

AGENDA ITEM: C.1.c.

AGENDA TOPIC: Hartland and Co. September 12, 2013 Non-Endowment Assets Update

CONTACT(S): Mike Shebak and Sarah Parker from Hartland and Co.

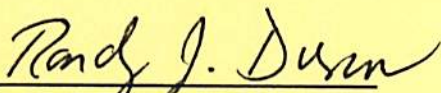
BACKGROUND: Investment review of the YSU Non-Endowment assets.

SUMMARY AND ANALYSIS:

- Review portfolio accomplishments and future investment initiatives.
- Provide a second quarter 2013 market update.
- Review asset allocation and performance as of 6/30/2013.
 - Long-Term Pool: \$47.6 million
 - Asset Allocation: 30% U.S. and international equities, 70% short-term and intermediate-term fixed income
 - 2Q13 Performance: +0.1%; outpaced the policy benchmark (-0.1%)
 - YTD Performance: +3.0%; outpaced the policy benchmark (+1.3%)
 - Short-Term Pool: \$16.1 million
 - Asset allocation: 94% cash, 6% short-term fixed income
 - 2Q13 and YTD Performance: 0.0%; in-line with the policy benchmark (0.0%)
- Recommend a portfolio rebalance to reduce the U.S. equity overweight.
 - Current U.S. equity weighting = 25% vs. 20% target
 - U.S. equity weighting after recommendation = 23% vs. 20% target

RESOLUTION: N/A – DISCUSSION ITEM ONLY

REVIEWED AS TO FORM AND CONTENT:


Randy J. Dunn, President



September 12, 2013

Youngstown State University Non-Endowment Assets



HARTLAND & Co.
Investment Consultants

INDEPENDENCE || EXPERTISE || RESULTS



Consulting Team:

Michael P. Shebak

Sarah E. Parker





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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
 - PNC Update
- Q4
 - Annual Fee Review
 - Investment Policy Review



