

# Investment Portfolio Tools Review

Douglas Kidd Investment Officer 15 April, 2020



## **Executive Summary**

- The FCERA Board is well-served by a better understanding of the Investment Portfolio
- Staff has requested and been granted access to various useful tools to provide that understanding
- This demo is intended to inform the Board about progress toward better insight into the FCERA investment portfolio
  - Portfolio Performance Monitoring
  - eVestment
  - Bloomberg





А	sset	12/31/2019		3/31/2020	Change YTD	Benchmark		
Т	otal Equities	2,351,335,754	1,966,826,356		-16.4	% see overlay		
	CWI	565	442			•	-21.7%	
A	CWI imi	1,439	1,111				-22.8%	
	Domestic	1,202,444,275	999,375,202		-16.9	% see overlay		
	Overlay (Futures)	117,617,775	77,260,567					
	S&P Index	560,201,786	529,701,778		-5.4			
	T Rowe	135,178,329	117,687,896		-12.9			The next step is
	AJO PIMCO StocksPlus	131,228,573 258,217,812	93,286,705 181,438,256		-28.9 <sup>4</sup>			
	FINICO SIOCASFIUS	230,217,012	101,430,230		-29.1	/6 -32.9 /6		to use the
	International	1,148,891,479	967,451,154		-15.8	% see overlay		Ploomborg plug
	Overlay (Futures)	(642,806)	22,914,013			•		Bloomberg plug-
	EAFE Index	281,936,677	295,855,309		4.9	% -24.6%		in to update
	Artisan	191,818,238	151,440,251		-21.1	% -24.6%	\	
	RAFI	194,146,908	139,100,815		-28.4	% -24.6%		benchmarks
	Mondrian Intl Small	167,532,103	122,298,496		-27.04			automatically
	Mondrian EM	156,084,473	119,737,802		-23.3			automatically
	Baillie Gifford	158,015,886	116,104,468		-26.5	% -24.8%		
	S Agg	2,225	2,295				3.1%	
	S Agg Ilobal Agg	512	510				-0.3%	
	otal Fixed	1,474,144,647	1,163,440,590		-21.1	% see overlay	0.070	
	Overlay (Futures)	118,099,199	125,576,546			,		
1	WAMCO	188,004,253	177,614,766		-5.5	%		
	RBC	49,368,455	50,826,876		3.04	%		
	Loomis Sayles	256,712,159	225,914,120		-12.0	%		
	Eaton Vance	213,622,966	185,347,634		-13.2	%		
	NTRS	187,913,499	-		-100.0			
	Brandywine	266,832,408	236,221,310		-11.5			
	PIMCO EMD	193,591,708	161,939,338		-16.4	<b>∜</b> 6		
P	E	251,123,953	247,147,944		-1.6	V.		
	CERA Realty	201,120,000	241,141,044		-1.0	,,,		
	ıfra	165,183,101	168,281,129		1.9	%		
н	F	316,354,905	313,472,826		-0.9	%		
Р	E	268,886,276	273,488,800		1.7	%		Estimated
	Overlay	65,344,739	-		-100.0	%		Estimated
	С	318,848,600	348,966,164		9.4	%		YTD
	TRS Cash							
	reasury Cash		0.505.404					performance
Р	arametric		8,505,421					Sorromanico
Т	otal	5,211,221,975	4,490,129,230		-13.8	<sub>%</sub> )		
	chec		(10,001)			/		3
	overlay total	300,418,907	225,751,126		_	-		_

