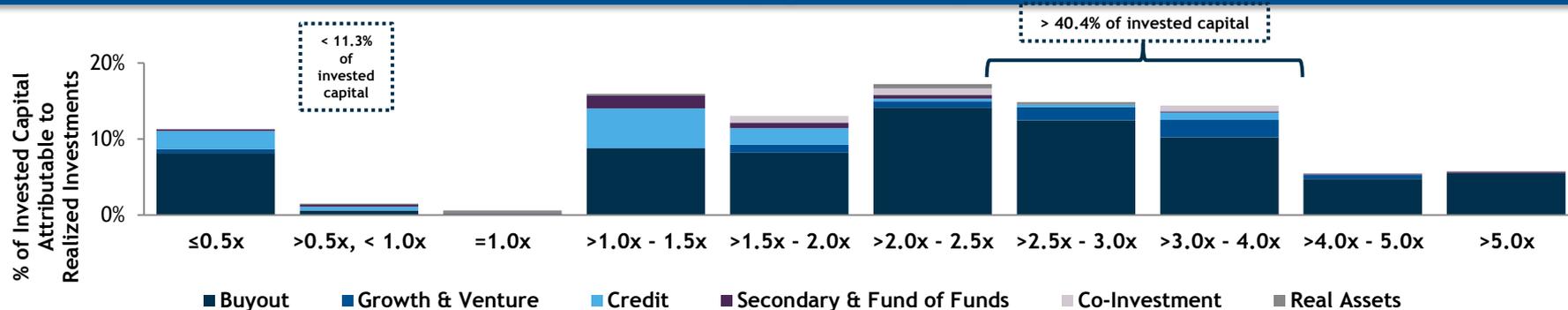


All figures as of December 31, 2017, and benchmark is Burgiss PrivateIQ measured by TVPI. Only includes private equity funds with vintage years 2007-2014. Excludes direct co-investments. Bubble size represents aggregate total value (NAV + distributions) by quartile.

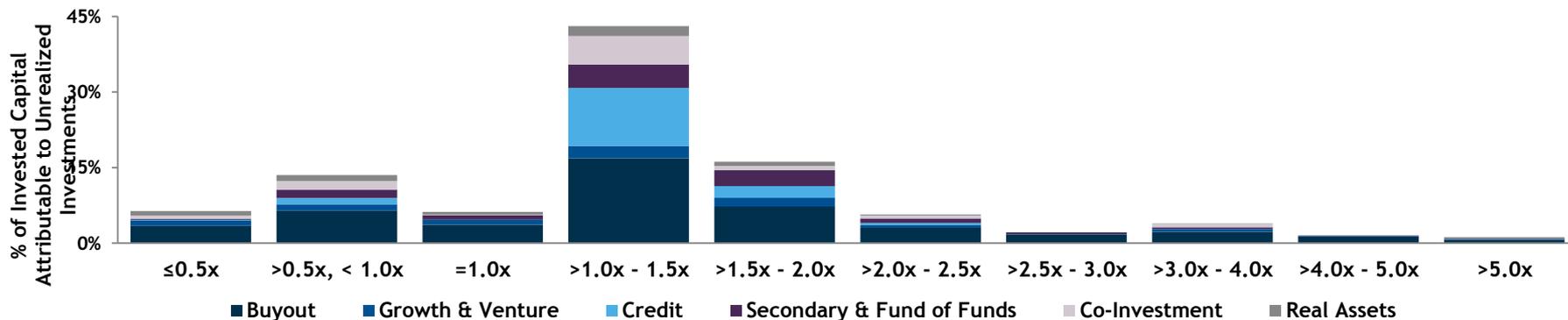
Portfolio Performance: Underlying Holdings Analysis

Volatility Dispersion by Gross Multiple

Realized Underlying Portfolio Companies



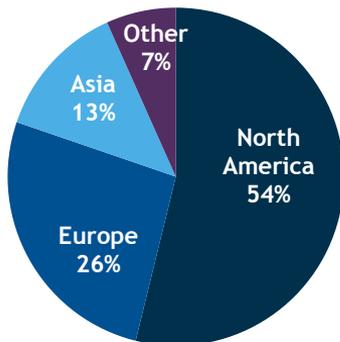
Unrealized Underlying Portfolio Companies



