

**BOARD OF TRUSTEES
INVESTMENT SUBCOMMITTEE**

**Samuel W. Grooms, Chair
Anita A. Hackstedde, Vice Chair
Molly S. Seals
David C. Deibel
Lexi E. Rager**

**Wednesday, September 6, 2017
11:30 a.m. or immediately following
previous meeting**

**Tod Hall
Board Meeting Room**

AGENDA

- A. Disposition of Minutes for Meetings Held June 1, 2016; and June 7, 2017**
- B. Old Business**
- C. Committee Items**

1. Discussion Item

- Tab C.1.a. a. September 6, 2017 Quarterly Portfolio Asset Allocation and Investment Performance Review**
Mike Shebak and Sarah Parker will report.

2. Action Items

- Tab C.2.a. a. Resolution to Approve Hartland's Recommendation to Rebalance the Non-Endowment Long-Term Investment Pool**
Mike Shebak and Sarah Parker will report.
- Tab C.2.b. b. Resolution to Approve Hartland's Recommendation to Change Custodians of Endowment Assets**
Mike Shebak and Sarah Parker will report.

- D. New Business**
- E. Adjournment**

HARTLAND



independence
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results

September 6, 2017

YOUNGSTOWN STATE UNIVERSITY NON-ENDOWMENT & ENDOWMENT ASSETS

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Cleveland, Ohio 44114
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- I. Accomplishments and Future Initiatives
- II. Market Update
- III. Non-Endowment Assets: 2Q17 Performance & Asset Allocation Review
 - ORC Compliance Review
 - Fixed Income Portfolio Review
 - Rebalance Recommendation (Action)
 - Peer Asset Allocation Comparisons
- I. Endowment Assets: 2Q17 Performance & Asset Allocation Review (Action)

ACCOMPLISHMENTS & FUTURE INITIATIVES

	2016	1Q2017	2Q2017	3Q2017	4Q2017
Strategic/Administrative	<ul style="list-style-type: none"> • Endowment Allocation/ Management Review • Non-Endowment Asset Allocation Review 		<ul style="list-style-type: none"> • US Equity Framework (Active vs. Passive – see Appendix) 	<ul style="list-style-type: none"> • Peer Comparisons 	<ul style="list-style-type: none"> • Strategic Asset Allocation Review
Investment Opportunities	<ul style="list-style-type: none"> • Alternative Investments/GARS • High Yield Fixed Income Education and Recommendation 	<ul style="list-style-type: none"> • Fixed Income Portfolio Review 			
Manager Reviews	<ul style="list-style-type: none"> • PNC Fixed Income Review 		<ul style="list-style-type: none"> • Voya Global Real Estate/ Brookfield Global Real Estate 	<ul style="list-style-type: none"> • Fixed Income Portfolio Review 	
Fiduciary Responsibilities	<ul style="list-style-type: none"> • Asset Allocation Guidelines Review • Fee Review 			<ul style="list-style-type: none"> • ORC Compliance Review 	<ul style="list-style-type: none"> • Fee Review • Asset Allocation Guidelines Review



MARKET UPDATE

PERIODIC CHART: ASSET CLASSES

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	07/07 - 06/17 Annual	Volatility
REITs 34.3%	Em Mkt 39.4%	Glb Bond 9.4%	Em Mkt 78.5%	REITs 27.6%	US Bonds 7.8%	REITs 20.1%	Sm/Mid 36.8%	REITs 27.2%	REITs 2.3%	Sm/Mid 17.6%	Em Mkt 18.4%	Hi Yld 7.5%	REITs 23.8%
Em Mkt 32.2%	Dev Intl 11.2%	US Bonds 5.2%	Hi Yld 57.5%	Sm/Mid 26.7%	REITs 7.3%	Em Mkt 18.2%	Large Cap 32.4%	Large Cap 13.7%	Large Cap 1.4%	Hi Yld 17.5%	Dev Intl 13.8%	Sm/Mid 7.4%	Em Mkt 23.4%
Dev Intl 26.3%	Glb Bond 10.9%	Cash 2.1%	Sm/Mid 34.4%	Em Mkt 18.9%	Glb Bond 5.2%	Dev Intl 17.3%	Dev Intl 22.8%	Balanced 10.6%	Balanced 1.0%	Large Cap 12.0%	Large Cap 9.3%	Large Cap 7.2%	Sm/Mid 19.0%
Sm/Mid 16.2%	Hdg Fnds 9.7%	Hdg Fnds -20.8%	Dev Intl 31.8%	Hi Yld 15.2%	Balanced 5.0%	Sm/Mid 17.9%	Balanced 17.6%	Sm/Mid 7.1%	US Bonds 0.6%	Em Mkt 11.2%	Balanced 6.6%	Balanced 6.7%	Dev Intl 18.6%
Large Cap 15.8%	US Bonds 7.0%	Balanced -21.6%	REITs 27.5%	Large Cap 15.1%	Hi Yld 4.4%	Large Cap 16.0%	Hdg Fnds 9.0%	US Bonds 6.0%	Cash 0.1%	REITs 9.3%	Sm/Mid 6.0%	REITs 6.0%	Large Cap 15.2%
Hi Yld 11.8%	Balanced 6.2%	Hi Yld -26.4%	Large Cap 26.5%	Balanced 12.2%	Large Cap 2.1%	Hi Yld 15.6%	Hi Yld 7.4%	Hdg Fnds 3.4%	Hdg Fnds -0.4%	Balanced 8.4%	Glb Bond 5.5%	US Bonds 4.5%	Hi Yld 10.7%
Balanced 11.1%	Large Cap 5.5%	Sm/Mid -36.8%	Balanced 18.5%	Hdg Fnds 10.6%	Cash 0.1%	Balanced 11.4%	REITs 3.2%	Hi Yld 2.5%	Dev Intl -0.8%	US Bonds 2.7%	REITs 5.4%	Glb Bond 3.2%	Balanced 9.1%
Hdg Fnds 10.2%	Cash 5.0%	Large Cap -37.0%	Hdg Fnds 11.5%	Dev Intl 7.8%	Sm/Mid -2.5%	Hdg Fnds 5.4%	Cash 0.1%	Cash 0.0%	Sm/Mid -2.9%	Glb Bond 1.9%	Hi Yld 4.9%	Em Mkt 1.9%	Glb Bond 8.3%
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 -2.0%	Em Mkt -2.2%	Hi Yld -4.6%	Dev Intl 1.0%	Hdg Fnds 2.6%	Dev Intl 1.0%	Hdg Fnds 5.3%
Cash 4.9%	Sm/Mid 1.4%	Dev Intl -43.4%	Glb Bond 4.4%	Glb Bond 6.1%	Dev Intl -12.1%	Glb Bond 1.8%	Em Mkt -2.6%	Glb Bond -2.8%	Glb Bond -4.8%	Hdg Fnds 0.5%	US Bonds 2.3%	Hdg Fnds 0.8%	US Bonds 3.3%
US Bonds 4.3%	REITs -17.8%	Em Mkt -53.3%	Cash 0.2%	Cash 0.1%	Em Mkt -18.4%	Cash 0.1%	Glb Bond -4.9%	Dev Intl -4.9%	Em Mkt -14.9%	Cash 0.3%	Cash 0.3%	Cash 0.6%	Cash 0.4%