Asset	12/31/2019	3/31/2020	Change YTD Benchma	ark
Total Equities ACWI ACWI imi	2,351,335,754 565 1,439	1,966,826,356 442 1,111	-16.4% see over -21.7 -22.8	%
Domestic Overlay (Futures)	1,202,444,275 117,617,775	999,375,202 77,260,567	-16.9% see over	
S&P Index	560,201,786	529,701,778	-5.4% -5.4	
T Rowe	135,178,329	117,687,896	-12.9% -14.4	
AJO	131,228,573	93,286,705	-28.9% -27.2	
PIMCO StocksPlus	258,217,812	181,438,256	-29.7% -32.9	%
International	1,148,891,479	967,451,154	-15.8% see over	lay
Overlay (Futures)	(642,806)	22,914,013		
EAFE Index	281,936,677	295,855,309	4.9% -24.6	
Artisan	191,818,238	151,440,251	-21.1% -24.6	
RAFI	194,146,908	139,100,815	-28.4% -24.6	%
Mondrian Intl Small	167,532,103	122,298,496	-27.0%	0.1
Mondrian EM	156,084,473	119,737,802	-23.3% -24.8	
Baillie Gifford	158,015,886	116,104,468	-26.5% -24.8	%
US Agg	2,225	2,295	3.1	%
Global Agg	512	510	-0.3	%
Total Fixed	1,474,144,647	1,163,440,590	-21.1% see over	lay
Overlay (Futures)	118,099,199	125,576,546		
WAMCO	188,004,253	177,614,766	-5.5%	
RBC	49,368,455	50,826,876	3.0%	
Loomis Sayles	256,712,159	225,914,120	-12.0%	
Eaton Vance	213,622,966	185,347,634	-13.2%	
NTRS	187,913,499	-	-100.0% (sold TIP	S)
Brandywine	266,832,408	236,221,310	-11.5%	
PIMCO EMD	193,591,708	161,939,338	-16.4%	
RE FCERA Realty	251,123,953	247,147,944	-1.6%	
Infra	165,183,101	168,281,129	1.9%	
HF	316,354,905	313,472,826	-0.9%	
PE	268,886,276	273,488,800	1.7%	
Overlay	65,344,739	-	-100.0%	
PC	318,848,600	348,966,164	9.4%	
NTRS Cash		, ,		
Treasury Cash				
Parametric		8,505,421		
<b>T</b> ( )	5 044 004 0==	4 400 400 000	40.007	
Total	5,211,221,975	4,490,129,230	-13.8%	



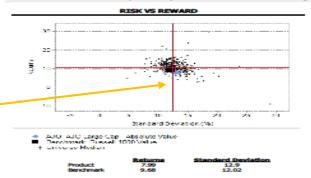
AJO, LP December 31, 2019

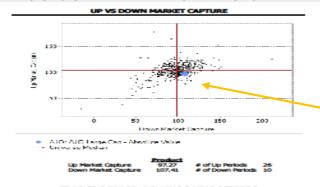
ASSET Class:

Asset Class:

United States-Equity
Primary Universe:
Primary Capitalization:
Primary Style Emphasise
Value
Primary Capitalization:
Value

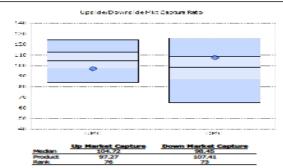
Risk Vs Reward And Market Capture Analysis: 3 Years vs. eVestment US Large Cap Value Equity Displayed In Vehicle Base Currency - US Dollar (USD)





AJO up capture vs. down capture







Performance data displayed in base currency (USD) using Spot Rate (SR) conversion method.

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Western Asset Slightly higher excess returns, for slightly higher volatility

### Western Asset Management Company, LLC

December 31, 2019

**WA US Investment Grade Credit** Asset Class: United States-Fixed Income

Primary Universe: eVestment US Corporate Fixed Income

Marketing Contact: Derek C Fan

Head of Consultant Relations Phone/Fax:

626-844-9465 / Email Address: Derek.Fan@westernasset.com Preferred Benchmark: Total Product Assets: Total Product Accounts: Product Offered As:

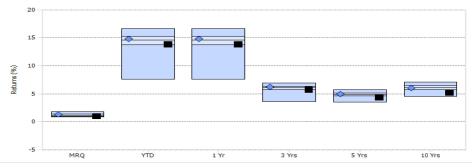
Key Facts Displayed in Product Base Currency - US Dollar (USD)

Duration Emphasis: Core/All Durations

Primary Style Emphasis: Credit Bloomberg Barclays US Credit \$18,170.2

Peer Group Statistics And Ranking vs. eVestment US Corporate Fixed Income Displayed In Vehicle Base Currency - US Dollar (USD)

