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Tuesday, June 4, 2013 1:00 p.m.

Tod Hall Board Meeting Room

AGENDA

- A. Disposition of Minutes for Meetings Held December 4, 2012; and February 26, 2013
- B. Old Business
- C. Subcommittee Item
 - 1. Discussion Items
 - a. Hartland & Co. June 4, 2013 Non-Endowment Assets Update Mike Shebak and Sarah Parker will report.

Tab 1

b. Hartland & Co. March 2013 Quarterly University Investments Update Mike Shebak and Sarah Parker will report.

Tab 2

- c. Report on the Status of the New Investment Manager Paul McFadden, President of Youngstown State University Foundation, will report.
- D. New Business
- E. Adjournment



Youngstown State University Non-Endowment Assets

HARTLAND & Co. Investment Consultants

INDEPENDENCE | EXPERTISE | RESULTS



Consulting Team:

Michael P. Shebak

Sarah E. Parker

Contents

- I. Accomplishment Schedule and Future Initiatives
- II. Market Update
- III. First Quarter 2013 Performance
- IV. Global Fixed Income

Electronic Quarterly Reports

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Accomplishment Schedule and Future Initiatives



2012

- Q3
 - Fixed Income Challenges
 - Annual Fee Review
 - Investment Policy Review
- Q4
 - Asset Allocation Review

2013

- Q1
 - Active, Short-Term Fixed Income: PIMCO Low Duration (Long-Term Pool)
 - Yield Review
- Q2
 - Global Fixed Income (Long-Term Pool)
- Q3-Q4
 - Annual Fee Review
 - Investment Policy Review
 - PNC Update

Market Update

1Q13 Review

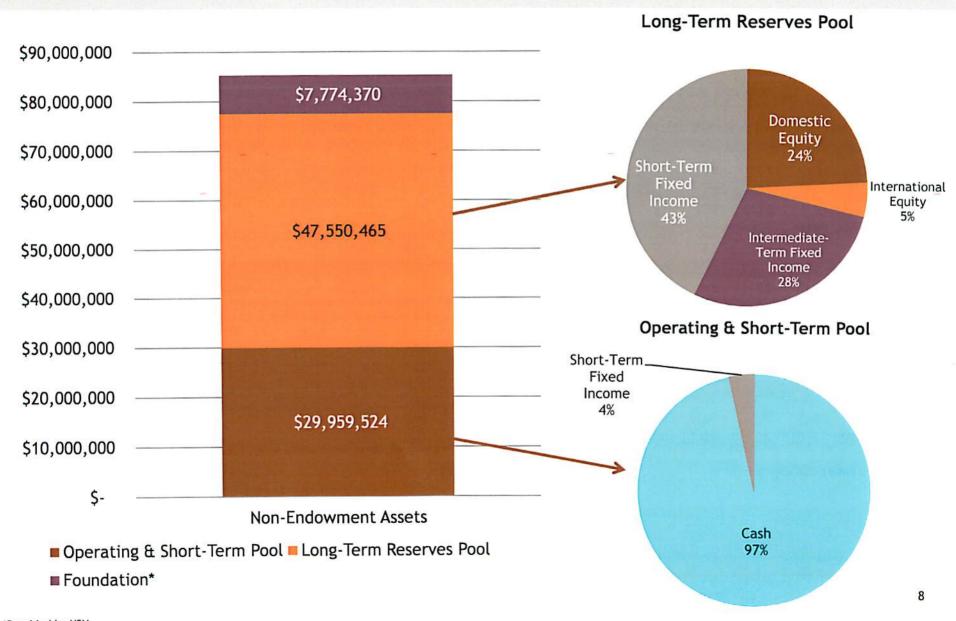
2003	2004	2005	2006	2007	2008	2009	<u>2010</u>	2011	2012	Q1 2013
Em Mkt 56.3%	REITs 30.4%	Em Mkt 34.5%	REITs 34.3%	Em Mkt 39.8%	Glb Bond 9.4%	Em Mkt 79.0%	REITs 27.6%	US Bonds 7.8%	REITs 20.1%	Sm/Mid 12.9%
Sm/Mid	Em Mkt	Dev Intl	Em Mkt	Dev Intl	US Bonds	Hi Yld	Sm/Mid	REITs	Em Mkt	Large Cap
45.5%	26.0%	14.0%	32.6%	11.6%	5.2%	57.5%	26.7%	7.3%	18.6%	10.6%
Dev Intl	Dev Intl	REITs	Dev Intl	Glb Bond	Cash	Sm/Mid	Em Mkt	Glb Bond	Dev Intl	REITs
39.2%	20.7%	8.3%	26.9%	10.9%	2.1%	34.4%	19.2%	5.2%	17.9%	9.1%
REITs	Sm/Mid	Sm/Mid	Sm/Mid	Hdg Fnds	Hdg Fnds	Dev Intl	Hi Yld	Hi Yld	Sm/Mid	Dev Intl
38.5%	18.3%	8.1%	16.2%	9.7%	-20.8%	32.5%	15.2%	4.4%	17.9%	5.2%
Large Cap 28.7%	Glb Bond 12.1%	Hdg Fnds 7.5%	Large Cap 15.8%	US Bonds 7.0%	Hi Yld -26.4%	REITs 27.5%	Large Cap 15.1%	Large Cap 2.1%	Large Cap 16.0%	Hdg Fnds 3.4%
Hi Yld	Large Cap	Large Cap	Hi Yld	Large Cap	Sm/Mid	Large Cap	Hdg Fnds	Cash	Hi Yld	Hi Yld
28.2%	10.9%	4.9%	11.8%	5.5%	-36.8%	26.5%	10.6%	0.1%	15.6%	2.9%
Glb Bond 18.2%	Hi Yld 10.9%	Cash 3.1%	Hdg Fnds 10.2%	Cash 5.0%	Large Cap -37.0%	Hdg Fnds 11.5%	Dev Intl 8.2%	Sm/Mid -2.5%	Hdg Fnds 5.4%	Cash 0.0%
Hdg Fnds 11.4%	Hdg Fnds 7.2%	Hi Yld 2.7%	Glb Bond 7.3%	Hi Yld 2.2%	REITs -37.3%	US Bonds 5.9%	US Bonds 6.6%	Hdg Fnds -4.9%	US Bonds 4.2%	US Bonds -0.1%
US Bonds	US Bonds	US Bonds	Cash	Sm/Mid	Dev Intl	Glb Bond	Glb Bond	Dev Intl	Glb Bond	Em Mkt
4.1%	4.3%	2.4%	4.9%	1.4%	-43.1%	4.4%	6.1%	-11.7%	1.8%	-1.6%
Cash	Cash	Glb Bond	US Bonds	REITs	Em Mkt	Cash	Cash	Em Mkt	Cash	Glb Bond
1.2%	1.3%	-8.8%	4.3%	-17.8%	-53.2%	0.2%	0.1%	-18.2%	0.1%	-3.9%