Market Update





Asset Class Performance



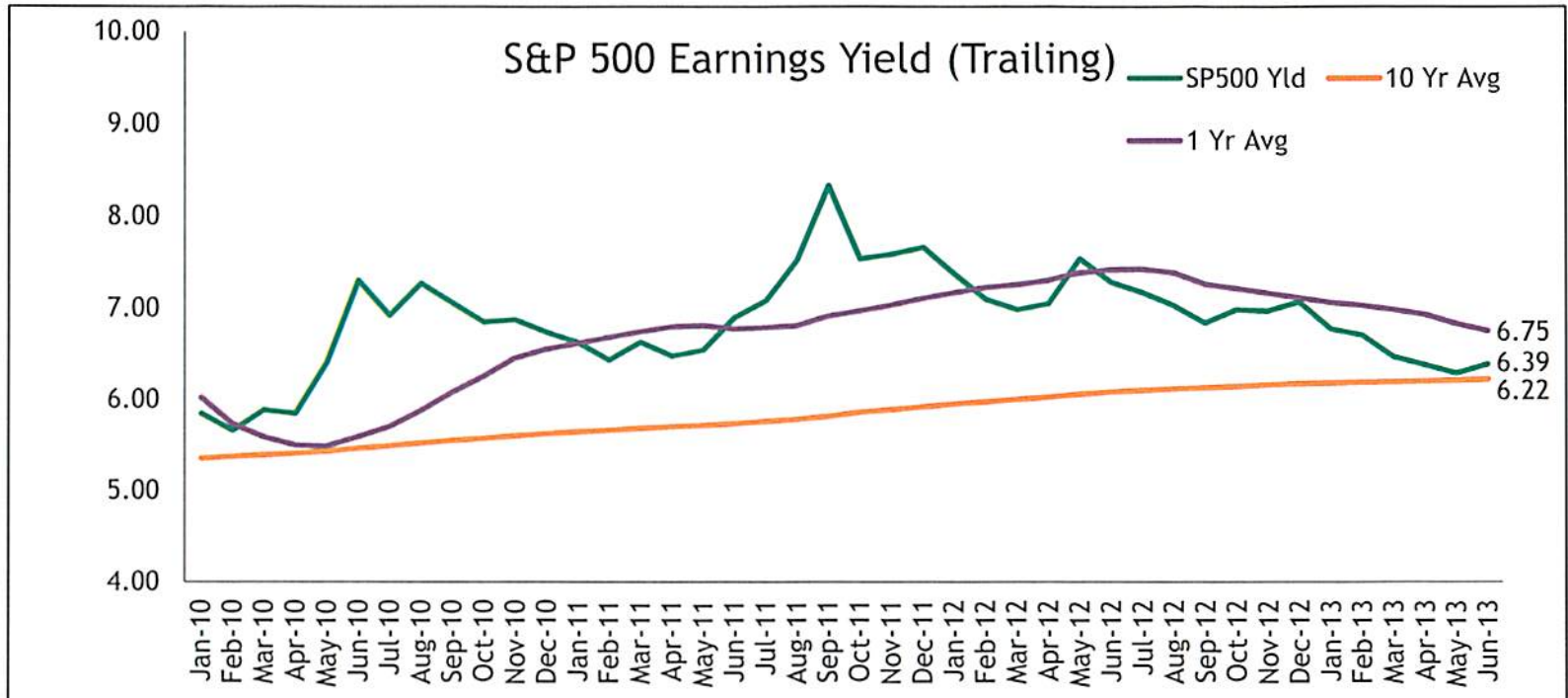
Best

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Q1 2013	Q2 2013	YTD
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%	Large Cap 2.9%	Sm/Mid 15.4%
Sm/Mid 45.5%	Em Mkt 26.0%	Dev Intl 14.0%	Em Mkt 32.6%	Dev Intl 11.6%	US Bonds 5.2%	Hi Yld 57.5%	Sm/Mid 26.7%	REITs 7.3%	Em Mkt 18.6%	Large Cap 10.6%	Sm/Mid 2.3%	Large Cap 13.8%
Dev Intl 39.2%	Dev Intl 20.7%	REITs 8.3%	Dev Intl 26.9%	Glb Bond 10.9%	Cash 2.1%	Sm/Mid 34.4%	Em Mkt 19.2%	Glb Bond 5.2%	Dev Intl 17.9%	REITs 9.1%	Hdg Fnds 0.3%	REITs 5.4%
REITs 38.5%	Sm/Mid 18.3%	Sm/Mid 8.1%	Sm/Mid 16.2%	Hdg Fnds 9.7%	Hdg Fnds -20.8%	Dev Intl 32.5%	Hi Yld 15.2%	Hi Yld 4.4%	Sm/Mid 17.9%	Dev Intl 5.2%	Cash 0.0%	Dev Intl 4.5%
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 3.3%	Dev Intl -0.7%	Hdg Fnds 3.5%
Hi Yld 28.2%	Large Cap 10.9%	Large Cap 4.9%	Hi Yld 11.8%	Large Cap 5.5%	Sm/Mid -36.8%	Large Cap 26.5%	Hdg Fnds 10.6%	Cash 0.1%	Hi Yld 15.6%	Hi Yld 2.9%	Hi Yld -1.4%	Hi Yld 1.5%
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%	US Bonds -2.3%	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%	REITs -3.4%	US Bonds -2.4%
US Bonds 4.1%	US Bonds 4.3%	US Bonds 2.4%	Cash 4.9%	Sm/Mid 1.4%	Dev Intl -43.1%	Glb Bond 4.4%	Glb Bond 6.1%	Dev Intl -11.7%	Glb Bond 1.8%	Em Mkt -1.6%	Glb Bond -3.6%	Glb Bond -7.4%
Cash 1.2%	Cash 1.3%	Glb Bond -8.8%	US Bonds 4.3%	REITs -17.8%	Em Mkt -53.2%	Cash 0.2%	Cash 0.1%	Em Mkt -18.2%	Cash 0.1%	Glb Bond -3.9%	Em Mkt -8.0%	Em Mkt -9.4%