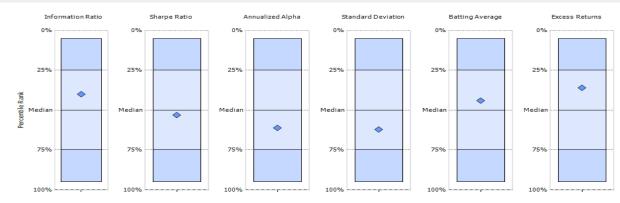
#### Quartile Ranking Analysis Annualized Returns



♦ Western Asset: WA US Investment Grade Credit ■ Benchmark: Bloomberg Barclays US Credit

	MR	Q	YT	D	1 Y	r	3 Y	rs	5 Y	rs	10 Y	rs
Firm/Product	Return	Rank										
Western Asset Management Company, LLC	1.39	29	14.80	43	14.80	43	6.28	36	5.02	41	6.09	53
Bloomberg Barclays US Credit	1.05	75	13.80	74	13.80	74	5.75	76	4.39	83	5.32	86
Universe Median	1.22		14.63		14.63		6.17		4.94		6.14	

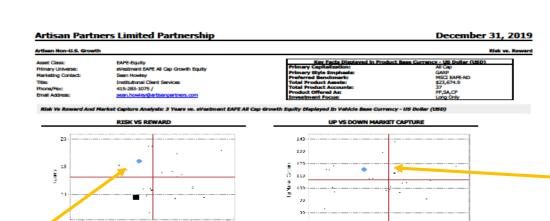
#### Three Year Statistics vs. eVestment US Corporate Fixed Income vs. Bloomberg Barclays US Credit Displayed In Vehicle Base Currency - US Dollar (USD)



	Information Ratio	Sharpe Ratio	Annualized Alpha	Standard Deviation	Batting Average	Excess Returns
Median	0.71	1.28	0.54	3.57	0.61	0.41
Product	0.97	1.28	0.42	3.62	0.61	0.52
Rank	40	53	61	62	44	36



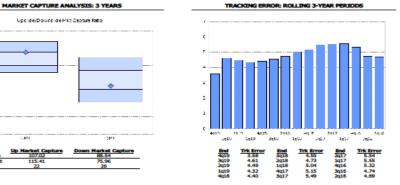
Artisan: higher returns with lower volatility



73.5

Artisan Partners, Artisan Kon-U.S. Growth
 Universe Median

Down Market Caphure



Higher up capture, and lower down capture

Performance data displayed in base currency (USD) using Spot Rate (SR) conversion method.

Standard Deviation (%)

Artisan Partners Artisan Ken U.S. Grewth
 Danchmark: MPCLEAFF-ND
 Universe Median

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### FCERA 2013 ASSET ALLOCATION vs. 60/40



Vehicle Type: Blended Portfolio - Blended Port. Displayed in US Dollar (USD). Data frequency: Quarterly

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### FCERA 2014 ASSET ALLOCATION vs. 60/40