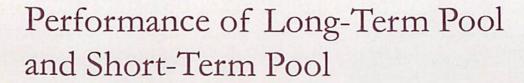
- U.S. outpaced
 International in 1Q13
- A strong USD and negative emerging market returns were headwinds to International markets
- Favorable performance from Japan (up 21.5%/20% index weight)
- GDP grew 0.4% in 4Q12; estimates for 1Q13 are 2.0%
- American consumers are gaining momentum
- Corporate profit margins attractive; earnings growth potential reliant on revenue growth
- Equity valuations are reasonable; safety expensive
- Markets are at all time highs; market pull backs may occur and are normal

Non-Endowment Assets First Quarter 2013 Performance

Quarterly Market Values and Asset Allocation (as of 3/31/2013)









	Ending March 31, 2013									Calendar Years			Inception	
	2013 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2012 (%)	2011 (%)	2010 (%)	Return (%)	Since	
Total University Assets	1.8	1.8	3.6	3.1	3.8	3.8	4.4	-	4.1	1.2	5.4	4.0	Mar-04	
YSU Policy Benchmark	1.3	1.3	2.5	2.3	2.5	2.5	3.6	3.4	2.8	1.1	3.3	3.3	Mar-04	
Total Operating & Short Term	0.0	0.0	0.0	0.1		-	-		0.0	0.2	-	0.1	Jun-10	
YSU Total Operating & Short Term Benchmark	0.0	0.0	0.1	0.1	0.1	0.4	1.6	1.8	0.1	0.2	0.1	0.1	Jun-10	
Total Long Term/ Reserves Pool	2.9	2.9	5.5	4.8	1	-	-	_	6.4	1.9		5.6	Jun-10	
YSU Total Long Term/ Reserves Fund Benchmark	2.6	2.6	4.9	4.4	4.7	4.2	5.0	4.4	5.5	1.9	5.7	4.7	Jun-10	
Total Domestic Equity	11.5	11.5	14.2	10.0	-	-	_		15.3	0.8		19.1	Jun-10	
Russell 3000	11.1	11.1	14.6	10.8	13.0	6.3	5.1	9.2	16.4	1.0	16.9	19.3	Jun-10	
Total International Equity	3.9	3.9	11.1	-0.7	-	-	-	7.86	20.1	-18.9		3.3	Sep-10	
MSCI EAFE Gross	5.2	5.2	11.8	2.9	5.5	-0.4	2.1	10.2	17.9	-11.7	8.2	6.4	Sep-10	
Total Fixed Income	0.2	- 0.2	2.6	3.4	-	_	-	-	3.2	3.8	-	3.2	Jun-10	
YSU Fixed Income Benchmark	0.2	0.2	2.2	2.8	2.9	3.3	4.3	3.6	2.4	3.2	4.0	2.5	Jun-10	

⁻ YSU Policy Benchmark = BofA Merrill Lynch 91-Day T-Bill 45% / Barclays 1-3 Yr. Govt. 27.5% / Barclays Int Govt/Credit 15% / Russell 3000 10% / MSCI EAFE Gross 2.5%

⁻ YSU Total Operating & Short Term Benchmark = BofA Merrill Lynch 91-Day T-Bill 95% / Barclays 1-3 Yr. Govt. 5%

⁻ YSU Total Long Term/ Reserves Fund Benchmark = Russell 3000 20% / MSCI EAFE Gross 5% / Barclays Int Govt/Credit 30% / Barclays 1-3 Yr. Govt. 45%

⁻ YSU Fixed Income Benchmark = BofA Merrill Lynch US Corp & Gov 1-3 Yrs 60% / Barclays Int Govt/Credit 40%

Global Fixed Income

YSU Fixed Income Assets

- \$63.7 million of Fixed Income assets (Short-Term Pool + Long-Term Pool)
- 71% of Long-Term Pool; 82% of Non-Endowment Assets
- Approximately 97% U.S. Fixed Income

Challenges

- Historically low interest rate environment
- Low coupon yield to offset potential rising rate environment
- Fed policy
- Spread levels
- Deleveraging

Opportunities

- Lengthen duration not advised
- · Credit risk (i.e., junk bonds) not advised
- Non-US Fixed Income improved diversification and return potential





Global Fixed Income – Why?

Broader Opportunities

- Differing economies and interest rate environments
- Approximately 75% of the fixed income universe is located outside of the U.S.
- The global fixed income market is estimated to be over \$28 trillion
 - Government sovereign debt accounts for a large percentage of the market (approx 70% of the BarCap Global Aggregate Index)

Performance

- Over the past decade, global fixed income returns have outpaced domestic fixed income
- A more volatile fixed income asset class provides potential for improved performance
- May improve portfolio performance when U.S. dollar is weak

Diversification

Low correlation to domestic fixed income

Country	Current 10-Year Gov't Bond Yield*	2013 GDP Estimates*	% of International Debt
<u>De</u>	<u>85.5%</u>		
U.S.	1.9%	2.2%	23.8%
UK	1.8%	1.1%	12.8%
Germany	1.3%	1.5%	7.4%
Netherlands	1.8%	0.1%	7.1%
France	2.0%	-0.2%	6.9%
Spain	5.1%	-0.8%	5.2%
Italy	4.8%	-1.5%	4.0%
Canada	1.9%	2.4%	2.4%
Australia	3.4%	2.7%	2.0%
<u>E</u>	merging Marke	ets	4.5%
Brazil	10.0%	- 3.4%	0.5%
South Korea	2.8%	3.7%	0.5%
Mexico	5.0%	3.8%	0.4%
Russia	7.1%	3.5%	0.2%
China	3.6%	8.0%	0.1%
India	8.1%	6.2%	0.1%
<u>C</u>	Offshore Cente	<u>rs</u>	5.5%
Intern	ational Organi	zations	4.5%

Recommendations

Hartland & Co. recommends diversifying the fixed income management in the Long-Term Pool into Global Fixed Income.*

Hartland & Co. recommends reallocating \$1.5 million from the Intermediate-Term fixed income funds to the DFA Five-Year Global Fund.