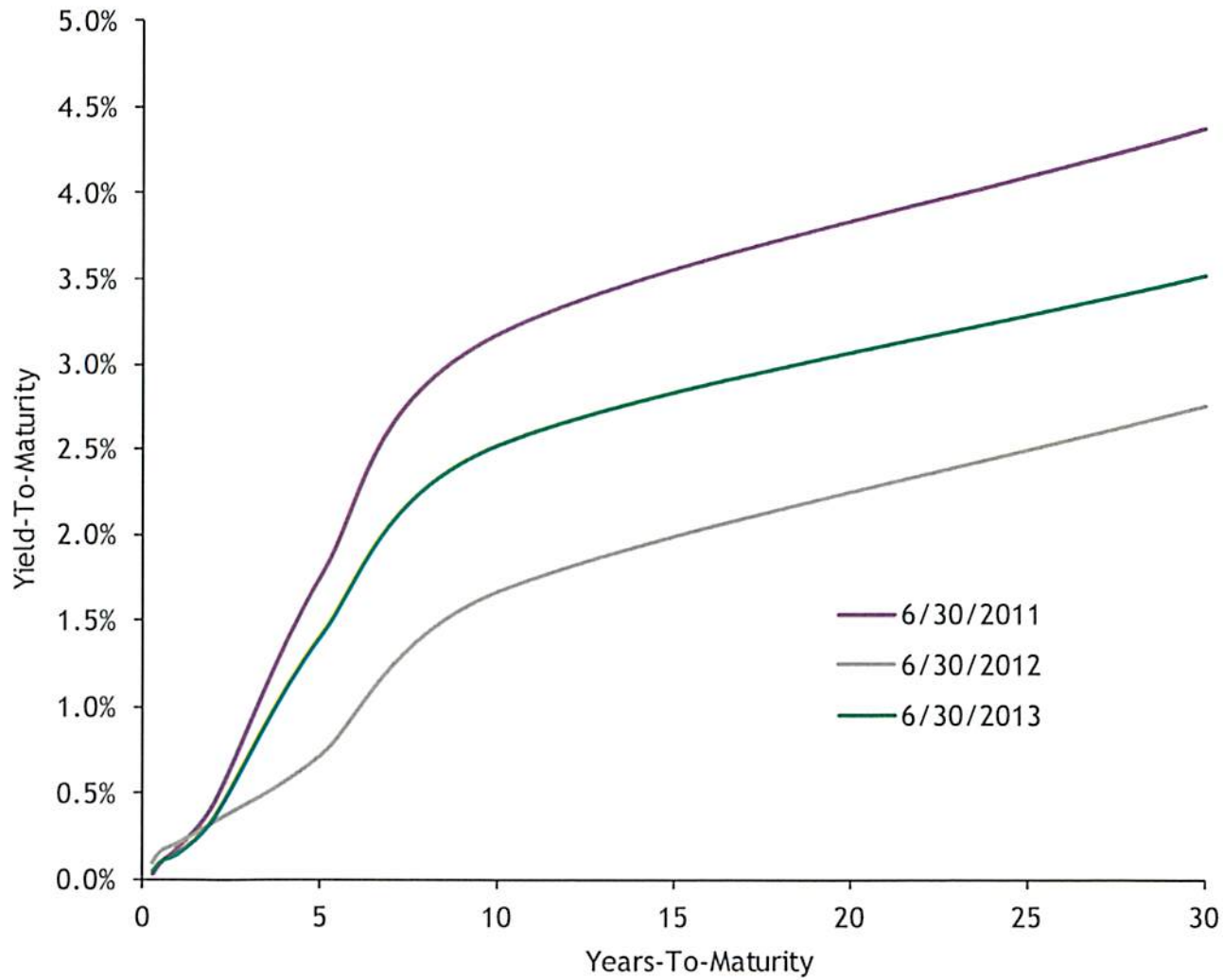
Worst

- U.S. outpaced International in 2Q13
- A strong USD and negative emerging market returns were headwinds to International markets
- Japanese equities continue to hold up developed international markets
- GDP grew 1.8 in 1Q13 but is expected to accelerate in 2nd half
- American consumers are gaining momentum and corporate balance sheets remain strong
- Equity valuations are reasonable
- Despite a back-up in interest rates, fixed income remains expensive; regardless, it plays a valuable role in client portfolios

Past performance is no guarantee of future results. Asset classes represented by: Large Cap - S&P 500 Index; Sm/Mid - Russell 2500 Index; Dev Intl - MSCI EAFE Index; Em Mkt - MSCI Emerging Markets Index; Hi Yld - Bank of America Merrill Lynch U.S. High Yield Master II; US Bonds - Barclays Capital U.S. Aggregate; Glb Bond - Barclays Capital Global Treasury ex US; REITs - NAREIT ALL REITs; Hdg Fnds - HFRI FOF: Diversified Index; Cash - Merrill Lynch 91-day Tbill. Data as of 6/30/2013 Source: Zephyr Associates.



	Price/ Future Earnings			Price/ Book Value		Dividend Yield	
	Current	3/31/2013	15 Yr. Avg	Current	15 Yr. Avg	Current	15 Yr. Avg
US Large Cap	14.7 —	14.3	17.1	2.4	2.9	2.1%	1.7%
US Small/Mid	21.8 ↑	20.6	19.3	1.8	2.0	1.3%	1.4%
EAFE	14.0 —	13.8	16.8	1.5	2.0	3.2%	2.5%
Emerging Mkts	11.0 ↓	11.6	11.8	1.5	1.8	3.0%	2.4%