2014 Asset
Allocation
underperformed
60/40 in 1-2yr
periods, slightly
better 3, 5 yr



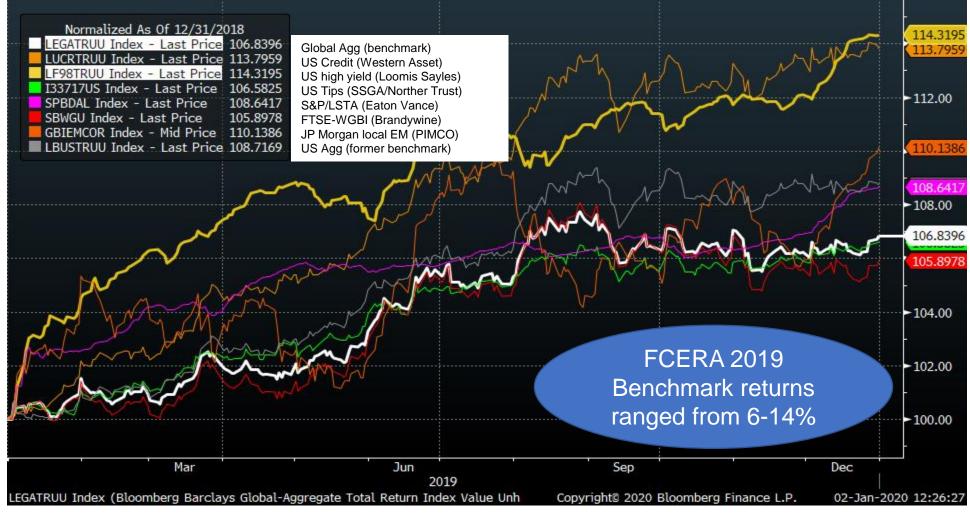
Vehicle Type: Blended Portfolio - Blended Port. Displayed in US Dollar (USD). Data frequency: Quarterly

eVestment Alliance, LLC and its affiliated entities (collectively, "eVestment") collect information directly from investment management firms and other sources believed to be reliable, however, eVestment does not guarantee or warrant the accuracy, timeliness, or completeness of the information provided and is not responsible for any errors or omissions. Performance results may be provided with additional disclosures available on eVestment's systems and other important considerations such as fees that may be applicable. Not for general distribution and limited distribution may only be made pursuant to client's agreement terms. \* All categories not necessarily included, Totals may not equal 100%. Copyright 2012-2020 eVestment Alliance, LLC. All Rights Reserved.





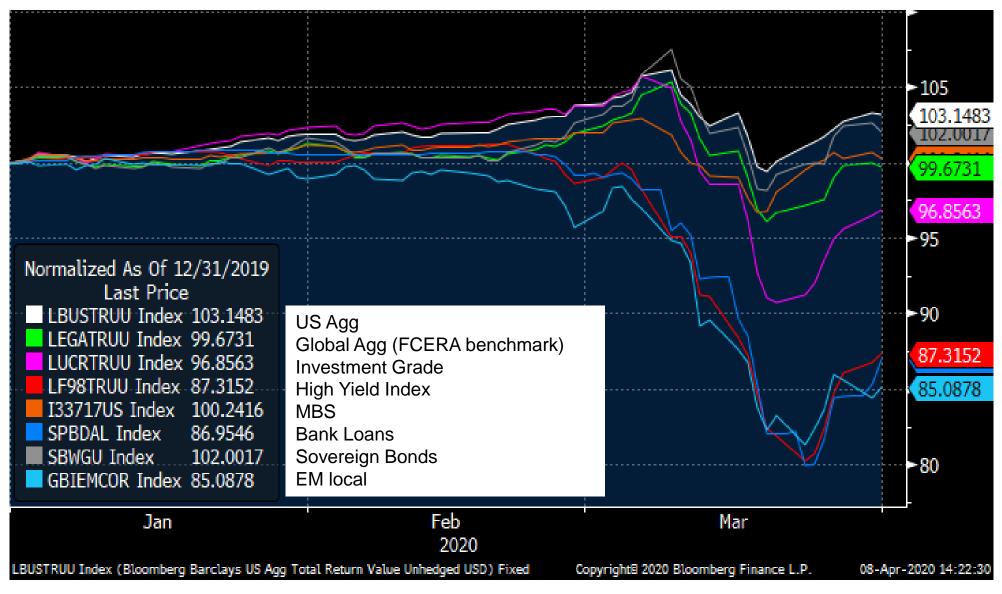
# FCERA Fixed Income Portfolio – Sub Benchmarks 2019