The YSU portfolio maintains credit quality, lowers duration, improves yield, lowers fees, and improves diversification.

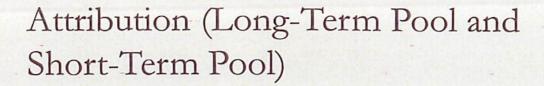
	Current Yield (as of 3/31/12)	Sector Weightings	Non-U.S. Exposure	Average Maturity	Average Duration	Average Credit Quality	Net Expense
DFA Five- Year Global Fixed	2.7%	50% Gov't/Agency/ 50% Corporates	74%	4.0 years	3.8 years	AA (no bonds below AA)	0.28%
JPMorgan Core Bond	2.1%	26% Gov't/Agency/ 16% Corporates/ 53% Securitized	0%	6.1 years	4.6 years	AA	0.41%
PNC Intermediate Term Bond	1.3%	56% Govt/Agency/ 37% Corporates/ 6% Securitied	0%	4.0 years	3.7 years	A	0.15%

^{*}Per the Asset Allocation Guidelines, fixed-income investments may include U.S. and Non-U.S. issues of Government and Agency obligations, marketable corporate bonds, mortgage or asset-backed bonds, and preferred stocks with sinking funds as deemed prudent by the investment managers.

Rebalance Recommendation

		Proposed Allocation	n						
Total Plan	Asset Class \$77,509,990				\$77,509,990		Pool Target	Pool Range	Total Range
Operating & Short Term Pool		\$29,959,524	38.7%		\$29,959,524	38.7%		100%	25 - 50%
2									
Operating Assets		\$28,923,917	96.5%		\$28,923,917	96.5%	n/a	60-100%	
JPMorgan US Treasury Money Market	US Treasury Money Market	\$25,825,465	86.2%		\$25,825,465	86.2%			
PNC Sweep Account	Cash Equivalents	\$3,098,452	10.3%		\$3,098,452	10.3%			
Short Term Assets		\$1,035,608	3.5%		\$1,035,608	3.5%	n/a	0-40%	
Vanguard Short-Term Federal Adm	Intermediate Gov't	\$1,035,608	3.5%		\$1,035,608	3.5%			
		V.,000,000	3.0.0		\$1,000,000	0.00			
Long-Term Reserves Pool		\$47,550,465	61.3%		\$47,550,465	61.3%		100%	50 - 75%
				N. Carling					
Domestic Equity		\$11,522,600	24.2%		\$11,522,600	24.2%	20%	0-25%	
Γ. Rowe Price U.S. Structured Research	Large Blend	\$3,607,696	7.6%		\$3,607,696	7.6%		l I	
Vanguard 500 Index Signal	Large Blend	\$3,632,186	7.6%		\$3,632,186	7.6%			-
Vanguard Mid Cap Index Signal	Mid-Cap Blend	\$2,152,166	4.5%		\$2,152,166	4.5%	1		
Loomis Sayles Small Cap Growth Instl	Small Value	\$1,080,817	2.3%		\$1,080,817	2.3%			
Veractiy Small Cap Value I	Small Growth	\$1,049,735	2.2%		\$1,049,735	2.2%	_		
International Equity		\$2,252,815	4.7%		\$2,252,815	4.7%	5%	0 - 10%	
William Blair International Growth I	Foreign Large Growth	\$915,856	1.9%	=	\$915,856	1.9%	- 570		-
Dodge & Cox Int'l Stock	Foreign Large Value	\$1,336,959	2.8%		\$1,336,959	2.8%			
							2,72,725	TO LOCAL DESIGNATION IN CONTROL OF THE PARTY	
Total Equity		\$13,775,415	29.0%		\$13,775,415	29.0%	25%	0-35%	
ST Fixed Income		\$20,261,639	42.6%		\$20,261,639	42.6%	45%	35-55%	
YSU Short Term Bond	Short-Term Bond	\$14,907,549	31.4%		\$14,907,549	31.4%	1 2 2 2 2 2 2		
Vanguard Short-Term Bond Index	Short-Term Bond	\$2,849,541	6.0%	(\$500,000)	\$2,349,541	4.9%	1		
PIMCO Low Duration Instl	Short-Term Bond	\$2,504,549	5.3%	\$500,000	\$3,004,549	6.3%			
Total Int. Fixed Income		C12 E12 444	20 40/		642 542 444	20 404	30%	20-40%	
DFA Five-Year Global	Global Fixed Income	\$13,513,411 \$0	28.4% 0.0%	\$1,500,000	\$13,513,411	28.4% 3.2%	30%	20-40%	
JPMorgan Core Bond	Intermediate-Term Bond	\$6,844,940	14.4%	(\$750,000)	\$1,500,000	12.8%			
YSU Intermediate Term Bond	Intermediate-Term Bond		14.4%	The state of the s	\$6,094,940			1	
130 intermediate remi bond	intermediate-renn bond	\$6,668,471	14.0%	(\$750,000)	\$5,918,471	12.4%			

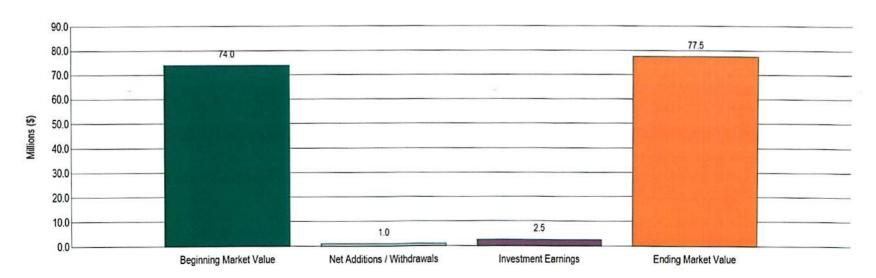
Appendix



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	2012 Q2	2012 Q3	2012 Q4	First Quarter	One Year
Beginning Market Value	\$73,970,154.89	\$57,881,607.73	\$79,728,675.20	\$55,959,142.09	\$73,970,154.89
- Withdrawals	-\$15,010,286.51	-\$10,010,193.01	-\$28,011,756.78	-\$2,010,427.33	-\$55,042,663.63
+ Contributions	\$10,286.51	\$30,010,268.11	\$5,011,932.07	\$21,011,222.53	\$56,043,709.22
= Net Cash Flow	-\$15,000,000.00	\$20,000,075.10	-\$22,999,824.71	\$19,000,795.20	\$1,001,045.59
+ Net Investment Change	-\$1,088,547.16	\$1,846,992.37	-\$769,708.40	\$2,550,052.57	\$2,538,789.38
= Ending Market Value	\$57,881,607.73	\$79,728,675.20	\$55,959,142.09	\$77,509,989.86	\$77,509,989.86
Net Change	-\$16,088,547.16	\$21,847,067.47	-\$23,769,533.11	\$21,550,847.77	\$3,539,834.97