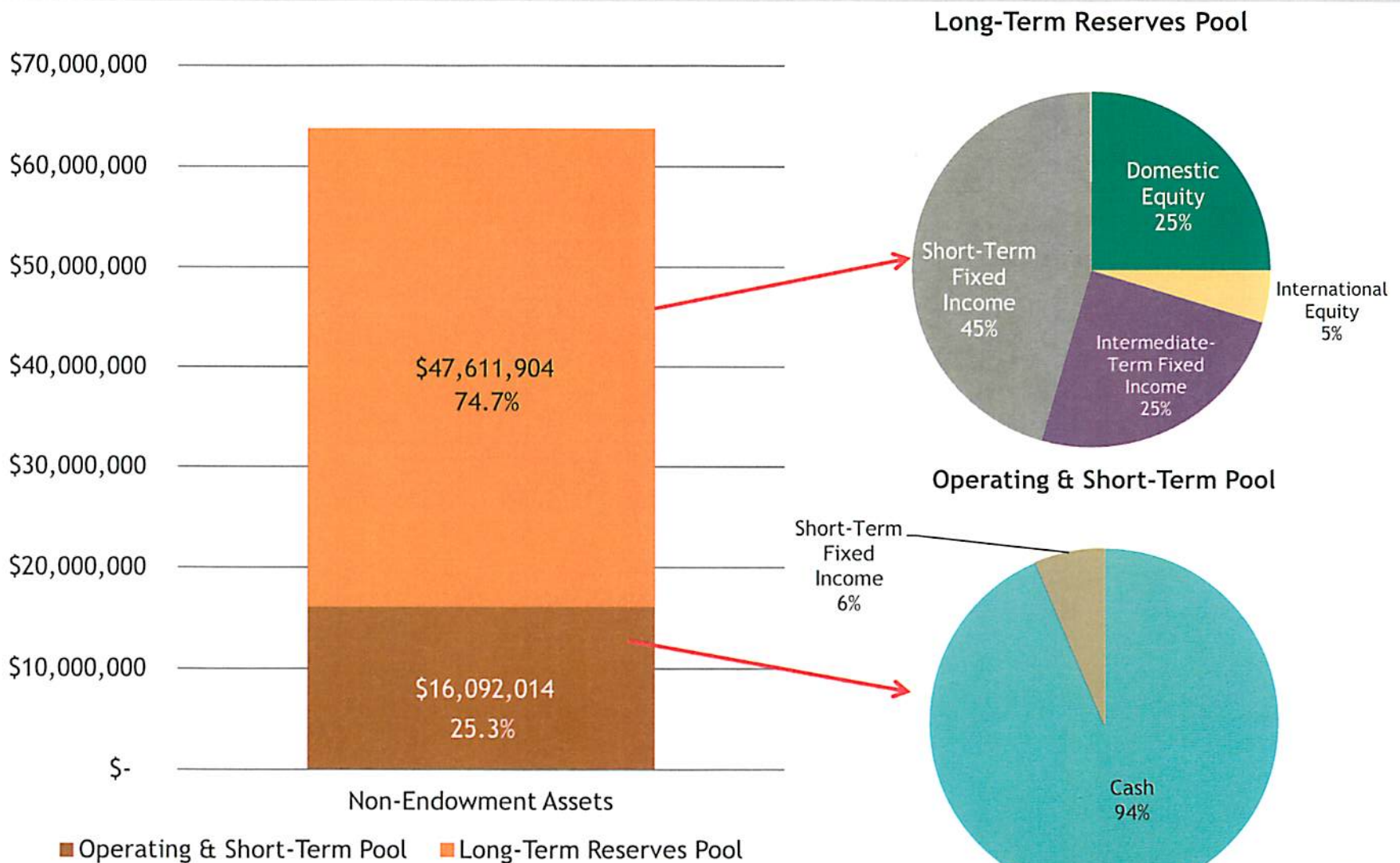




Second Quarter 2013
Performance Update



Quarterly Market Values and Asset Allocation (as of 6/30/2013)





Performance of Long-Term Pool and Short-Term Pool



	Ending June 30, 2013								Calendar Years			Inception	
	2013 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2012 (%)	2011 (%)	2010 (%)	Return (%)	Since
Total University Assets	0.0	1.8	3.9	2.7	3.4	3.9	4.4	--	4.1	1.2	5.4	3.9	Mar-04
<i>YSU Policy Benchmark</i>	0.0	1.3	2.7	2.0	2.2	2.7	3.5	3.2	2.8	1.1	3.3	3.2	Mar-04
Total Operating & Short Term	0.0	0.0	0.0	0.1	0.1	--	--	--	0.0	0.2	--	0.1	Jun-10
<i>YSU Total Operating & Short Term Benchmark</i>	0.0	0.0	0.1	0.1	0.1	0.3	1.5	1.7	0.1	0.2	0.1	0.1	Jun-10
Total Long Term/ Reserves Pool	0.1	3.0	6.2	4.3	5.2	--	--	--	6.4	1.9	--	5.2	Jun-10
<i>YSU Total Long Term/ Reserves Fund Benchmark</i>	-0.1	2.5	5.2	3.8	4.3	4.5	4.9	4.1	5.5	1.9	5.7	4.3	Jun-10

Long-Term Pool: 1-Year Investment Earnings = \$2.8 million

Long-Term Pool: Since Inception Investment Earnings = \$7.9 million

- 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%



Performance Report Card



Short-Term Pool

	% of Pool	Ending June 30, 2013								Calendar Years			Inception	
		2013 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2012 (%)	2011 (%)	2010 (%)	Return (%)	Since
JPMorgan 100% U.S. Tr Sec MM Inst	93.6%	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.5	0.0	0.0	0.0	0.0	Sep-11
BofA Merrill Lynch 91-Day T-Bill		0.0	0.0	0.1	0.1	0.1	0.3	1.4	1.7	0.1	0.1	0.1	0.1	Sep-11
JPMorgan Sweep Account	6.4%													
Vanguard Short-Term Federal Adm		-0.9	-0.8	-0.1	1.1	1.4	3.0	4.0	3.2	1.5	2.9	3.4	1.1	Sep-10
Barclays 1-5 Yr. Govt.		-0.6	-0.5	0.0	1.1	1.4	2.9	3.9	3.1	1.0	3.2	3.6	1.1	Sep-10

	Yield	Average Maturity	Average Duration	Average Credit Quality
Short-Term Pool	0.04%	0.4 yrs	0.4 yrs	AAA
Benchmark	0.02%	0.4 yrs	0.4 yrs	AAA