# FCERA INDIANTA

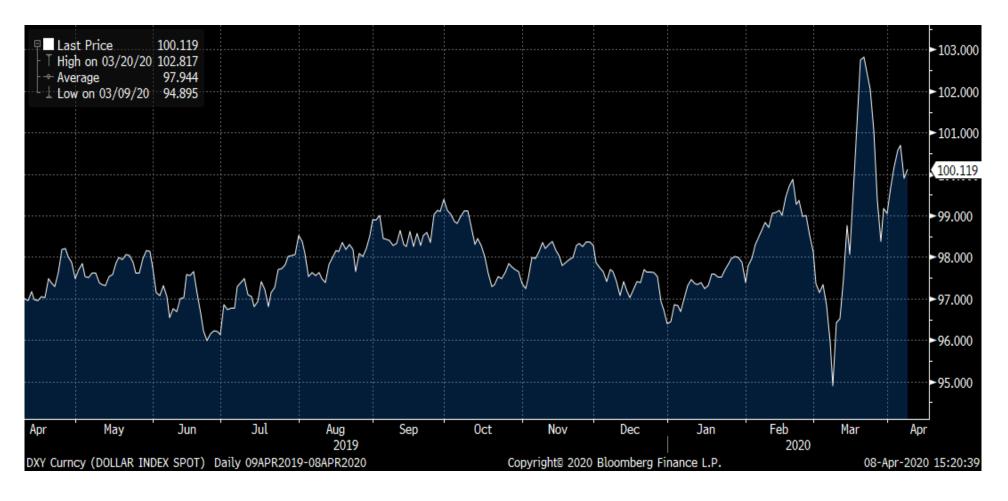
RETIREMENT

### FCERA Fixed Income Benchmarks 2020 YTD





## US \$ index (spot) shows financial market stress



### PORT Scenarios Report: Scenarios (04/08/2020 15:23:27)



See Portfolio Under Separate Cover

Summary	
User Name	DOUGLAS KIDD
Portfolio	Sample EM
As-of Date	4/7/2020
Сиптепсу	USD