Past performance is not a 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; Balanced – 60% S&P 500/40% BarCap US Aggregate; Hdg Fnds – HFRI FOF: Diversified Index; Cash – Merrill Lynch 91-day Tbill (rebalanced quarterly). Data as of 6/30/2017. Source: Zephyr Associates.



NON-ENDOWMENT ASSETS

2Q17 PERFORMANCE & ASSET ALLOCATION REVIEW

Non-Endowment Assets	Market Value	2Q2017	YTD	1 Yr	3 Yrs	5 Yrs	2016	2015	2014	Since Inception****
Operating & Short-Term Pool	\$13.174 Million	0.2%	0.3%	0.3%	0.2%	0.1%	0.3%	0.1%	0.1%	0.1%
	<i>Benchmark*</i>	0.2%	0.3%	0.5%	0.3%	0.2%	0.4%	0.1%	0.1%	0.2%
Long-Term Pool	\$57.842 Million	2.1%	5.4%	8.4%	3.7%	5.2%	4.9%	-0.3%	4.5%	5.1%
	<i>Benchmark**</i>	1.8%	4.6%	7.2%	3.5%	4.7%	4.7%	0.3%	4.0%	4.4%
Total Non-Endowment Assets	\$71.016 Million	1.6%	3.8%	6.4%	2.6%	3.6%	4.0%	-0.5%	2.9%	3.7%
	<i>Benchmark***</i>	1.0%	2.6%	4.1%	2.0%	2.5%	2.7%	0.2%	2.3%	3.0%

1-Year Net Investment Change of \$4,475,011

*95% BofA Merrill Lynch 91-Day T-Bill / 5% Barclays 1-3 Yr. Govt

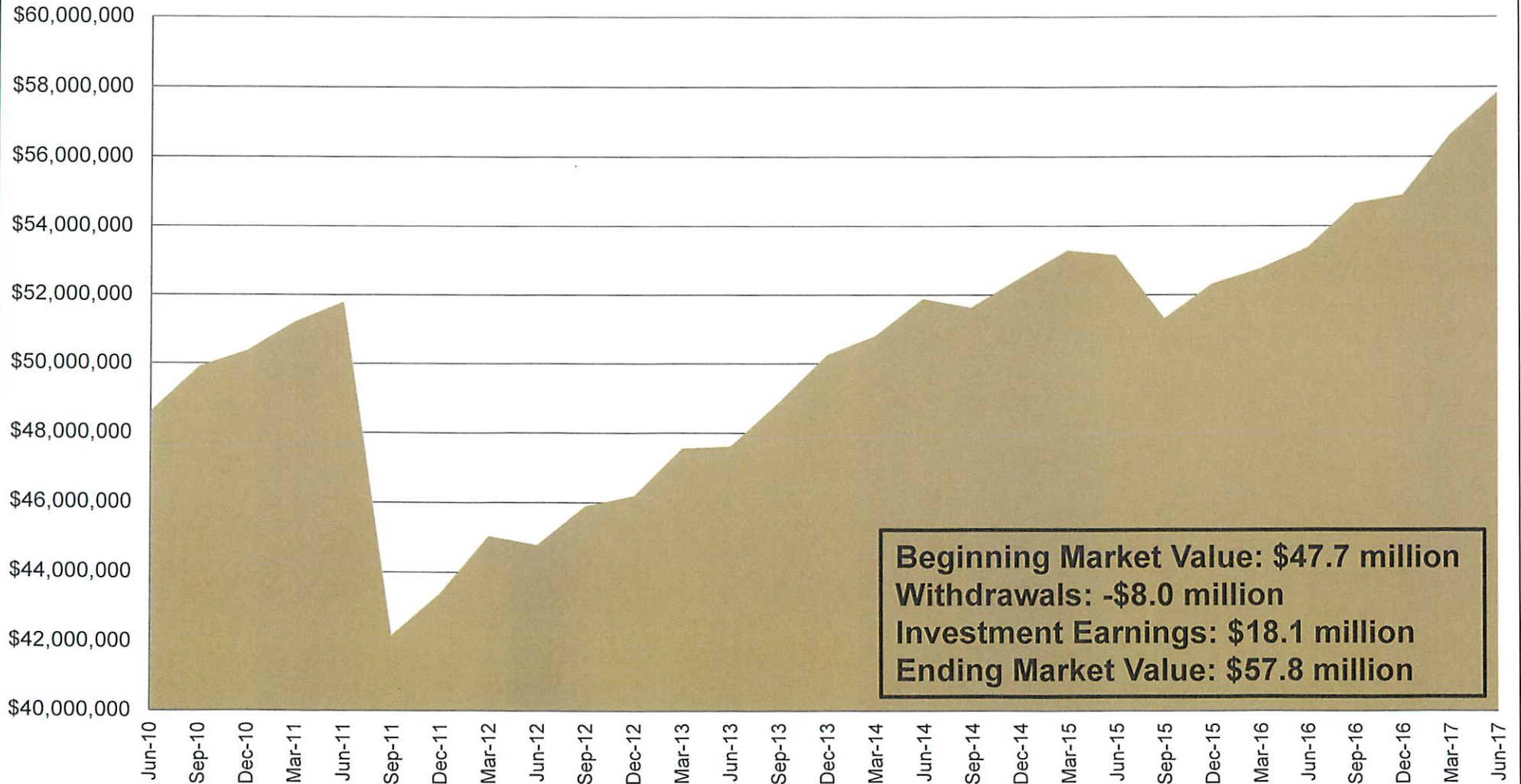
**27% Russell 3000 / 8% MSCI EAFE Gross / 15% Total Alternatives Benchmark / 30% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 20% BBgBarc US Govt/Credit Int TR