Long-Term Pool

	% of Pool	2013 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2012 (%)	2011 (%)	2010 (%)	Return (%)	Since
Total Domestic Equity	25.0%	3.3	15.2	22.6	11.8	18.7	--	--	--	15.3	0.8	--	18.7	Jun-10
Russell 3000		2.7	14.1	21.5	12.3	18.6	7.2	5.8	7.8	16.4	1.0	16.9	18.6	Jun-10
TRP Instl US Structured Rsch	7.8%	2.8	13.5	20.2	12.5	18.0	6.9	--	--	16.2	1.4	13.6	18.0	Jun-10
S&P 500		2.9	13.8	20.6	12.8	18.5	7.0	5.7	7.3	16.0	2.1	15.1	18.5	Jun-10
Vanguard 500 Index Signal	7.8%	2.9	13.8	20.5	12.7	18.4	7.0	5.7	7.2	16.0	2.1	15.0	18.4	Jun-10
S&P 500		2.9	13.8	20.6	12.8	18.5	7.0	5.7	7.3	16.0	2.1	15.1	18.5	Jun-10
Vanguard Mid Cap Index Signal	4.6%	2.4	15.5	25.0	10.2	19.0	7.9	6.6	10.5	16.0	-2.0	25.6	15.7	Sep-10
Vanguard Mid Cap Index Benchmark		2.4	15.6	25.1	10.3	19.1	8.0	6.6	10.5	16.0	-1.9	25.7	15.7	Sep-10
Loomis Sayles Sm Growth Instl	2.4%	7.9	22.9	27.3	10.5	23.1	10.8	9.8	11.7	10.3	3.2	31.4	20.0	Sep-10
Russell 2000 Growth		3.7	17.4	23.7	9.7	20.0	8.9	6.9	9.6	14.6	-2.9	29.1	16.7	Sep-10
Munder Veracity Sm-Cap Value Y	2.3%	4.1	18.2	28.9	11.9	19.2	13.0	6.6	--	14.0	-2.6	29.7	16.9	Sep-10
Russell 2000 Value		2.5	14.4	24.8	10.9	17.3	8.6	4.6	9.3	18.1	-5.5	24.5	15.1	Sep-10
Total International Equity	4.7%	0.2	4.1	21.0	-0.6	--	--	--	--	20.1	-18.9	--	3.1	Sep-10
MSCI EAFE Gross		-0.7	4.5	19.1	1.6	10.6	-0.2	1.9	8.2	17.9	-11.7	8.2	5.5	Sep-10



Performance Report Card



Long-Term Pool	% of Pool	Ending June 30, 2013								Calendar Years			Inception	
		2013 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2012 (%)	2011 (%)	2010 (%)	Return (%)	Since
William Blair Int'l Gr I	1.9%	-2.0	2.1	17.4	3.1	10.9	0.2	3.0	9.3	24.0	-14.2	20.5	17.4	Jun-12
MSCI EAFE Gross		-0.7	4.5	19.1	1.6	10.6	-0.2	1.9	8.2	17.9	-11.7	8.2	19.1	Jun-12
Dodge & Cox Internat'l Stock	2.9%	1.7	5.4	23.5	2.0	11.0	1.6	3.0	11.3	21.0	-16.0	13.7	5.5	Sep-10
MSCI EAFE Gross		-0.7	4.5	19.1	1.6	10.6	-0.2	1.9	8.2	17.9	-11.7	8.2	5.5	Sep-10
Total Fixed Income	70.2%	-1.0	-0.8	0.6	2.1	2.6	--	--	--	3.2	3.8	--	2.6	Jun-10
YSU Fixed Income Benchmark		-0.8	-0.5	0.6	1.7	2.0	3.3	4.1	3.4	2.4	3.2	4.0	2.0	Jun-10
JPMorgan Core Bond Ultra	12.5%	-2.1	-1.9	0.2	3.9	4.2	6.1	6.3	5.1	5.2	7.4	7.5	4.0	Apr-11
Barclays Aggregate		-2.3	-2.4	-0.7	3.3	3.5	5.2	5.6	4.5	4.2	7.8	6.5	3.5	Apr-11
YSU Intermediate Term Bond	12.2%	-1.6	-1.2	1.0	3.2	3.3	5.3	5.7	--	5.2	4.6	6.2	4.6	Mar-04
Barclays Int Govt/Credit		-1.7	-1.4	0.3	2.8	3.1	4.6	5.1	4.0	3.9	5.8	5.9	4.1	Mar-04
PIMCO Low Duration Instl	6.2%	-1.8	-1.4	1.3	2.0	2.8	4.3	4.8	3.8	6.2	1.7	5.0	-1.6	Mar-13
BofA Merrill Lynch US Treasuries 1-3 Yrs		-0.1	0.0	0.3	0.6	0.8	1.9	3.1	2.6	0.4	1.5	2.3	-0.1	Mar-13
YSU Short Term Bond	31.2%	-0.2	0.0	0.8	1.2	1.4	2.8	3.7	--	1.8	1.5	3.1	3.2	Mar-04
BofA Merrill Lynch US Corp & Gov 1-3 Yrs		-0.1	0.1	0.9	1.0	1.3	2.5	3.5	2.9	1.5	1.6	2.8	2.9	Mar-04
Vanguard Short-Term Bond Instl	4.9%	-0.7	-0.5	0.5	--	--	--	--	--	2.1	--	--	1.0	Dec-11
Barclays 1-5 Yr. Govt/Credit		-0.7	-0.5	0.6	1.5	2.0	3.4	4.2	3.4	2.2	3.1	4.1	1.2	Dec-11
DFA Five-Yr Global Fxd-Inc I	3.2%	-1.6	-1.2	0.9	2.6	3.1	4.2	4.2	3.4	4.8	4.5	5.3	--	Jun-13
Citi WGBI 1-5 Yr Hdg USD		-0.3	-0.1	1.1	1.9	1.5	2.8	3.5	3.1	2.1	2.3	2.0	--	Jun-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%