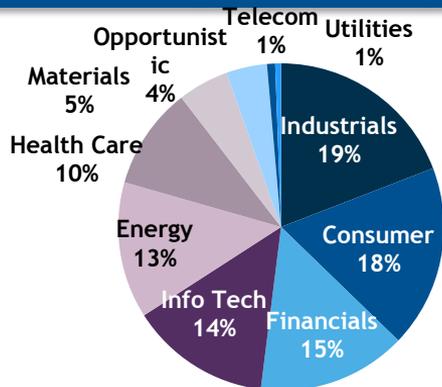
Portfolio Performance: Underlying Holdings Analysis

Diversification and Performance

Remaining Value by Geography



Remaining Value by Industry



Return by Geography

Geography	Realized		Unrealized		Total	
	Gross Gain / Loss	Gross Mult.	Gross Gain / Loss	Gross Mult.	Gross Gain / Loss	Gross Mult.
North America	\$ 797.5	2.47x	\$ 931.9	1.45x	\$ 1,729.4	1.66x
Europe	312.8	2.18x	573.4	1.58x	886.3	1.70x
Asia	32.8	1.65x	208.0	1.45x	240.7	1.47x
Other	31.7	2.19x	84.7	1.25x	116.4	1.32x
Grand Total	\$ 1,174.8	2.33x	\$ 1,798.0	1.46x	\$ 2,972.9	1.62x

Return by Industry

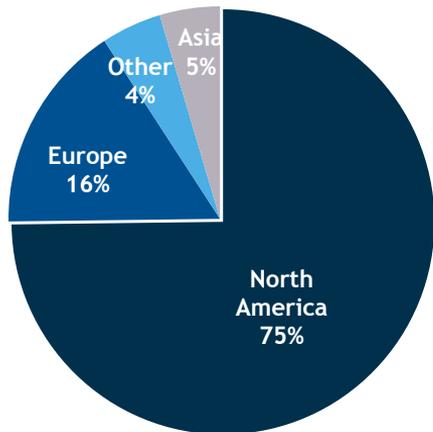
Industry	Realized		Unrealized		Total	
	Gross Gain / Loss	Gross Mult.	Gross Gain / Loss	Gross Mult.	Gross Gain / Loss	Gross Mult.
Consumer	\$ 260.8	1.91x	\$ 240.7	1.34x	\$ 501.5	1.51x
Info Tech	89.4	2.07x	229.9	1.46x	319.4	1.54x
Health Care	150.1	2.45x	240.3	1.73x	390.4	1.90x
Industrials	206.8	2.43x	420.0	1.67x	626.8	1.81x
Financials	108.5	2.32x	276.6	1.37x	385.1	1.46x
Materials	246.7	3.68x	153.1	2.08x	399.8	2.71x
Energy	54.7	1.93x	98.7	1.19x	153.4	1.27x
Telecom	44.6	2.90x	11.8	1.39x	56.4	2.05x
Utilities	13.3	2.90x	13.3	1.39x	26.6	1.65x
Opportunistic	(0.1)	0.98x	113.5	1.46x	113.4	1.45x
Grand Total	\$ 1,174.8	2.33x	\$ 1,798.0	1.46x	\$ 2,972.9	1.62x

Portfolio Snapshot: Co-Investment Program

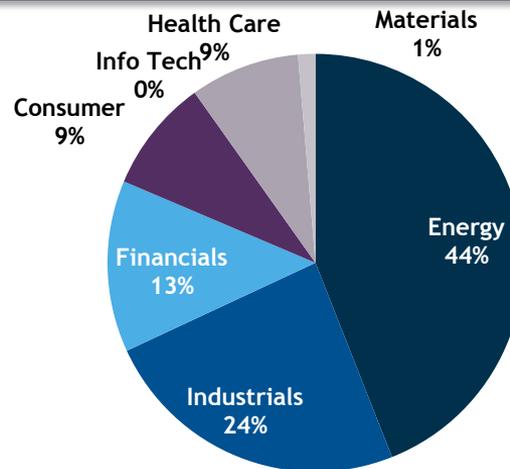
The ERS co-investment program is well-diversified across GPs, strategies and sectors, with an intentional weighting towards buyouts and North America