***45% BofA Merrill Lynch 91-Day T-Bill / 17% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 11% BBgBarc US Govt/Credit Int TR / 8% Total Alternatives

Benchmark / 15% Russell 3000 / 4% MSCI EAFE Gross

****Inception date for Long-Term and Short-Term Pools: June 2010, Inception Date for Total Non-Endowment Assets: March 2004

Long-Term Pool Market Value Change (6/30/2010-6/30/2017)



2Q17 PERFORMANCE & ASSET ALLOCATION REVIEW

(MANAGER DETAILS CONTAINED IN APPENDIX)

Non-Endowment Asset Pool	Current Asset Allocation	Compliance with Policy?	Investment Manager Comments
Short-Term Pool	<ul style="list-style-type: none"> • 94% Cash • 6% Short-Term Fixed Income 	In-Line	Liquidity; modest return overtime (+0.3% YTD); investments include Star Plus money market.
Long-Term Pool	<ul style="list-style-type: none"> • Domestic Equities = 30% • International Equities = 8% • Alternatives = 15% • Short-Term Fixed Income = 25% • Intermediate-Term Fixed Income = 22% 	<p>In-Line</p> <p>Overweight Domestic Equities by 3%.</p> <p>Underweight Short-Term Fixed Income by 5%.</p> <p>Overweight Intermediate-Term Fixed Income by 2%.</p>	<p><i>Domestic Equity (+3.3% 2Q17, +9.5% YTD):</i> Active management continues to be in favor in 2017 while growth outperforms value, Small Cap manager Loomis Sayles led the way up +5.6% in the 2nd quarter benefitting from stock selection and sector positioning.</p> <p><i>International Equity (+5.8% 2Q17, +14.5% YTD):</i> Dodge & Cox Int'l (value bias) was impacted by energy stock selection but benefited from sector positioning; Both Dodge & Cox and William Blair (growth bias) are outpacing their respective benchmarks year-to-date.</p> <p><i>Alternative Investments (+1.8% 2Q17, +4.3% YTD):</i> Wells Fargo Abs Return outpaced its benchmark largely due to emerging markets exposure; Diamond Hill was impacted by stock selection, but continues to deliver strong results over longer term time periods (+15/9% on a 1-year basis).</p> <p><i>Fixed Income (+0.9% 2Q17, +1.7% YTD):</i> All active managers outpaced their benchmarks in the 2nd quarter; High yield continues to be one of top performers in fixed income (Prudential +2.3% 2Q17, +5.3% YTD).</p>

NON-ENDOWMENT UNIVERSITY INVESTMENTS: SCHEDULE OF ASSETS

Asset Class	Market Value 3/31/17 (\$)	Market Value 6/30/17 (\$)	% of Total Plan	% of Pool	
Total University Assets	82,773,135	71,015,332	100.0	100.0	
Total Operating & Short Term	26,144,522	13,173,651	18.6	100.0	
JPMorgan 100% U.S. Tr Sec MM Inst	Cash	20,037,534	7,055,171	9.9	53.6
Star Plus	Cash	5,036,675	5,044,841	7.1	38.3
Vanguard Short-Term Federal Adm	US Fixed Income Short Term	1,070,313	1,073,638	1.5	8.1
Total Long Term/ Reserves Pool	56,628,614	57,841,682	81.4	100.0	
Total Domestic Equity	16,709,216	17,255,958	24.3	29.8	
TRP Instl US Structured Rsch	US Stock Large Cap Core	5,374,791	5,596,254	7.9	9.7
Vanguard 500 Index Adm	US Stock Large Cap Core	5,645,612	5,819,145	8.2	10.1
Vanguard Mid Cap Index Adm	US Stock Mid Cap Core	2,855,301	2,934,494	4.1	5.1
Loomis Sayles Sm Growth Instl	US Stock Small Cap Growth	1,448,967	1,530,423	2.2	2.6
Victory Integrity Sm-Cap Value Y	US Stock Small Cap Value	1,384,544	1,375,641	1.9	2.4
Total International Equity	4,632,622	4,901,373	6.9	8.5	
William Blair International Growth I	International	2,235,615	2,390,414	3.4	4.1
Dodge & Cox Internat'l Stock	International	2,397,008	2,510,959	3.5	4.3
Total Alternatives	8,756,070	8,913,647	12.6	15.4	
John Hancock Global Absolute Return I	Absolute Return	2,019,822	2,043,608	2.9	3.5
Wells Fargo Adv Absolute Return Instl	All Assets	2,462,518	2,528,519	3.6	4.4
Diamond Hill Long-Short I	Long/Short Equity	2,621,701	2,639,740	3.7	4.6
Voya Global Real Estate I	Global Real Estate	1,652,029	1,701,780	2.4	2.9
Total Fixed Income	26,530,706	26,770,704	37.7	46.3	
JPMorgan Core Bond Ultra	US Fixed Income Core	4,090,011	4,156,052	5.9	7.2
YSU Intermediate Term Bond	US Fixed Income Core	3,954,967	3,996,115	5.6	6.9
Prudential High Yield Z	US Fixed Income High Yield	2,580,904	2,641,300	3.7	4.6
YSU Short Term Bond	US Fixed Income Short Term	12,815,287	12,865,655	18.1	22.2
Vanguard Short-Term Bond Instl	US Fixed Income Short Term	1,280,731	1,288,369	1.8	2.2
DFA Five-Yr Global Fxd-Inc I	Global Fixed Income	1,808,805	1,823,213	2.6	3.2