	Yield	Average Maturity	Average Duration	Average Credit Quality
Long-Term Pool	1.27%	3.4 yrs	3.0 yrs	AA
Fixed Income Benchmark	1.10%	4.3 yrs	3.4 yrs	AA



Rebalance Recommendation



Total Plan	Asset Class	Market Value as of June 30, 2013		Recommendations	Proposed Allocation		Pool Target	Pool Range	Total Range
		\$63,703,921			\$63,703,921				
Operating & Short Term Pool		\$16,092,015	25.3%		\$16,092,015	25.3%		100%	25 - 50%
Operating Assets		\$15,065,484	93.6%		\$15,065,484	93.6%	n/a	60-100%	
JPMorgan US Treasury Money Market	US Treasury Money Market	\$10,825,465	67.3%		\$10,825,465	67.3%			
PNC Sweep Account	Cash Equivalents	\$4,240,019	26.3%		\$4,240,019	26.3%			
Short Term Assets		\$1,026,531	6.4%		\$1,026,531	6.4%	n/a	0-40%	
Vanguard Short-Term Federal Adm	Intermediate Gov't	\$1,026,531	6.4%		\$1,026,531	6.4%			
Long-Term Reserves Pool		\$47,611,906	74.7%		\$47,611,906	74.7%		100%	50 - 75%
Domestic Equity		\$11,908,403	25.0%		\$10,808,403	22.7%	20%	0-25%	
T. Rowe Price U.S. Structured Research	Large Blend	\$3,708,654	7.8%	(\$275,000)	\$3,433,654	7.2%			
Vanguard 500 Index Signal	Large Blend	\$3,737,383	7.8%	(\$275,000)	\$3,462,383	7.3%			
Vanguard Mid Cap Index Signal	Mid-Cap Blend	\$2,203,140	4.6%	(\$250,000)	\$1,953,140	4.1%			
Loomis Sayles Small Cap Growth Instl	Small Value	\$1,166,357	2.4%	(\$150,000)	\$1,016,357	2.1%			
Veractiy Small Cap Value I	Small Growth	\$1,092,869	2.3%	(\$150,000)	\$942,869	2.0%			
International Equity		\$2,257,522	4.7%		\$2,257,522	4.7%	5%	0 - 10%	
William Blair International Growth I	Foreign Large Growth	\$897,846	1.9%		\$897,846	1.9%			
Dodge & Cox Intl Stock	Foreign Large Value	\$1,359,676	2.9%		\$1,359,676	2.9%			
Total Equity		\$14,165,925	29.8%		\$13,065,925	27.4%	25%	0-35%	
ST Fixed Income		\$20,160,893	42.3%		\$20,460,893	43.0%	45%	35-55%	
YSU Short Term Bond	Short-Term Bond	\$14,876,552	31.2%		\$14,876,552	31.2%			
Vanguard Short-Term Bond Index	Short-Term Bond	\$2,331,560	4.9%		\$2,331,560	4.9%			
PIMCO Low Duration Instl	Short-Term Bond	\$2,952,781	6.2%	\$300,000	\$3,252,781	6.8%			
Total Int. Fixed Income		\$13,285,088	27.9%		\$14,085,088	29.6%	30%	20-40%	
DFA Five-Year Global	Global Fixed Income	\$1,500,000	3.2%		\$1,500,000	3.2%			
JPMorgan Core Bond	Intermediate-Term Bond	\$5,964,483	12.5%	\$800,000	\$6,764,483	14.2%			
YSU Intermediate Term Bond	Intermediate-Term Bond	\$5,820,605	12.2%		\$5,820,605	12.2%			