Change in Market Value From April 1, 2012 To March 31, 2013



Performance Report Card

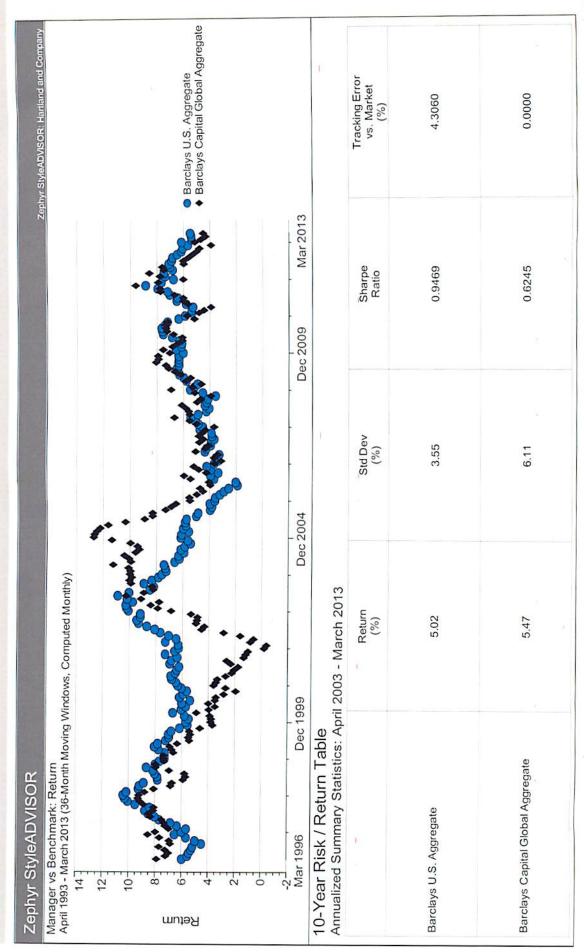
		Ending March 31, 2013 Calendar Yea										Inception		
	2013 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2012 (%)	2011 (%)	2010 (%)	Return (%)	Since	
Total University Assets	1.8	1.8	3.6	3.1	3.8	3.8	4.4	_	4.1	1.2	5.4	4.0	Mar-04	
YSU Policy Benchmark	1.3	1.3	2.5	2.3	2.5	2.5	3.6	3.4	2.8	1.1	3.3	3.3	Mar-04	
Total Operating & Short Term	0.0	0.0	0.0	0.1	-	-	-	_	0.0	0.2		0.1	Jun-10	
YSU Total Operating & Short Term Benchmark	0.0	0.0	0.1	0.1	0.1	0.4	1.6	1.8	0.1	0.2	0.1	0.1	Jun-10	
JPMorgan 100% U.S. Tr Sec MM Inst	0.0	0.0	0.0	0.0	0.0	0.2	1.4	1.5	0.0	0.0	0.0	0.0	Sep-11	
BofA Merrill Lynch 91-Day Т-Bill	0.0	0.0	0.1	0.1	0.1	0.3	1.6	1.8	0.1	0.1	0.1	0.1	Sep-11	
JPMorgan Sweep Account		THE REAL			The state of					BETTER				
Vanguard Short-Term Federal Adm	0.1	0.1	1.3	2.2	2.3	3.0	4.2	3.4	1.5	2.9	3.4	1.5	Sep-10	
Barclays 1-5 Yr. Govt.	0.2	0.2	1.2	2.1	2.3	2.7	4.1	3.3	1.0	3.2	3.6	1.5	Sep-10	
Total Long Term/ Reserves Pool	2.9	2.9	5.5	4.8	-	-	-	_	6.4	1.9	-	5.6	Jun-10	
YSU Total Long Term/ Reserves Fund Benchmark	2.6	2.6	4.9	4.4	4.7	4.2	5.0	4.4	5.5	1.9	5.7	4.7	Jun-10	
Total Domestic Equity	11.5	11.5	14.2	10.0		-	-	_	15.3	0.8	-	19.1	Jun-10	
Russell 3000	11.1	11.1	14.6	10.8	13.0	6.3	5.1	9.2	16.4	1.0	16.9	19.3	Jun-10	
TRP Insti US Structured Rsch	10.4	10.4	12.9	10.9	12.0	6.0	-	-	16.2	1.4	13.6	18.6	Jun-10	
S&P 500	10.6	10.6	14.0	11.2	12.7	5.8	5.0	8.5	16.0	2.1	15.1	19.0	Jun-10	
Vanguard 500 Index Signal	10.6	10.6	13.9	11.2	12.6	5.8	5.0	8.5	16.0	2.1	15.0	19.0	Jun-10	
S&P 500	10.6	10.6	14.0	11.2	12.7	5.8	5.0	8.5	16.0	2.1	15.1	19.0	Jun-10	
Vanguard Mid Cap Index Signal	12.9	12.9	15.4	8.9	14.1	8.1	5.8	11.9	16.0	-2.0	25.6	16.3	Sep-10	
Vanguard Mid Cap Index Benchmark	12.9	12.9	15.5	9.0	14.1	8.1	5.8	12.2	16.0	-1.9	25.7	16.3	Sep-10	
Loomis Sayles Sm Growth Instl	13.9	13.9	12.6	7.5	17.1	9.9	7.3	13.4	10.3	3.2	31.4	18.6	Sep-10	
Russell 2000 Growth	13.2	13.2	14.5	7.4	14.7	9.0	5.2	11.6	14.6	-2.9	29.1	16.8	and the same of the same of	
Munder Veracity Sm-Cap Value Y	13.5	13.5	18.4	8.5	13.5	11.0	5.7	_	14.0	-2.6	29.7	16.9	Sep-10	
Russell 2000 Value	11.6	11.6	18.1	8.1	12.1	7.3	3.9	11.3	18.1	-5.5	24.5	15.6		
Total International Equity	3.9	3.9	11.1	-0.7					20.1	-18.9	-	3.3		
MSCI EAFE Gross	5.2	5.2	11.8	2.9	5.5	-0.4	2.1	10.2	17.9	-11.7	8.2	6.4	SELECTION SECURIOR	