ORC COMPLIANCE REVIEW: 6/30/2017

Ohio Revised Code 3345.05 Compliance	
	Compliant
Over 25% of Total Portfolio in Cash Equivalents/Govt Securities (average amount over previous FY)	Yes
Investment policy adopted in public session	Yes
Quarterly Investment Committee meetings	Yes
Recommend changes to the board's investment policy that assist in meeting the Committee's fiduciary duties	Yes
Retain an investment advisor who meets the qualifications	Yes

	Total Non-Endow. ORC 3345.05 Defined Assets	% from Short-Term Pool	% from Long-Term Pool
9/30/16	40%	31%	9%
12/31/16	21%	11%	10%
3/31/17	37%	30%	7%
6/30/17	25%	17%	8%
Average	31%	22%	9%

*A minimum of 25% of the average amount of the University's investment portfolio over the course of the previous fiscal year must be invested according to ORC guidelines (i.e. US government bonds, cash equivalents)

YSU LONG-TERM POOL: FIXED INCOME PORTFOLIO REVIEW

	Average Maturity	Average Duration	Credit Quality	Yield
YSU Portfolio	3.7 years	3.1 years	AA	2.3%

Long-Term Pool High Yield Calculation			
	High Yield Allocation	Portfolio Weighting	Weighting
DFA Global	0.0%	6.8%	0.0%
JPM Core Bond	1.0%	15.6%	0.2%
Prudential High Yield	88.6%	9.8%	8.7%
Vanguard ST Bond	0.0%	4.8%	0.0%
PNC Intermediate	0.0%	14.9%	0.0%
PNC Short Term	0.0%	48.0%	0.0%
Total			8.9%

Youngstown State’s Asset Allocation Guidelines permits up to 10% of the total fixed income allocation in below investment grade fixed income. The total portfolio seeks an average weighted credit quality of “AA” or better by Standard & Poor’s.

YSU LONG-TERM POOL: FIXED INCOME PERFORMANCE REVIEW

	Ending June 30, 2017								Calendar Years			Inception	
	2017 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2016 (%)	2015 (%)	2014 (%)	Return (%)	Since
Total Fixed Income	0.9	1.7	0.5	1.8	1.6	1.5	2.1	--	1.6	0.8	2.1	2.1	Jun-10
<i>Total Fixed Income Benchmark</i>	<i>0.5</i>	<i>1.1</i>	<i>0.1</i>	<i>1.3</i>	<i>1.3</i>	<i>1.3</i>	<i>1.7</i>	<i>2.9</i>	<i>1.6</i>	<i>0.8</i>	<i>1.7</i>	<i>1.7</i>	<i>Jun-10</i>
JPMorgan Core Bond Ultra	1.6	2.5	-0.1	2.9	2.6	2.4	3.5	5.0	2.5	1.0	5.4	3.3	Apr-11
<i>BBgBarc US Aggregate TR</i>	<i>1.4</i>	<i>2.3</i>	<i>-0.3</i>	<i>2.8</i>	<i>2.5</i>	<i>2.2</i>	<i>3.2</i>	<i>4.5</i>	<i>2.6</i>	<i>0.6</i>	<i>6.0</i>	<i>3.2</i>	<i>Apr-11</i>
<i>Intermediate-Term Bond MStar MF Rank</i>	<i>40</i>	<i>56</i>	<i>77</i>	<i>58</i>	<i>37</i>	<i>68</i>	<i>64</i>	<i>41</i>	<i>76</i>	<i>14</i>	<i>63</i>	<i>59</i>	<i>Apr-11</i>
YSU Intermediate Term Bond	1.0	1.8	0.0	1.8	1.6	1.8	2.6	4.2	2.0	0.5	3.0	3.8	Mar-04
<i>BBgBarc US Govt/Credit Int TR</i>	<i>0.9</i>	<i>1.7</i>	<i>-0.2</i>	<i>2.0</i>	<i>1.9</i>	<i>1.8</i>	<i>2.6</i>	<i>3.9</i>	<i>2.1</i>	<i>1.1</i>	<i>3.1</i>	<i>3.5</i>	<i>Mar-04</i>
<i>Intermediate-Term Bond MStar MF Rank</i>	<i>90</i>	<i>91</i>	<i>75</i>	<i>94</i>	<i>92</i>	<i>93</i>	<i>94</i>	<i>80</i>	<i>90</i>	<i>34</i>	<i>91</i>	<i>84</i>	<i>Mar-04</i>
Prudential High Yield Z	2.3	5.3	12.5	7.4	4.9	7.0	8.1	7.5	15.3	-2.6	2.8	7.3	Dec-16
<i>BBgBarc US High Yield TR</i>	<i>2.2</i>	<i>4.9</i>	<i>12.7</i>	<i>7.0</i>	<i>4.5</i>	<i>6.9</i>	<i>8.2</i>	<i>7.7</i>	<i>17.1</i>	<i>-4.5</i>	<i>2.5</i>	<i>6.9</i>	<i>Dec-16</i>
<i>High Yield Bond MStar MF Rank</i>	<i>13</i>	<i>14</i>	<i>29</i>	<i>8</i>	<i>9</i>	<i>17</i>	<i>18</i>	<i>15</i>	<i>30</i>	<i>38</i>	<i>22</i>	<i>18</i>	<i>Dec-16</i>
YSU Short Term Bond	0.4	0.8	0.5	1.0	0.9	1.0	1.2	2.4	1.1	0.6	0.7	2.5	Mar-04
<i>BofA Merrill Lynch US Corp & Gov 1-3 Yrs</i>	<i>0.3</i>	<i>0.7</i>	<i>0.3</i>	<i>1.0</i>	<i>0.9</i>	<i>1.0</i>	<i>1.1</i>	<i>2.3</i>	<i>1.3</i>	<i>0.7</i>	<i>0.8</i>	<i>2.4</i>	<i>Mar-04</i>
<i>Short-Term Bond MStar MF Rank</i>	<i>89</i>	<i>89</i>	<i>89</i>	<i>92</i>	<i>85</i>	<i>90</i>	<i>95</i>	<i>77</i>	<i>90</i>	<i>46</i>	<i>88</i>	<i>76</i>	<i>Mar-04</i>
Vanguard Short-Term Bond Instl	0.6	1.1	0.1	1.3	1.3	1.2	--	--	1.5	1.0	1.3	1.3	Dec-11
<i>BBgBarc US Govt/Credit 1-5 Yr. TR</i>	<i>0.6</i>	<i>1.1</i>	<i>0.1</i>	<i>1.4</i>	<i>1.3</i>	<i>1.3</i>	<i>1.7</i>	<i>3.0</i>	<i>1.6</i>	<i>1.0</i>	<i>1.4</i>	<i>1.4</i>	<i>Dec-11</i>
<i>Short-Term Bond MStar MF Rank</i>	<i>56</i>	<i>72</i>	<i>99</i>	<i>73</i>	<i>59</i>	<i>77</i>	<i>--</i>	<i>--</i>	<i>84</i>	<i>15</i>	<i>48</i>	<i>83</i>	<i>Dec-11</i>
DFA Five-Yr Global Fxd-Inc I	0.8	1.6	-0.1	1.9	1.9	1.9	2.6	3.3	1.8	1.4	2.9	2.1	Jun-13
<i>Citi WGBI 1-5 Yr Hdg USD</i>	<i>0.4</i>	<i>0.6</i>	<i>0.3</i>	<i>1.3</i>	<i>1.3</i>	<i>1.4</i>	<i>1.5</i>	<i>2.5</i>	<i>1.5</i>	<i>1.0</i>	<i>1.9</i>	<i>1.4</i>	<i>Jun-13</i>
<i>World Bond MStar MF Rank</i>	<i>82</i>	<i>86</i>	<i>72</i>	<i>89</i>	<i>35</i>	<i>59</i>	<i>72</i>	<i>81</i>	<i>80</i>	<i>3</i>	<i>42</i>	<i>59</i>	<i>Jun-13</i>