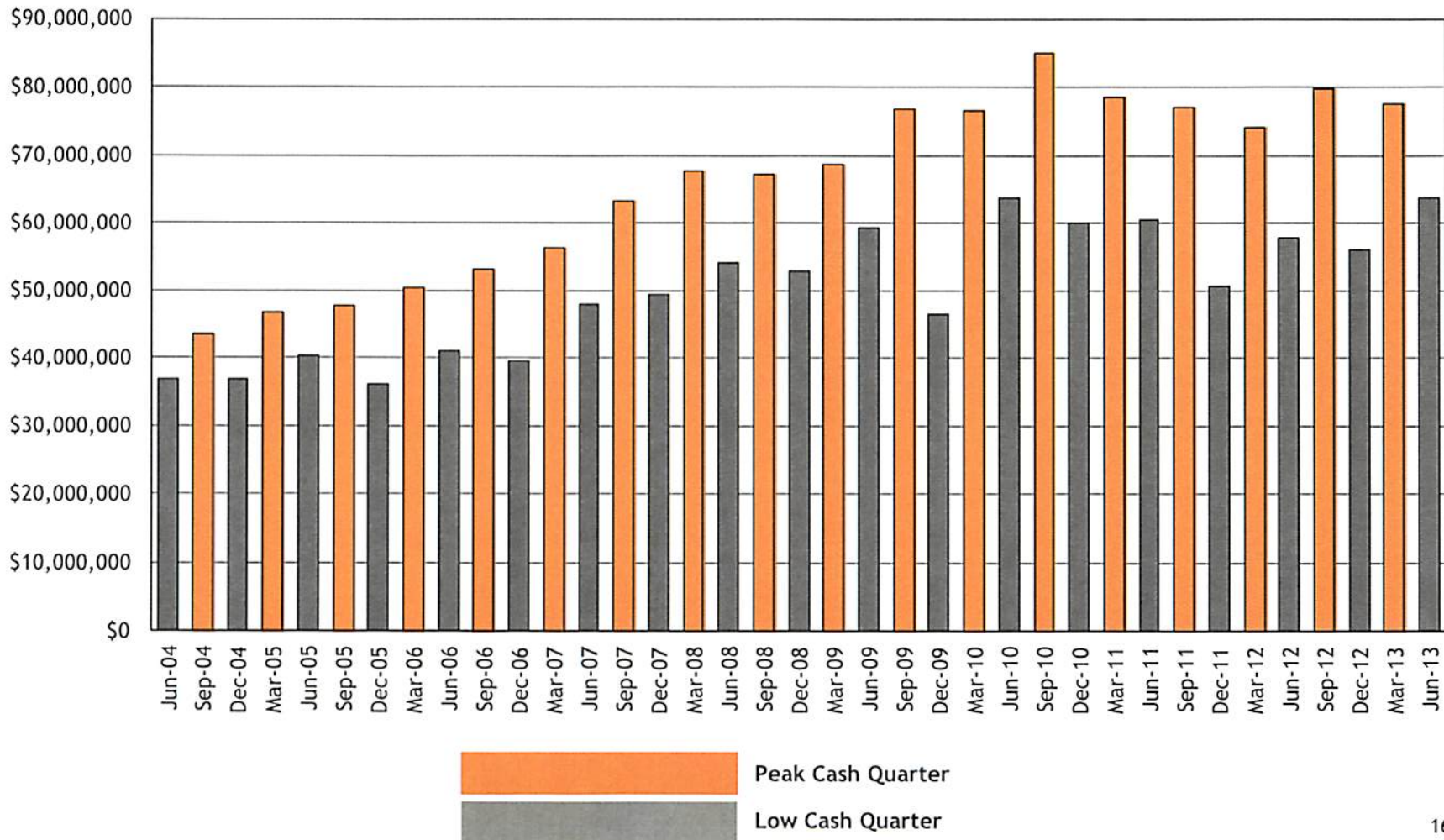


Appendix





Total Non-Endowment Assets Market Value (June 2004-June 2013)