- From year-end 2011 thru Q4 2017, ERS has committed approximately \$543.3 million to 39 co-investments alongside 16 unique sponsors
- Nearly 71% of the co-investment commitments are allocated to buyout strategies
- Aside from The Carlyle Group, no single GP sponsor accounts for more than 12.2% of co-invest commitments
 - Carlyle accounts for approximately 19.6% of ERS' co-investment commitments, however these co-investments are diversified across two distinct strategies within the Carlyle platform
 - Approximately two-thirds of these co-investments are in energy assets and the remainder in financial services buyouts

Geographic Exposure by Committed Capital



Sector Exposure by Committed Capital

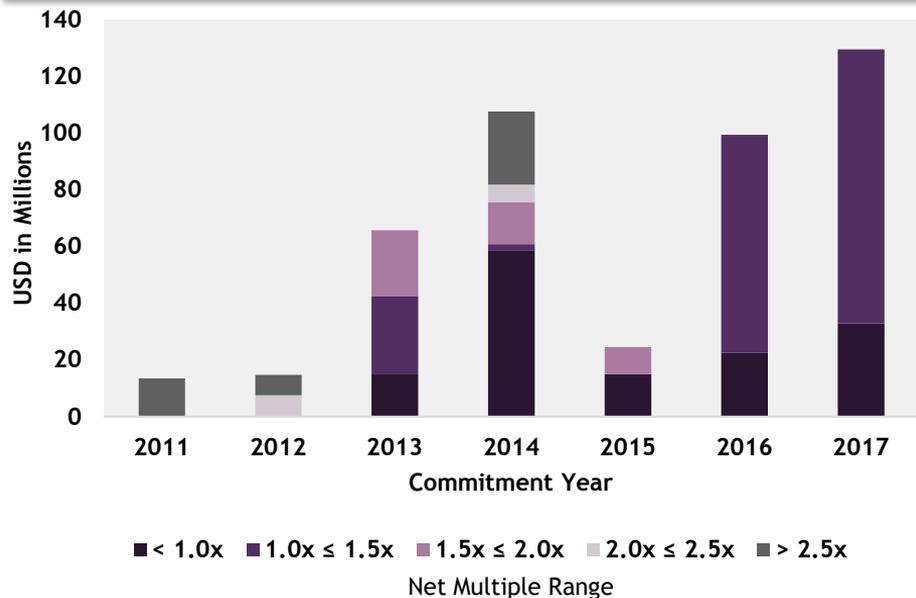


Portfolio Performance: Co-Investment Program

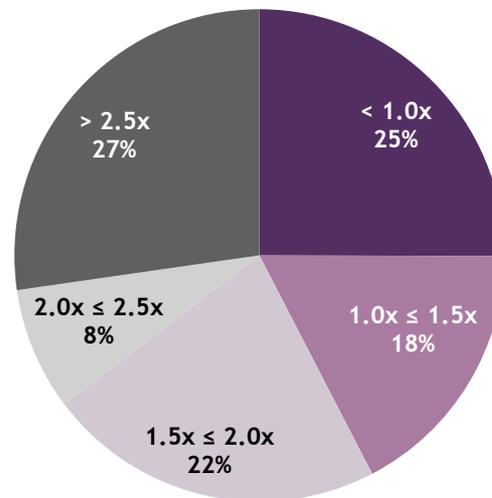
The ERS co-investment program is performing well and generating a 1.4x multiple as of December 31, 2017.

- Subsequent to December 31, 2017, Dwyer Group exited from RCAF VI, generating a 44% gross IRR and 3.4x gross cash-on-cash return.

Net Multiple by Amount Drawn and Commitment Year
(All Direct Co-Investments)



Net Multiple by Amount Drawn
(Only Includes Direct Co-Investments from 2011-2014)*



II:

Private Equity Market Statistics & Outlook



PAVILION

Private Equity Market Snapshot

Fundraising

- Private equity fundraising, especially for U.S. and global mega-funds, remains strong. In Q1 2018, a total of \$36.6 billion of capital commitment was raised by 55 new U.S. funds. Of the capital raised in Q1 2018, over half were with vehicles of \$1 billion or more.
- The average time to close funds continues to decline and the number of successful fundraises continues to increase

Deal Flow

- Private equity deal flow has remained flat in terms of value and decreased in terms of volume YoY. In Q1 2018, U.S. and Europe saw deal flow decline to \$88.8 billion and €68.4 million, which represent year-over-year declines of 32.8% and 56.9%, respectively.