Performance Report Card

	Ending March 31, 2013									lar Year	Inception		
	2013 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2012 (%)	2011 (%)	2010 (%)	Return (%)	Since
William Blair Int'l Gr I	4.2	4.2	13.0	5.2	8.8	0.2	2.8	11.3	24.0	-14.2	20.5	19.8	Jun-12
MSCI EAFE Gross	5.2	5.2	11.8	2.9	5.5	-0.4	2.1	10.2	17.9	-11.7	8.2	20.0	Jun-12
Dodge & Cox Internat'l Stock	3.6	3.6	11.3	1.4	4.9	1.1	3.0	13.4	21.0	-16.0	13.7	-5.3	Sep-10
MSCI EAFE Gross	5.2	5.2	11.8	2.9	5.5	-0.4	2.1	10.2	17.9	-11.7	8.2	6.4	
Total Fixed Income	0.2	0.2	2.6	3.4	-	-	-		3.2	3.8	-	3.2	Jun-10
YSU Fixed Income Benchmark	0.2	0.2	2.2	2.8	2.9	3.3	4.3	3.6	2.4	3.2	4.0	2.5	Jun-10
JPMorgan Core Bond Ultra	0.2	0.2	4.4	6.1	6.1	6.4	6.6	5.5	5.2	7.4	7.5	5.7	Apr-11
Barclays Aggregate	-0.1	-0.1	3.8	5.7	5.5	5.5	5.9	5.0	4.2	7.8	6.5	5.3	Apr-11
YSU Intermediate Term Bond	0.3	0.3	4.0	4.8	4.9	5.4	5.9	-	5.2	4.6	6.2	4.9	Mar-04
Barclays Int Govt/Credit	0.3	0.3	3.5	4.8	4.7	4.6	5.4	4.5	3.9	5.8	5.9	4.4	Mar-04
YSU Short Term Bond	0.2	0.2	1.3	1.6	1.9	2.8	3.8	_	1.8	1.5	3.1	3.3	Mar-04
BofA Merrill Lynch US Corp & Gov 1-3 Yrs	0.2	0.2	1.2	1.5	1.7	2.4	3.6	3.0	1.5	1.6	2.8	3.0	Mar-04
Vanguard Short-Term Bond Instl	0.2	0.2	1.8	-	-	-		-	2.1	-		1.9	Dec-11
Barclays 1-5 Yr. Govt/Credit	0.3	0.3	2.0	- 2.7	2.8	3.3	4.4	3.6	2.2	3.1	4.1	2.0	Dec-11
PIMCO Low Duration Instl	0.4	0.4	4.8	3.6	3.8	4.7	5.2	4.2	6.2	1.7	5.0	-	Mar-13
BofA Merrill Lynch US Treasuries 1-3 Yrs	0.1	0.1	0.6	1.0	1.2	1.7	3.2	2.7	0.4	1.5	2.3	-	Mar-13

- YSU Policy Benchmark = BofA Merrill Lynch 91-Day T-Bill 45% / Barclays 1-3 Yr. Govt. 27.5% / Barclays Int Govt/Credit 15% / Russell 3000 10% / MSCI EAFE Gross 2.5%
- YSU Total Operating & Short Term Benchmark = BofA Merrill Lynch 91-Day T-Bill 95% / Barclays 1-3 Yr. Govt. 5%
- YSU Total Long Term/ Reserves Fund Benchmark = Russell 3000 20% / MSCI EAFE Gross 5% / Barclays Int Govt/Credit 30% / Barclays 1-3 Yr. Govt. 45%
- Vanguard Mid Cap Index Benchmark = 100% CRSP US Mid Cap TR USD
- YSU Fixed Income Benchmark = BofA Merrill Lynch US Corp & Gov 1-3 Yrs 60% / Barclays Int Govt/Credit 40%