- Total Fixed Income Benchmark = 64% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 36% BBgBarc US Govt/Credit Int TR

YSU LONG-TERM POOL: FIXED INCOME INTEREST RATE SENSITIVITY

Portfolio Expected Returns

		Time					
		1 month	3 months	6 months	12 months	18 months	24 months
Interest Rate Change	-0.5%	1.8%	2.1%	2.7%	3.9%	5.0%	6.2%
	-0.25%	1.0%	1.4%	1.9%	3.1%	4.2%	5.4%
	0.0%	0.2%	0.6%	1.2%	2.3%	3.5%	4.6%
	0.25%	-0.6%	-0.2%	0.4%	1.5%	2.7%	3.8%
	0.5%	-1.4%	-1.0%	-0.4%	0.7%	1.9%	3.0%
	1.0%	-2.9%	-2.6%	-2.0%	-0.8%	0.3%	1.5%
	2.0%	-6.1%	-5.7%	-5.1%	-4.0%	-2.8%	-1.7%

How to read:

A +0.5% increase in rates over a 1-year period with YSU fixed income portfolio characteristics would result in a return of approximately +0.7% for YSU's long-term pool fixed income.

Index Expected Returns

		Time					
		1 month	3 months	6 months	12 months	18 months	24 months
Interest Rate Change	-0.5%	3.2%	3.7%	4.3%	5.6%	6.9%	8.2%
	-0.25%	1.7%	2.2%	2.8%	4.1%	5.4%	6.7%
	0.0%	0.2%	0.7%	1.3%	2.6%	3.9%	5.2%
	0.25%	-1.3%	-0.9%	-0.2%	1.1%	2.4%	3.7%
	0.5%	-2.8%	-2.4%	-1.7%	-0.4%	0.9%	2.2%
	1.0%	-5.8%	-5.4%	-4.7%	-3.4%	-2.1%	-0.8%
	2.0%	-11.8%	-11.4%	-10.7%	-9.4%	-8.1%	-6.8%

FIXED INCOME SUMMARY

Compliance

- YSU is in line with the Ohio Revised Code 3345.05 Compliance requirements
- YSU's exposure to high yield is 8.9%, which is within the allowable range as stated in the Asset Allocation Guidelines (maximum weighting of 10%)

Characteristics

- The Long-Term Pool fixed income portfolio has a 2.3% yield with a duration of 3.1 years
- Total fixed income is outpacing the benchmark over short and long-term time periods
- Diversification across maturities and credit structures will aid the portfolio during a rising interest rate environment

REBALANCE RECOMMENDATION (ACTION)