Pricing

- Pricing has remained robust in the U.S. with median EBITDA multiples of 10.7x
- Europe has seen a slight decline of EBITDA multiples of 8.2x

Credit Markets

- Both U.S. and Europe have strong credit markets with median debt levels of 5.5x in the U.S. and 4.6x in Europe

Asset Pricing

- Asset prices are expected to remain close to historical highs due to the increase in dry powder, the ready availability of debt and an improved economic environment. In Q1 2018, U.S. GDP was 2.2%, the strongest first quarter GDP growth in the last four years and the trailing four quarters have shown the most consistent growth since 2010. Growth in Europe is expected to remain strong as the IMF forecasts growth to reach 2.6% in 2018 and 2.2% in 2019

Returns

- Over longer investment horizons, private equity funds continue to generate returns above corresponding public equity markets. Over an 18-year period, private equity has generated a 11.44% return, compared to 5.29% return on the S&P 500 and a 5.77% return on the Russell 3000 over the same period.

III:

Summary



Summary

- The ERS private equity portfolio has consistently exceeded its investment benchmark over the longer investment horizons.
- As of December 31, 2017, ERS private equity portfolio has invested \$4,761.6 million that has generated \$1,174.8 million in realizations. Moving forward, ERS should continue to enjoy the benefits of a maturing private equity portfolio.
- The ERS private equity portfolio is well diversified across geographies, sectors, and styles
- The ERS private equity portfolio is primarily populated with high quality fund managers
- The ERS co-investment program continues to provide concentrated exposure to portfolio companies which are outperforming the broader portfolio while increasing the portfolio's economic efficiency
- Pavilion continues to value its relationship with ERS

Questions?



Public Agenda Item #7.2

Consideration of the Proposed Private Equity Annual Tactical Plan for Fiscal Year 2019 – (Action)



August 29, 2018

Wesley Gipson, Senior Managing Director – Private Equity
Ricky Lyra, Director – Private Equity
Davis Peacock, Director – Private Equity
Brad Young, Pavilion Financial Corporation

Private Equity FY2019 Tactical Plan

IAC and Board Approval Request



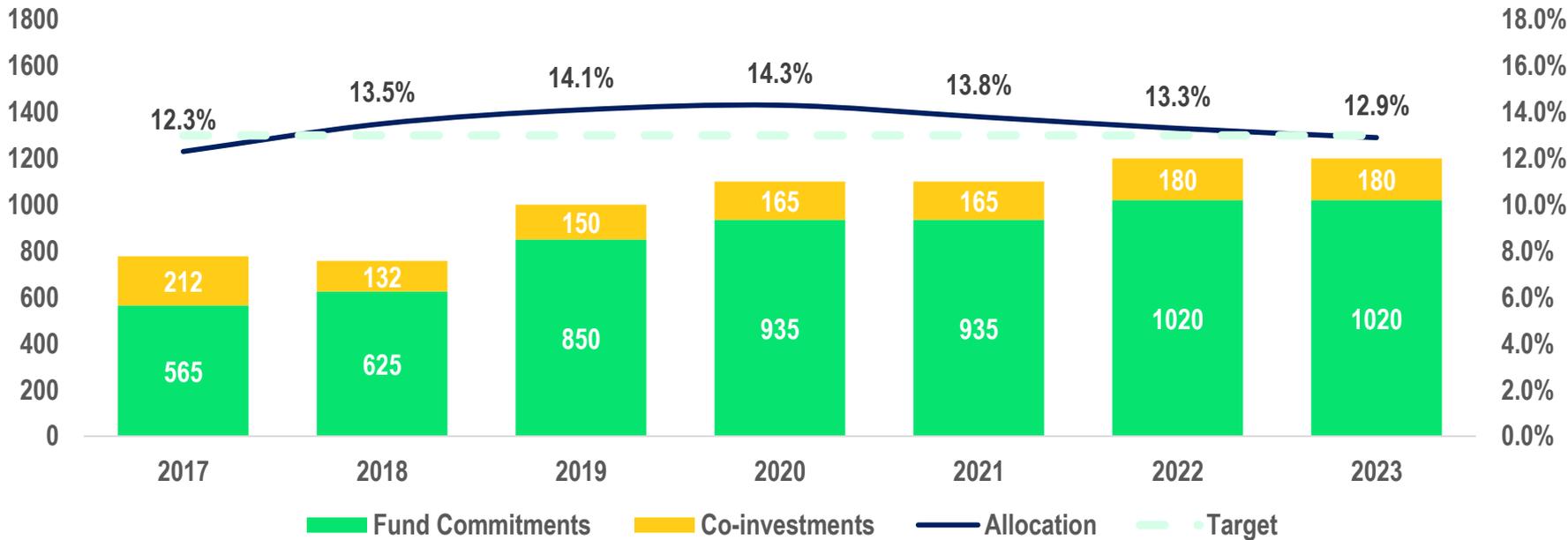
- **Review and consideration of ERS Private Equity Annual Tactical Plan for FY2019:**
 - Propose to invest in 9-18 commitments totaling \$1.0 billion (including co-investments)
 - Commitment target range +/- 25% (\$750M – 1.25B)