2Q International Equity Performance



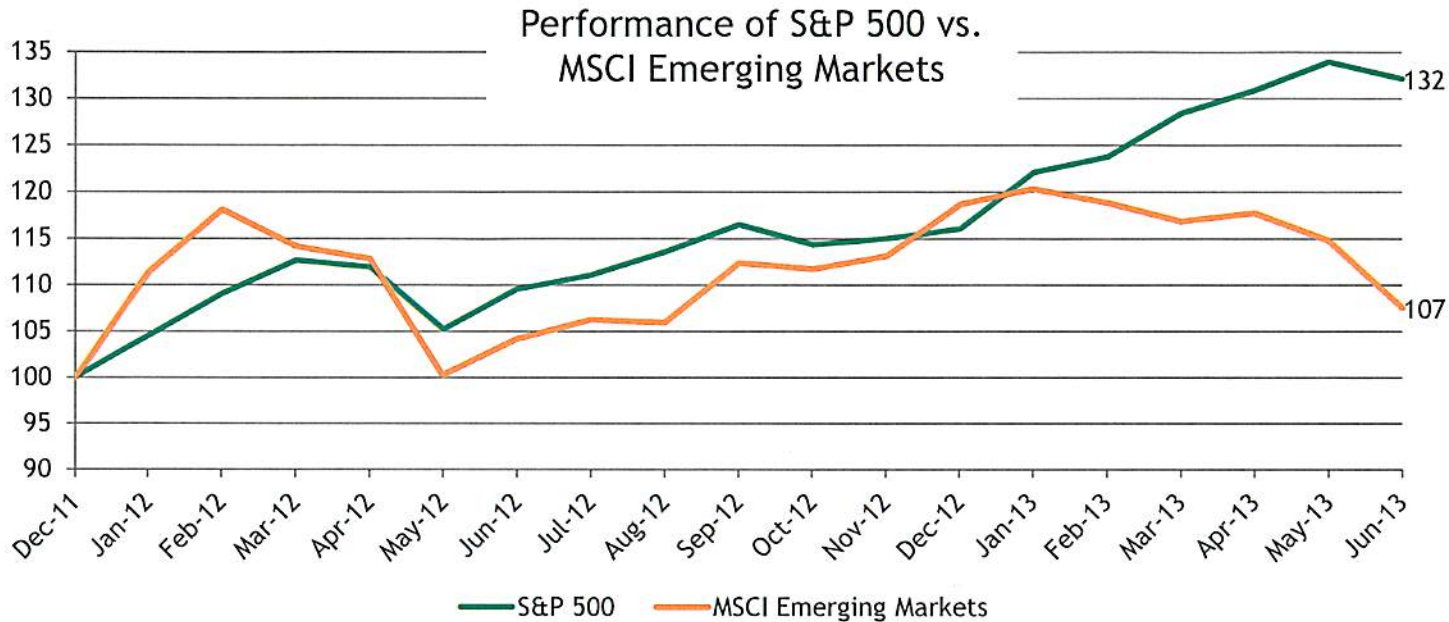
Developed Markets

	USD Return	Local Return	Weighting
AUSTRALIA	-13.9%	-1.9%	8.0%
AUSTRIA	-2.7%	-3.9%	0.3%
BELGIUM	-3.7%	-4.9%	1.1%
DENMARK	-3.8%	-4.9%	1.1%
FINLAND	1.4%	0.2%	0.8%
FRANCE	3.5%	2.2%	9.4%
GERMANY	3.4%	2.2%	8.7%
GREECE	-9.0%	-10.1%	0.0%
HONG KONG	-4.6%	-4.7%	3.0%
IRELAND	-3.6%	-4.8%	0.3%
ISRAEL	-4.2%	-4.0%	0.5%
ITALY	1.4%	0.2%	2.0%
JAPAN	4.4%	10.3%	22.6%
NETHERLANDS	3.1%	1.9%	2.6%
NEW ZEALAND	-10.4%	-2.8%	0.1%
NORWAY	-5.0%	-0.5%	0.8%
PORTUGAL	0.4%	-0.8%	0.2%
SINGAPORE	-6.3%	-4.3%	1.7%
SPAIN	-0.4%	-1.6%	2.8%
SWEDEN	-5.3%	-1.7%	3.1%
SWITZERLAND	0.0%	0.0%	9.2%
UNITED KINGDOM	-2.2%	-2.0%	21.7%
EAFE	-0.7%	1.5%	100.0%

Emerging Markets

	USD Return	Local Return	Weighting
BRAZIL	-17.2%	-9.3%	11.3%
CHILE	-14.5%	-8.4%	1.9%
CHINA	-6.5%	-6.6%	18.2%
COLOMBIA	-13.3%	-8.4%	1.2%
CZECH REPUBLIC	-6.5%	-6.9%	0.2%
EGYPT	-9.7%	-7.1%	0.2%
HUNGARY	13.2%	8.2%	0.2%
INDIA	-5.6%	3.2%	6.8%
INDONESIA	-6.5%	-4.5%	3.2%
KOREA	-10.0%	-7.6%	14.6%
MALAYSIA	6.2%	8.4%	4.0%
MEXICO	-11.2%	-6.2%	5.4%
MOROCCO	-2.8%	-3.7%	0.1%
PERU	-27.5%	-27.5%	0.5%
PHILIPPINES	-8.6%	-3.3%	1.0%
POLAND	-4.4%	-2.1%	1.6%
RUSSIA	-8.3%	-4.1%	5.8%
SOUTH AFRICA	-7.3%	0.3%	7.2%
TAIWAN	1.6%	1.8%	11.9%
THAILAND	-8.5%	-3.1%	2.8%
TURKEY	-15.2%	-9.6%	1.9%
EM (EMERGING MARKETS)	-8.0%	-4.3%	100.0%

Why Have Emerging Market Investments Pulled Back?



- High growth expectations are becoming difficult to sustain
- Weak Eurozone and modest overall global growth
- Declining cost advantage in manufacturing
- Falling commodity prices
- Potential housing bubble and debt concerns with “Shadow Banking System” in China



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 Index** and **Russell 2000 Growth Index** are indices that measure the performance of small-capitalization value stocks, small-capitalization stocks and 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 stocks and 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. stocks and 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 global developed market equity performance. The **MSCI World Index Ex-U.S. 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 Japan. The **MSCI Pacific ex. 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 fixed-rate 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 external-currency-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 (ERISA-eligible) 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 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 and 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 and 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 RV: 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.