Domestic vs. Global Bonds



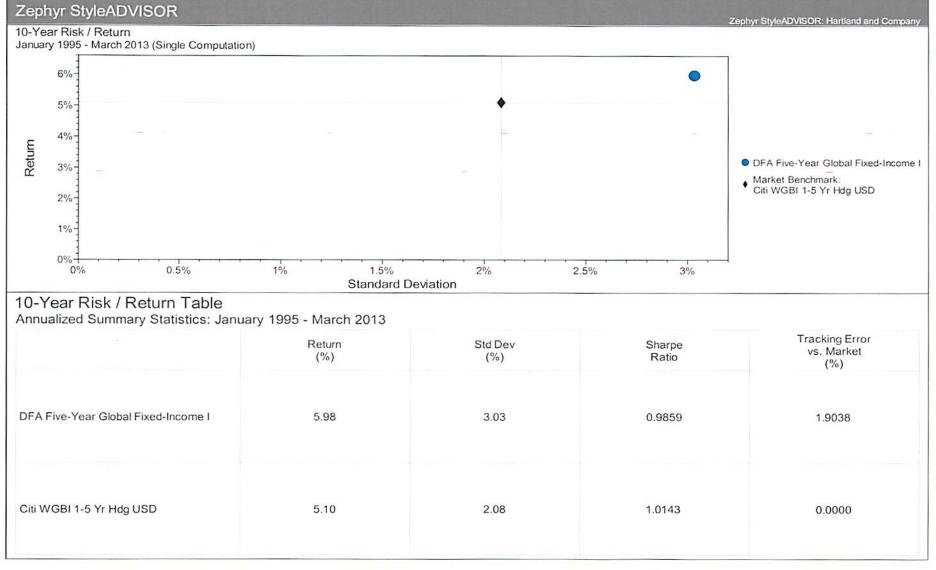
Domestic vs. Global Bonds



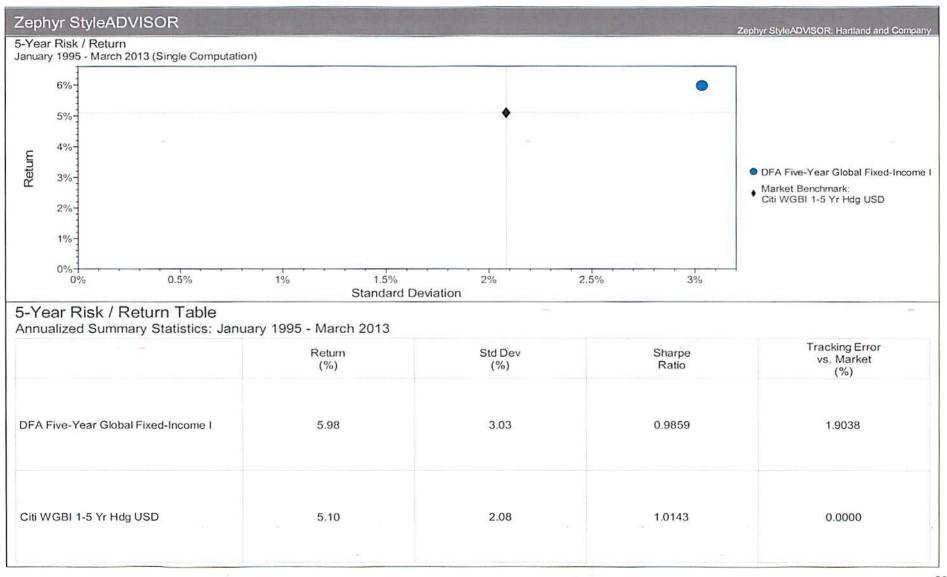
DFA Five-Year Global Fixed Income

10-Year Risk/Return

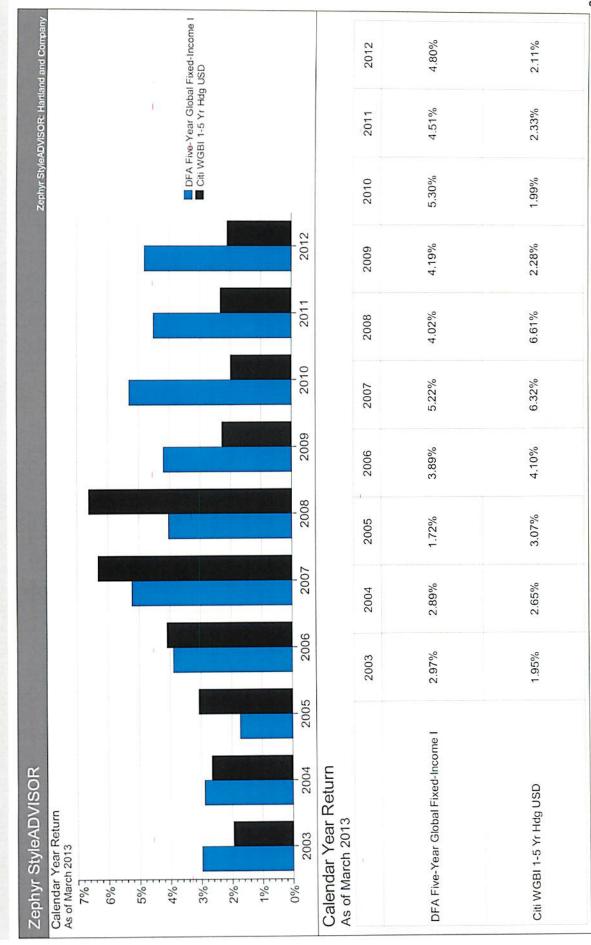




5-Year Risk/Return



Calendar Year Return



Disclosures



Information provided is general in nature, is provided for informational purposes only, and should not be construed as investment advice. Any views expressed are based upon the data available at the time the information was produced and are subject to change at any time based on market or other conditions. Hartland disclaims any liability for any direct or incidental loss incurred by applying any of the information in this presentation. All investment decisions must be evaluated as to whether it is consistent with their investment objectives, risk tolerance, and financial situation.

Past performance is no guarantee of future results. Investing involves risk, including risk of loss. Diversification does not ensure a profit or guarantee against loss.

All indices are unmanaged and performance of the indices includes reinvestment of dividends and interest income and, unless otherwise noted. An investment cannot be made in any index.

Although bonds generally present less short-term risk and volatility than stocks, bonds do contain interest rate risk (as interest rates rise, bond prices usually fall and vice versa) and the risk of default, or the risk that an issuer will be unable to make income or principal payments. Additionally, bonds and short-term investments entail greater inflation risk, or the risk that the return of an investment will not keep up with increases in the prices of goods and services, than stocks.

Lower-quality debt securities generally offer higher yields, but also involve greater risk of default or price changes due to potential changes in the credit quality of the issuer. Any fixed income security sold or redeemed prior to maturity may be subject to loss.

The municipal market is volatile and can be significantly affected by adverse tax, legislative, or political changes and by the financial condition of the issuers of municipal securities. Interest rate increases can cause the price of a debt security to decrease. A portion of the dividends you receive may be subject to federal, state, or local income tax or may be subject to the federal alternative minimum tax. Generally, tax-exempt municipal securities are not appropriate holdings for tax advantaged accounts such as IRAs and 401(k)s.

Stock markets, especially foreign markets, are volatile and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments. Foreign securities are subject to interest-rate, currency-exchange-rate, economic, and political risks, all of which are magnified in emerging markets. The securities of smaller, less well-known companies can be more volatile than those of larger companies. Growth stocks can perform differently from the market as a whole and other types of stocks and can be more volatile than other types of stocks. Value stocks can perform differently than other types of stocks and can continue to be undervalued by the market for long periods of time.

The commodities industry can be significantly affected by commodity prices, world events, import controls, worldwide competition, government regulations, and economic conditions.

Changes in real estate values or economic conditions can have a positive or negative effect on issuers in the real estate industry, which may affect your investment.

Index Definitions:

The S&P 500 Index is a broad-based market index, comprised of 500 large-cap companies, generally considered representative of the stock market as a whole. The S&P 400 Index is an unmanaged index considered representative of mid-sized U.S. companies. The S&P 600 Index is a market-value weighted index that consists of 600 small-cap U.S. stocks chosen for market size, liquidity and industry group representation.

The Russell 1000 Value Index, Russell 1000 Index and Russell 1000 Growth Index are indices that measure the performance of large-capitalization value stocks, large-capitalization stocks and large-capitalization growth stocks, respectively. The Russell 2000 Value Index, Russell 2000 Growth Index are indices that measure the performance of small-capitalization value stocks, small-capitalization growth stocks, respectively. The Russell Midcap Value Index, Russell Midcap Index and Russell Midcap Growth Index are indices that measure the performance of mid-capitalization value stocks, mid-capitalization stocks and mid-capitalization growth stocks, respectively. The Russell 2500 Value Index, Russell 2500 Index and Russell 2500 Growth Index measure the performance of small to mid-cap value stocks, small to mid-cap growth stocks, respectively, commonly referred to as "smid" cap. The Russell 3000 Value Index, Russell 3000 Index and Russell 3000 Growth Index measure the performance of the 3,000 largest U.S. value stocks, 3,000 largest U.S. growth stocks, respectively, based on total market capitalization.