(Equities down 10%)	(Equities down 10%)	(Equities down			
(129,086,766)	(10.9)	1,059,445,253	1,188,532,019		100.0
(129,072,782)	(11.0)	1,043,484,208	1,172,556,989		98.6
(2,267,512)	(7.7)	27,356,318	29,623,831		2.4
(13,056,654)	(8.3)	144,939,614	157,996,268		13.2
(8,756,987)	(8.8)	91,098,179	99,855,166		8.4
(7,216,020)	(17.8)	33,384,778	40,600,798		3.4
(31,652,896)	(10.5)	271,139,588	302,792,485		25.4
(13,162,315)	(11.7)	99,527,119	112,689,434		9.4
(4,140,820)	(13.3)	27,072,490	31,213,310		2.6
(532,711)	(9.3)	5,181,183	5,713,894	7,143,750	0.4
(2,687,632)	(20.1)	10,690,532	13,378,164	1,967,377	1.1
(572,513)	(7.5)	7,044,255	7,616,768	7,122,000	0.6
(347,963)	(7.7)	4,156,520	4,504,483	424,956	0.3
(25,626,920)	(11.0)	207,610,706	233,237,625		19.6
(19,496,899)	(14.6)	114,025,717	133,522,616		11.2
(705,569)	(14.5)	4,170,445	4,876,014	277,712	0.4
(1,207,807)	(12.0)	8,859,038	10,066,846	31,793	0.8
(6,339,370)	(12.7)	43,718,964	50,058,334	197,745	4.2
(3,440,440)	(12.4)	24,427,419	27,867,859	1,717,818	2.3
(592,344)	(17.5)	2,791,894	3,384,238	864,602	0.2
(5,749,925)	(24.3)	17,897,605	23,647,530	3,333,100	1.9
(1,461,443)	(10.7)	12,160,351	13,621,794	15,433,585	1.1
(3,201,509)	(16.8)	15,814,389	19,015,898		1.6
(494,250)	(4.1)	11,515,310	12,009,559		1.0
(13,984)	(0.1)	15,961,046	15,975,029		1.3
(13,984)	(0.1)	15,961,046	15,975,029		1.3
(1,000)	(3.6)	26,757	27,757	145,501	0.0
-	2.8	(0)	0	(1)	0.0
-	-	560,398	560,398	4,343,925	0.0
-	2.4	(0)	0	(1)	0.0
(1)	(3.5)	41	43	780	0.0
(12,982)	(2.4)	526,981	539,963	659,100,793	0.0
(0)	(0.6)	11	11	339	0.0
-	-	14,846,857	14,846,857	14,846,857	1.2
	down 10%) (129,086,766) (129,072,782) (2,267,512) (13,056,654) (8,756,987) (7,216,020) (31,652,896) (13,1652,896) (13,162,315) (4,140,820) (532,711) (2,687,632) (572,513) (347,963) (25,626,920) (19,496,899) (705,569) (1,207,807) (6,339,370) (3,440,440) (592,344) (5,749,925) (1,461,443) (3,201,509) (494,250) (13,984) (13,984) (1,000) (1) (12,982)	Cown 10%   Cown 10%	down 10%)         down 10%)         10%)           (129,086,766)         (10.9)         1,059,445,253           (129,072,782)         (11.0)         1,043,484,208           (2,267,512)         (7.7)         27,356,318           (13,056,654)         (8.3)         144,939,614           (8,756,987)         (8.8)         91,098,179           (7,216,020)         (17.8)         33,384,778           (31,652,896)         (10.5)         271,139,588           (13,162,315)         (11.7)         99,527,119           (4,140,820)         (13.3)         27,072,490           (532,711)         (9.3)         5,181,183           (2,687,632)         (20.1)         10,690,532           (572,513)         (7.5)         7,044,255           (347,963)         (7.7)         4,156,520           (25,626,920)         (11.0)         207,610,706           (19,496,899)         (14.6)         114,025,717           (705,569)         (14.5)         4,170,445           (1,207,807)         (12.0)         8,859,038           (6,339,370)         (12.7)         43,718,964           (5,749,925)         (24.3)         17,897,605           (1,461,443) <td< td=""><td>down 10%)         down 10%)         10%)           (129,086,766)         (10.9)         1,059,445,253         1,188,532,019           (129,072,782)         (11.0)         1,043,484,208         1,172,556,989           (2,267,512)         (7.7)         27,356,318         29,623,831           (13,056,654)         (8.3)         144,939,614         157,996,268           (8,756,987)         (8.8)         91,098,179         99,855,166           (7,216,020)         (17.8)         33,384,778         40,600,798           (31,652,896)         (10.5)         271,139,588         302,792,485           (13,162,315)         (11.7)         99,527,119         112,689,483           (4,140,820)         (13.3)         27,072,490         31,213,310           (532,711)         (9.3)         5,181,183         5,713,894           (2,687,632)         (20.1)         10,690,532         13,378,164           (572,513)         (7.5)         7,044,255         7,616,768           (347,963)         (7.7)         4,156,520         4,504,483           (25,626,920)         (11.0)         207,610,706         233,237,625           (19,496,899)         (14.6)         114,025,717         133,522,616</td><td>                                     </td></td<>	down 10%)         down 10%)         10%)           (129,086,766)         (10.9)         1,059,445,253         1,188,532,019           (129,072,782)         (11.0)         1,043,484,208         1,172,556,989           (2,267,512)         (7.7)         27,356,318         29,623,831           (13,056,654)         (8.3)         144,939,614         157,996,268           (8,756,987)         (8.8)         91,098,179         99,855,166           (7,216,020)         (17.8)         33,384,778         40,600,798           (31,652,896)         (10.5)         271,139,588         302,792,485           (13,162,315)         (11.7)         99,527,119         112,689,483           (4,140,820)         (13.3)         27,072,490         31,213,310           (532,711)         (9.3)         5,181,183         5,713,894           (2,687,632)         (20.1)         10,690,532         13,378,164           (572,513)         (7.5)         7,044,255         7,616,768           (347,963)         (7.7)         4,156,520         4,504,483           (25,626,920)         (11.0)         207,610,706         233,237,625           (19,496,899)         (14.6)         114,025,717         133,522,616	

Portfolios can be tested under a variety of risk scenarios, historical and simulated

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### PORT Scenarios Report: Scenarios (04/08/2020 15:23:27)