	Market Value as of 7/31/2017		Change	New Allocation		Policy Target	Policy Range	Difference
	\$	%		\$	%			
Total Operating & Short Term	\$6,176,666	100.0%	\$0	\$6,176,666	100.0%	100.0%		
Operating Assets	\$5,100,012	82.6%	\$0	\$5,100,012	82.6%		60-100%	
JPMorgan 100% U.S. Treas. MM Instl	\$55,171	0.9%		\$55,171	0.9%			
Star Plus Account*	\$5,044,841	81.7%		\$5,044,841	81.7%			
Short-Term Assets	\$1,076,654	17.4%	\$0	\$1,076,654	17.4%		0-40%	
Vanguard Short-Term Federal Adm	\$1,076,654	17.4%		\$1,076,654	17.4%			
Total Long Term Reserves Pool	\$58,443,464	100.0%	\$0	\$58,443,464	100.0%	100.0%		
Domestic Equity	\$17,077,627	29.2%	-\$750,000	\$16,327,627	27.9%	27.0%	20-35%	0.9%
Large Cap	\$12,086,293	20.7%	-\$500,000	\$11,586,293	19.8%			
TRP Instl US Structured Research	\$4,967,086	8.5%		\$4,967,086	8.5%			
Vanguard 500 Index Adm	\$7,119,207	12.2%	-\$500,000	\$6,619,207	11.3%			
Small/Mid Cap	\$4,991,334	8.5%	-\$250,000	\$4,741,334	8.1%			
Vanguard Mid Cap Index Adm	\$2,481,517	4.2%	-\$250,000	\$2,231,517	3.8%			
Loomis Sayles Small Growth Instl	\$1,318,514	2.3%		\$1,318,514	2.3%			
Victory Integrity Small Cap Value Y	\$1,191,303	2.0%		\$1,191,303	2.0%			
International Equity	\$5,118,202	8.8%	\$0	\$5,118,202	8.8%	8.0%	0-15%	0.8%
William Blair International Growth I	\$2,497,320	4.3%		\$2,497,320	4.3%			
Dodge & Cox International Stock	\$2,620,882	4.5%		\$2,620,882	4.5%			
Total Equity	\$22,195,829	38.0%	-\$750,000	\$21,445,829	36.7%	35.0%	25-45%	1.7%
Alternatives	\$8,952,287	15.3%	\$0	\$8,952,287	15.3%	15.0%	0-20%	0.3%
Jhancock Global Absolute Return I	\$2,053,518	3.5%		\$2,053,518	3.5%			
Wells Fargo Adv Absolute Return I	\$2,564,933	4.4%		\$2,564,933	4.4%			
Diamond Hill Long-Short I	\$2,644,751	4.5%		\$2,644,751	4.5%			
Voya Global Real Estate I	\$0	0.0%		\$0	0.0%			
Brookfield Global Real Estate	\$1,689,084	2.9%		\$1,689,084	2.9%			
Fixed Income	\$27,295,348	46.7%	\$750,000	\$28,045,348	48.0%	50.0%		
Short Term Fixed Income	\$16,476,875	28.2%	\$250,000	\$16,726,875	28.6%	30.0%	25-45%	-1.4%
YSU Short Term Bond	\$12,854,062	22.0%	\$250,000	\$13,104,062	22.4%			
DFA Five-Year Global	\$1,831,530	3.1%		\$1,831,530	3.1%			
Vanguard Short Term Bond Index	\$1,791,282	3.1%		\$1,791,282	3.1%			
Intermediate Fixed Income	\$10,818,473	18.5%	\$500,000	\$11,318,473	19.4%	20.0%	10-30%	-0.6%
JPMorgan Core Bond Ultra R6	\$4,166,730	7.1%	\$500,000	\$4,666,730	8.0%			
YSU Intermediate Term Bond	\$3,991,476	6.8%		\$3,991,476	6.8%			
Prudential High Yield Z	\$2,660,267	4.6%		\$2,660,267	4.6%			
Total University Assets	\$64,620,130			\$64,620,130				

ASSET ALLOCATION COMPARISONS VS. STATE UNIVERSITIES

	Current YSU Allocation (ST & LT Pool)	Small State University	Small State University	Mid-Sized State University	Mid-Sized State University	Mid-Sized State University	Mid-Sized State University	Large State University	Large State University	Large State University
Equity	29%	0%	50%	23%	24%	15%	52%	30%	35%	14%
Alternatives	13%	0%	0%	33%	0%	4%	28%	21%	31%	51%
Fixed Income & Cash	58%	100%	50%	44%	76%	81%	20%	48%	34%	35%

Source: State of Ohio Auditor; FY 2016; Asset size range: \$20MM-\$5.3B.



ENDOWMENT ASSETS

2Q17 PERFORMANCE & ASSET ALLOCATION REVIEW

Endowment Assets	Market Value	Asset Allocation	Composition	2Q2017	YTD	1-Yr	3-Yr	2016	2015
YSU Endowment	\$10.0 million	76% Equities/ 24% Fixed Income & Cash	Stocks, Bonds, Mutual Funds	1.6%	5.6%	9.5%	6.2%	8.5%	-0.3%
<i>60% S&P 500 Index/40% Barclays Index</i>				2.4%	6.5%	10.3%	6.9%	8.3%	1.3%
Kilcawley Center	\$101,569	60% Equities/ 40% Fixed Income	Mutual Fund	2.5%	6.3	10.4%	2.2%	4.9%	-5.3%
<i>60% S&P 500 Index/40% Barclays Index</i>				2.4%	6.5%	10.3%	6.9%	8.3%	1.3%
Alumni License Plate	\$503,214	60% Equities/ 40% Fixed Income	Mutual Fund	1.3%	3.1%	9.8%	5.5%	13.8%	-0.2%
<i>60% S&P 500 Index/40% Barclays Index</i>				2.4%	6.5%	10.3%	6.9%	8.3%	1.3%

Compliance

- Asset Allocation Guidelines: 70% Equities (60-80%)/30% Cash & Fixed Income (20-40%)
 - YSU Endowment (In-Line)
 - Kilcawley Center (In-Line)
 - Alumni (In-Line)
- Equity and Fixed Income Guidelines
 - YSU Endowment (In-Line)
 - Kilcawley Center (In-Line)
 - Alumni (In-Line)

Historical allocation to single stock and bond positions resulted in large differences relative to benchmark. The Kilcawley Center and Alumni License Plate accounts are now currently invested in one low cost, balanced Vanguard mutual fund.