The Wilshire 5000 Index represents the broadest index for the U.S. equity market, measuring the performance of all U.S. equity securities with readily available price data. The Wilshire Micro Cap Index is a market capitalization-weighted index comprised of all stocks in the Wilshire 5000 Index below the 2,501st rank.

The MSCI EAFE (Europe, Australasia, Far East) Index is designed to measure developed market equity performance, excluding the U.S. and Canada. The MSCI Emerging Markets (EM) Index is designed to measure global emerging market equity performance. The MSCI World Index is designed to measure the equity market performance of developed markets and excludes the U.S. The MSCI Europe Index is an unmanaged index considered representative of developed European countries. The MSCI Japan Index is an unmanaged index considered representative of stocks of Asia Pacific countries excluding Japan.

The U.S. 10-Year treasury Yield is generally considered to be a barometer for long-term interest rates.

Merrill Lynch 91-day T-bill index includes U.S. Treasury bills with a remaining maturity from 1 up to 3 months.



The Barclays Capital® (BC) U.S. Treasury Index is designed to cover public obligations of the U.S. Treasury with a remaining maturity of one year or more. The BC Aggregate Bond Index is an unmanaged, market value-weighted performance benchmark for investment-grade fixed-rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities with maturities of at least one year. The BC U.S. Credit Bond Index is designed to cover publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements; bonds must be SEC-registered to qualify. The BC U.S. Agency Index is designed to cover publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government. The BC CMBS Index is designed to mirror commercial mortgage-backed securities of investment-grade quality (Baa3/BBB-/BBB- or above) using Moody's, S&P, and Fitch respectively, with maturity of at least one year. The BC MBS Index covers agency mortgage-backed pass-through securities (both fixed-rate and hybrid ARMs) issued by Ginnie Mae (GNMA). Fannie Mae (FNMA), and Freddie Mac (FHLMC). The BC U.S. Municipal Bond Index covers the U.S. dollar-denominated, long-term tax-exempt bond market with four main sectors; state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds. The BC TIPS Index is an unmanaged market index made up of U.S. Treasury Inflation Linked Index securities. The BC U.S. Government Bond Index is a market value-weighted index of U.S. Government fixed-rate debt issues with maturities of one year or more. The BC ABS Index is a market value-weighted index that covers fixed-rate asset-backed securities with average lives greater than or equal to one year and that are part of a public deal; the index covers the following collateral types: credit cards, autos, home equity loans, stranded-cost utility (rate-reduction bonds), and manufactured housing. The BC Global Aggregate Index is composed of three sub-indices; the U.S. Aggregate Index, Pan-European Aggregate Index, and the Asian-Pacific Aggregate Index. In aggregate the index is created to be a broad-based measure of the performance of investment grade fixed rate debt on a global scale. The BC US Corporate Long Aa Index is an unmanaged index representing public obligations of U.S. corporate and specified foreign debentures and secured notes with a remaining maturity of 10 years or more. The BC U.S. Corporate High-Yield Index measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. The BC Intermediate Corporate Index includes dollar-denominated debt from U.S. and non-U.S. industrial, utility, and financial institutions issuers with a duration of 1-10 years. The BC U.S. Treasury Long Index is an unmanaged index representing public obligations of the U.S. Treasury with a remaining maturity of one year or more. The BC U.S. Government 10 Year Treasury Index measures the performance of U.S. Treasury securities that have a remaining maturity of less than 10 years. The BC BAA Corporate Index measures the performance of the taxable Baa rated fixedrate U.S. dollar-denominated corporate bond market. The BC Global Treasury ex US Index includes government bonds issued by investment-grade countries outside the United States, in local currencies, that have a remaining maturity of one year or more and are rated investment grade or higher. The BC Emerging Market Bond Index is an unmanaged index that total returns for externalcurrency-denominated debt instruments of the emerging markets. The BC U.S. Securitized Bond Index is a composite of asset-backed securities, collateralized mortgage-backed securities (ERISAeligible) and fixed rate mortgage-backed securities. The BC Quality Distribution AAA, B, and CC-D Indices measure the respective credit qualities of U.S. corporate and specified foreign debentures and secured notes. The BC Universal Index represents the union of the U.S. Aggregate Index, the U.S. High Yield Corporate Index, the 144A Index, the Eurodollar Index, the Emerging Markets Index, and the non-ERISA portion of the CMBS Index. The BC 1-3 Year Government Credit Index is an unmanaged index considered representative of performance of short-term U.S. corporate bonds and U.S. government bonds with maturities from one to three years. The BC Long-term Government Index is an unmanaged index reflecting performance of the long-term government bond market. The BC Intermediate Aggregate Index measures the performance of intermediate-term investment grade bonds. The BC Intermediate 1-3 Year Government/Credit Index measures the performance of U.S. Dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one year and less than ten years.

The Bank of America ML U.S. High Yield Index tracks the performance of below investment grade US Dollar Denominated corporate bonds publicly issued in the US market. Qualifying bonds have at least one year remaining term to maturity, are fixed coupon schedule and minimum outstanding of \$100 million.

Signal Identification Model (SIM) - The balance between fixed income and equity securities is guided by a proprietary, quantitative modeling technique we call "SIM". SIM is a four factor model that measures short-term under or over-valuation of equity markets. When SIM is negative, for example, the Investment Review Committee (IRC) may recommend that Consultants reduce equity ratios within prescribed ranges in client portfolios; when positive, that Consultants increase equity ratios within prescribed ranges. Other judgments, such as short-term, relative weights between different asset classes often come from fundamental assessments of IRC members. Unemployment - Total labor force seasonally adjusted (U.S. Bureau of Labor Statistics'); ISM - An index based on surveys of more than 300 manufacturing firms by the Institute of Supply Management; Spread - indicates the difference in yield between Moody's AAA corporate bonds and Moody's BAA corporate bonds; S&P Earnings Yield - earnings per share for the most recent 12-month period divided by the current market price per share of the stocks in the S&P 500.