### Summary

User Name DOUGLAS KIDD
Portfolio Sample EM
As-of Date 4/7/2020
Currency USD

Detail									
	(Equities	(Equities	(Equities down						
	down 10%)	down 10%)	10%)						
SAMPLE EM	(129,086,766)	(10.9)	1,059,445,253	1,188,532,019		100.00			
Equity	(129,072,782)	(11.0)	1,043,484,208	1,172,556,989		98.66			
Communication Services	(2,267,512)	(7.7)	27,356,318	29,623,831		2.49			
Consumer Discretionary	(13,056,654)	(8.3)	144,939,614	157,996,268		13.29			
Consumer Staples	(8,756,987)	(8.8)	91,098,179	99,855,166		8.40			
Energy	(7,216,020)	(17.8)	33,384,778	40,600,798		3.42			
Financials	(31,652,896)	(10.5)	271,139,588	302,792,485		25.48			
Health Care	(13,162,315)	(11.7)	99,527,119	112,689,434		9.48			
Industrials	(4,140,820)	(13.3)	27,072,490	31,213,310		2.63			
CHINA STATE CONSTRUCTION	(532,711)	(9.3)	5,181,183	5,713,894	7,143,750	0.48			
EMBRAER SA-SPON ADR	(2,687,632)	(20.1)	10,690,532	13,378,164	1,967,377	1.13			
JIANGSU EXPRESS CO LTD-I	(572,513)	(7.5)	7,044,255	7,616,768	7,122,000	0.64			
LARSEN & TOUBRO LTD	(347,963)	(7.7)	4,156,520	4,504,483	424,956	0.38			
Information Technology	(25,626,920)	(11.0)	207,610,706	233,237,625		19.62			
Materials	(19,496,899)	(14.6)	114,025,717	133,522,616		11.23			
ANGLO AMERICAN PLC	(705,569)	(14.5)	4,170,445	4,876,014	277,712	0.41			
KOREA ZINC CO LTD	(1,207,807)	(12.0)	8,859,038	10,066,846	31,793	0.85			
LG CHEM LTD	(6,339,370)	(12.7)	43,718,964	50,058,334	197,745	4.21			
MONDI PLC	(3,440,440)	(12.4)	24,427,419	27,867,859	1,717,818	2.34			
SASOL LTD	(592,344)	(17.5)	2,791,894	3,384,238	864,602	0.28			
SUZANO SA	(5,749,925)	(24.3)	17,897,605	23,647,530	3,333,100	1.99			
VEDANTA LTD	(1,461,443)	(10.7)	12,160,351	13,621,794	15,433,585	1.15			
Real Estate	(3,201,509)	(16.8)	15,814,389	19,015,898		1.60			
Utilities	(494,250)	(4.1)	11,515,310	12,009,559		1.01			
Cash	(13,984)	(0.1)	15,961,046	15,975,029		1.34			
Cash	(13,984)	(0.1)	15,961,046	15,975,029		1.34			
BRAZIL REAL	(1,000)	(3.6)	26,757	27,757	145,501	0.00			
CHILEAN PESO	-	2.8	(0)	0	(1)	0.00			
HONG KONG DOLLAR	-	-	560,398	560,398	4,343,925	0.05			
INDONESIAN RUPIAH	-	2.4	(0)	0	(1)	0.00			
SOUTH AFRICAN RAND	(1)	(3.5)	41	43	780	0.00			
SOUTH KOREAN WON	(12,982)	(2.4)	526,981	539,963	659,100,793	0.05			
TAIWAN DOLLAR	(0)	(0.6)	11	11	339	0.00			
US DOLLAR	-	-	14,846,857	14,846,857	14,846,857	1.25			

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# Summary

- YTD FCERA Investment Performance has been adversely impacted, as expected and explained in a previous presentation by the material credit exposure in fixed income
- YTD, the rebalancing policy using the overlay has been costly, but the portfolio is positioned for a rebound in equities
- eVestment is a useful tool for testing asset allocations, for evaluating individual managers, and for potential new investment searches
- Bloomberg is helpful for processing financial market developments, for integrating price and performance measurement, and for evaluating portfolio risk measures within individual portfolios and for FCERA overall