CUSTODIAN REVIEW (ACTION)

- Hartland recommends consolidating Endowment assets to the same custodian as the Non-Endowment assets (PNC Bank)
- Assets held at Farmer's Trust are not being managed
- PNC Bank's custodian fee is 0.03% (3 bps)
- Huntington will continue to manage and hold the YSU Endowment (\$10 million)

- **Recommendation:** Move assets currently at Farmer's Trust to PNC Bank
 - Kilcawley Center
 - Alumni License Plate

HARTLAND



independence
expertise
results

APPENDIX

THOUGHTS ON THE CURRENT ENVIRONMENT

Capital Markets: Risk assets were up sharply, led by Emerging and Developed Market Equities (+6.3% and +6.1%). Equity returns outside the U.S. were roughly double. Emerging Market Equities lead the way YTD, +18.4%.

Economic Conditions: The constructive growth environment has broadened beyond the U.S. borders, with Eurozone business surveys increasing to their highest levels in >6 years. The U.S. economic expansion reached its 8th birthday, and the economy's continued slow growth was reflected in the 1.4% Q1 GDP growth. ISM surveys (both service and manufacturing) reflect strength, which along with consumer confidence and wage growth, continue to support expansion.

Monetary Policy: The Federal Reserve and European Central Bank have taken less accommodative tones in recent statements. The Fed has been able to execute two more rate increases, bringing the total to four in the current tightening cycle, while also communicating a plan to decrease its \$4.5 trillion balance sheet, without rattling investor confidence.

Valuations: U.S. equity valuations are above long-term averages; 18.1x one year forward P/E on MSCI US Equity Index. Emerging Market and European equities carry more reasonable valuations. Dispersion across countries, sectors and styles are opportunities for active investment managers.

Earnings: Earnings surprises in the U.S., Japan and Europe supported equity markets and raised expectations for 2Q results. 1Q growth was 14.0% for the S&P 500, and 2Q estimate stands at 6.5%. A rebound in Energy sector earnings is a tailwind.

Politics: U.S. politics have provided little substance; healthcare and tax reform await in limbo.

Risks: The near term risk of populism has decreased. Changes in monetary policy and valuations bear monitoring.

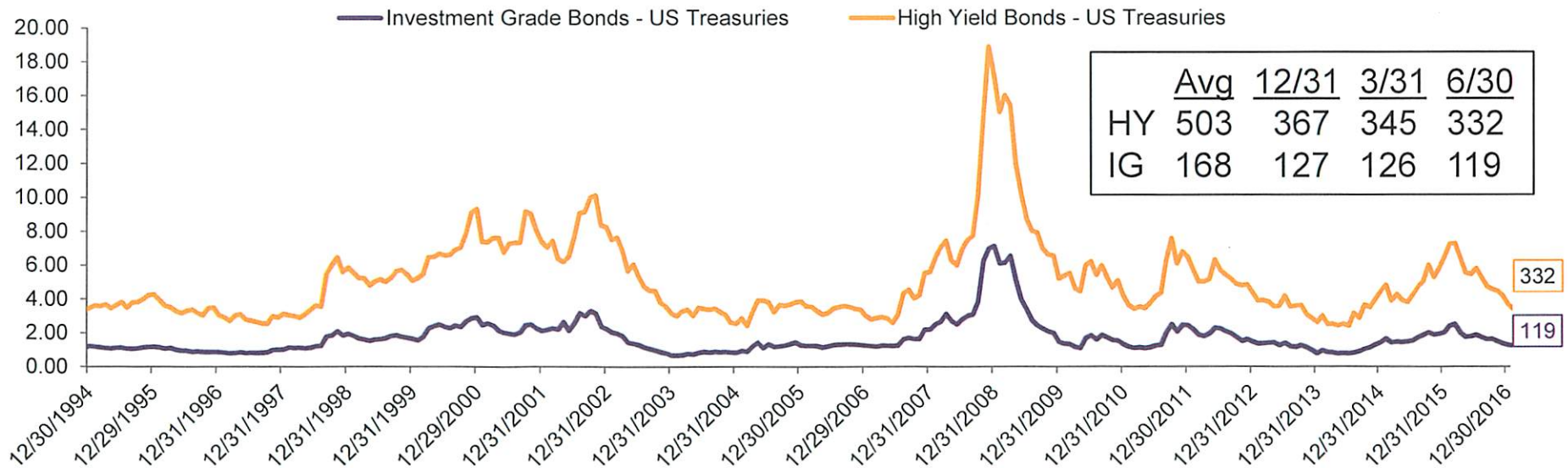
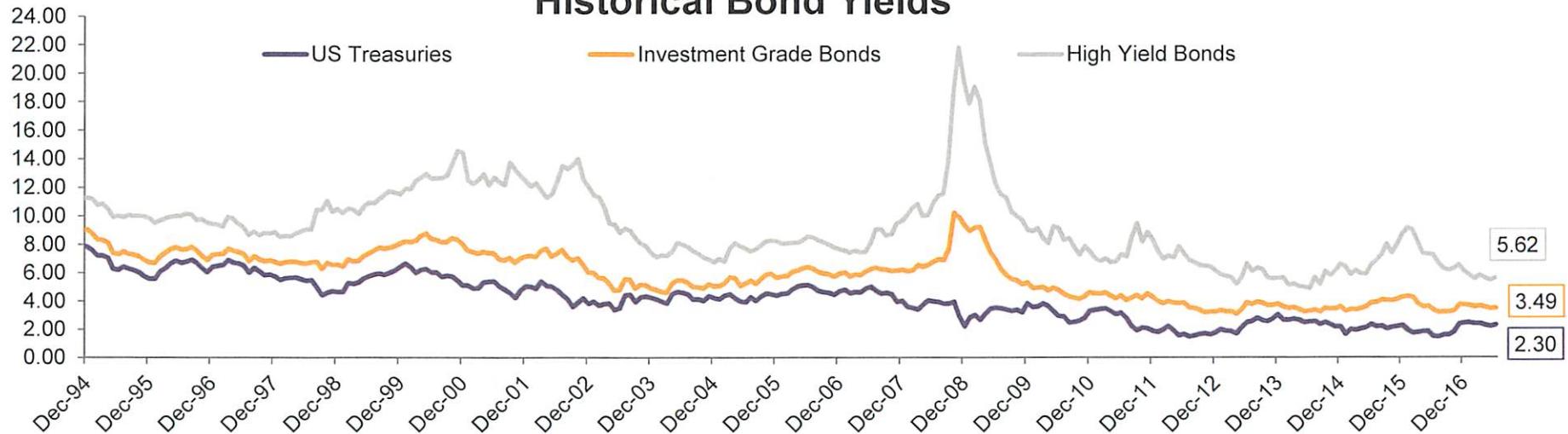
Fixed Income: A "clip your coupon" quarter. The treasury yield curve flattened and credit spreads tightened modestly.