Hartland Research Portfolio (HPR) - Our Optimal Long-Term Strategic Asset Allocation, called the Hartland Research Portfolio, sets forth our best thinking on the mix of different asset classes; it is the benchmark we use in considering appropriate asset allocation for all client portfolios. The Hartland Research Portfolio is developed with two major inputs. One is quantitative, based on the Black-Litterman model, and one is qualitative, based on the input of the professionals on our Investment Research Committee (IRC). The Hartland & Co. research team begins with the Black-Litterman model, a mathematical model that seeks asset allocations that are optimal; those that produce the best results with the lowest level of volatility or risk. Black-Litterman is more dynamic than other models and builds on traditional mean-variance techniques to create stable and consistent return forecasts for a set of asset classes. The IRC assess the quantitative output from Black-Litterman and integrate it with their own fundamental or qualitative judgments. The result is the Hartland Research Portfolio, which combines quantitative and qualitative inputs and our capital market projections.

The HFRI Funds of Funds Index (HFRI FOF) is an equal weighted index designed to measure the performance of hedge fund of fund managers. The more than 800 multi-strategy constituents are required to have at least \$50 million in assets under management and a trading track record spanning at least 12 months. The index includes both on and offshore funds and all returns are reported in USD

The NCREIF Property Index (NPI) represents quarterly time series composite total rate of return measure of a very large pool of individual commercial real estate properties acquired in the private market. The index represents apartments, hotels, industrial properties, office buildings and retail properties which are at least 60% occupied and owned or controlled, at least in part by tax-exempt institutional investors or its designated agent. In addition these properties that are included must be investment grade, non-agricultural and income producing and all development projects are excluded. Constituents included in the NPI be valued at least quarterly, either internally or externally, using standard commercial real estate appraisal methodology. Each property must be independently appraised a minimum of once every three years.

The FTSE NAREIT All REITs Index is a market capitalization-weighted index that is designed to measure the performance of all tax-qualified Real Estate Investment Trusts (REITs) that are listed on the New York Stock Exchange, the American Stock Exchange, or the NASDAQ National Market List.

The Dow Jones U.S. Select Real Estate Securities Index is a float-adjusted market capitalization-weighted index of publicly traded real estate securities such as real estate investment trusts (REITs) and real estate operating companies (REOCs).

The Cambridge PE Index is a representation of returns for over 70% of the total dollars raised by U.S. leveraged buyout, subordinated debt and special situation managers from 1986 to December 2007. Returns are calculated based on the pooled time weighted return and are net of all fees. These pooled means represent the end to end rate of return calculated on the aggregate of all cash flows and market values reported by the general partners of the underlying constituents in the quarterly and annual reports.

The University of Michigan Consumer Sentiment Index is a consumer confidence index published monthly by the University of Michigan and Thomson Reuters. The index is normalized to have a value of the consumer confidence index is a consumer confidence index published monthly by the University of Michigan and Thomson Reuters. The index is normalized to have a value of the consumer confidence index is a consumer confidence index published monthly by the University of Michigan and Thomson Reuters.

The University of Michigan Consumer Sentiment Index is a consumer confidence index published monthly by the University of Michigan and Thomson Reuters. The index is normalized to have a value of 100 in December 1964.

VIX - The CBOE Volatility Index (VIX) is based on the prices of eight S&P 500 index put and call options.

Gold - represented by the dollar spot price of one troy ounce

WTI Crude - West Texas Intermediate is a grade of crude oil used as a benchmark in oil pricing.

The Affordability Index measures of a population's ability to afford to purchase a particular item, such as a house, indexed to the population's income

The Homeownership % is computed by dividing the number of owner-occupied housing units by the number of occupied housing units or households.

HFRI Emerging Markets: Asia ex-Japan, Global Index, Latin America Index, Russia/Eastern Europe Index: The constituents of the HFRI Emerging Markets Indices are selected according to their Regional Investment Focus only. There is no Investment Strategy criteria for inclusion in these indices. Funds classified as Emerging Markets have a regional investment focus in one of the following geographic areas: Asia ex-Japan, Russia/Eastern Europe, Latin America, Africa or the Middle East, HFRI EH: Energy/Basic Materials strategies which employ investment processes designed to identify opportunities in securities in specific niche areas of the market in which the Manager maintains a level of expertise which exceeds that of a market generalist. HFRI EH: Equity Market Neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. HFRI EH: Quantitative Directional strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. HFRI EH: Short-Biased strategies employ analytical techniques in which the investment thesis is predicated on assessment of the valuation characteristics on the underlying companies with the goal of identifying overvalued companies. HFRI EH: Technology/Healthcare strategies employ investment processes designed to identify opportunities in securities in specific niche areas of the market in which the Manager maintain a level of expertise which exceeds that of a market generalist in identifying opportunities in companies engaged in all development, production and application of technology, biotechnology and as related to production of pharmaceuticals and healthcare industry. HFRI ED: Distressed Restructuring strategies which employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. HFRI ED: Merger Arbitrage strategies which employ an investment process primarily focused on opportunities in equity related instruments of companies which are currently engaged in a corporate transaction. HFRI ED: Private Issue/Regulation D strategies which employ an investment process primarily focused on opportunities in equity related instruments of companies which are primarily private and illiquid in nature. HFRI Macro: Systematic Diversified strategies have investment processes typically as function of mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. HFRI RV: Fixed Income - Asset Backed includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed income instrument backed physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. HFRI RY: Fixed Income - Convertible Arbitrage includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument. HFRI RV: Fixed Income - Corporate includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed income instrument. HFRI RV: Multi-Strategies employ an investment thesis is predicated on realization of a spread between related yield instruments in which one or multiple components of the spread contains a fixed income, derivative, equity, real estate, MLP or combination of these or other instruments. HFRI RV: Yield Alternatives Index strategies employ an investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread contains a derivative, equity, real estate, MLP or combination of these or other instruments. Strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager.

The Consumer Price Index (CPI) is an inflationary indicator that measures the change in the cost of a fixed basket of products and services, including housing, electricity, food, and transportation. The CPI is published monthly. Unless otherwise noted, the CPI figure is as of the date this report is created.

The Credit Suisse Leveraged Loan Index is a market value-weighted index designed to represent the investable universe of the U.S. dollar-denominated leveraged loan market.

The Dow Jones-UBS Commodity Index measures the performance of the commodities market. It consists of exchange-traded futures contracts on physical commodities that are weighted to account for the economic significance and market liquidity of each commodity.