Private Equity FY2019 Tactical Plan

7.5% Trust Growth



Commitments and Allocation Forecast

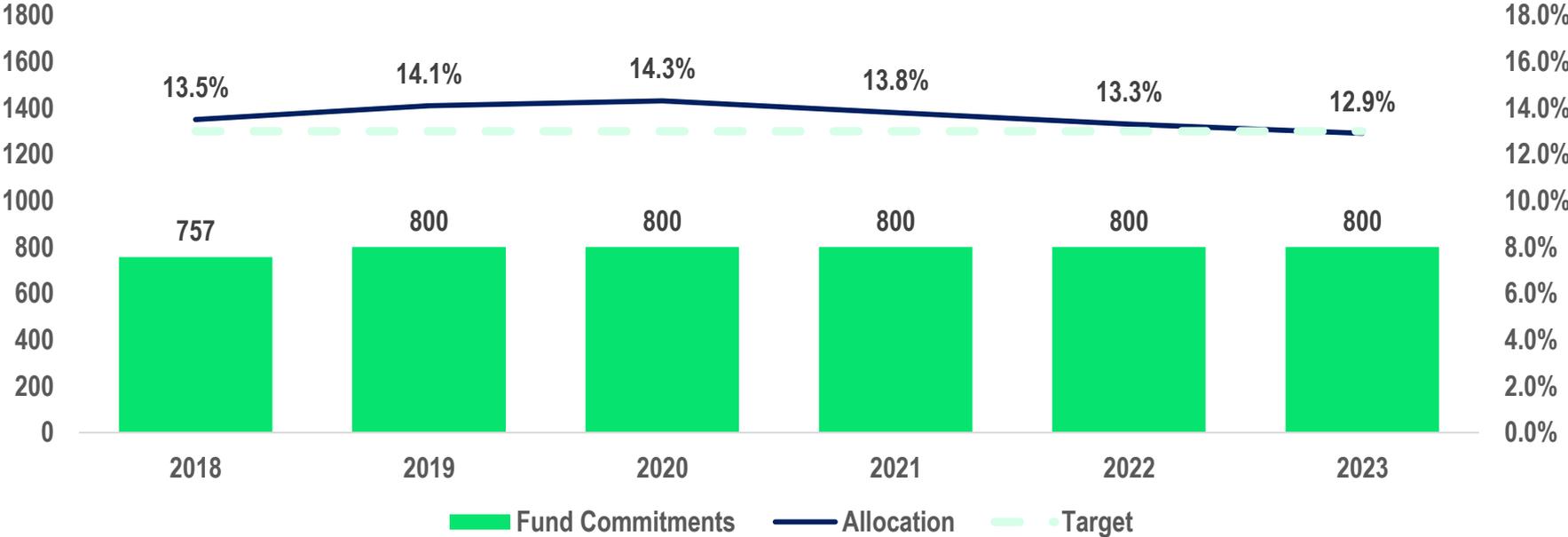


Private Equity FY2019 Tactical Plan

Sensitivity - 3.75% Trust Growth



Commitments and Allocation Forecast



Questions?
Action Item



Public Agenda Item #8.1

Adjournment of the Joint Meeting of the Board of Trustees and Investment Advisory Committee



August 29, 2018

Public Agenda Item #8.2

Recess of the Board of Trustees. Following a temporary recess, the Board of Trustees will reconvene to take up the remaining Board agenda items.



August 29, 2018

Next Meeting Dates



2018 Meeting Dates

2 Day Workshop:

Tuesday – Wednesday, December 11-12, 2018