"Oil's Not Well": Renewed production has perhaps capped the price of oil and OPEC members' fiscal ambitions.

Looking Forward: We are living in a lower growth world with lower return expectations. Low yields, and valuations pose challenges. Risk assets should perform relatively well in a modest growth, easy monetary policy environment.

CORPORATE SPREADS: INVESTMENT GRADE AND HIGH YIELD TO 10-YEAR TREASURIES

Historical Bond Yields



Past performance is no guarantee of future results. US Treasuries – BarCap US Gov't 10-Yr Treasury; Investment Grade Bonds – BarCap BAA Corp; High Yield Bonds - BarCap US High Yield.
Source: Bloomberg. Data as of 6/30/2017

FED ECONOMIC PROJECTIONS & NORMALIZATION

Federal Reserve Board Members and Bank Presidents

	2017	2018	2019	Longer Run*
GDP	2.2%	2.1%	1.9%	1.8%
Unemployment Rate	4.3%	4.2%	4.2%	4.6%
Core PCE Inflation	1.7%	2.0%	2.0%	
Federal Funds Rate	1.4%	2.1%	2.9%	3.0%
# of Implied 25 bps Rate Hikes	3	3	3	

Effective Fed Funds Rate at 7/12/17: 1.16%

Fed Balance Sheet

Security Type	Market Value as of 7/12/2017
US Treasury Notes/Bills	\$2.3 trillion
Agency Mortgage-Backed Securities	\$1.8 trillion
US Treasury TIPS	\$108.7 billion
US Treasury Floating Rate (FRN)	\$13.2 billion
Federal Agency Securities	\$8.1 billion
Total	\$4.2 trillion

Fed Balance Sheet Normalization Program

Start of Reduction	Treasuries <u>NOT</u> Reinvested	Agency & MBS <u>NOT</u> Reinvested
0 – 3 Months	\$6b/month	\$4b/month
3 – 6 Months	\$12b/month	\$8b/month
6 – 9 Months	\$18b/month	\$12b/month
9 – 12 Months	\$24b/month	\$16b/month
12+ Months	\$30b/month	\$20b/month

*Longer-run projections: The rates to which a policymaker expects the economy to converge over time – maybe in five or six years – in the absence of further shocks and under appropriate monetary policy.

Source: Federal Reserve 6/14/2017

JOHN HANCOCK GLOBAL ABSOLUTE RETURN (GARS)

Parent

- Standard Life manages approximately \$340 billion as a firm and approximately \$65 billion in the GARS strategy
- Earlier this year, Standard Life announced that they will be merging with Aberdeen Asset Management in August
- While both firms have announced the potential for a 10% reduction in headcount, they do not expect any changes to the Global Asset Allocation team that manages GARS

People

- Guy Stern, CFA is responsible for the management of the multi-asset fund management team overseeing the asset allocation in Standard Life Investments' multi-asset portfolios
- Mr. Stern joined Standard Life Investments in April 2008, from Credit Suisse Asset Management
- Mr. Stern is supported by 49 investment professionals who are part of the Multi-Asset Management Team

Process

- Global Absolute Return (GARS) is a discretionary, dynamic, multi-asset strategy. The team believes they can exploit market inefficiencies by investing in 20 to 35 market-level strategies at any given time
- The fund seeks to provide an annualized return of cash plus 5% with a half to a third of equity volatility in a liquid, transparent and scalable portfolio
- Each trade must: have a case to make money on a 2-3 year basis, add material diversification, and be liquid

Portfolio

Current Themes:

- 1. Continuing demand for yield**
 - Long investment grade credit
 - Long Pan European equity income
 - Long high yield credit
 - Long global REITs
 - Long emerging-market income
- 2. China economic rebalancing**
 1. Long U.S. Dollar vs. Singapore Dollar
 2. Long Indian Rupee vs. Korean Won
 3. Long Norwegian Krone vs. Australian Dollar
- 3. Uncertainty over global growth**
 1. Indian Rupee vs. Swiss Franc
 2. Yield curve flattening
- 4. Political risk-premium rising**
 1. U.S. large cap equities vs. small cap
 2. Long US Dollar vs British Pound

JOHN HANCOCK GLOBAL ABSOLUTE RETURN (GARS)

Performance

As of 6/30/17	2Q	YTD	1-year	3-year	5-year	Since Inception*
John Hancock GARS	1.2%	1.7%	3.6%	1.3%	2.6%	5.9%
ML 91 Day T Bill + 5% (Objective)	1.5%	2.8%	5.5%	5.2%	5.2%	5.9%
HFRI Relative Value (Total) Index	0.5%	2.7%	7.7%	3.1%	5.4%	5.5%

- Target 4-8% annualized volatility (realized volatility of 5.3% since inception of strategy in July 2006), Beta of 0.16 to MSCI World Index
- Max drawdown of 10% (ending Sep 2008) vs. 51% for S&P 500 (ending Feb 2009)

Q2 Contributors:

- U.S. Equity Banks vs Consumer Staples – the banking sector rallied after the six biggest US banks passed their capital adequacy stress tests; investor sentiment towards the sector turned positive
- U.S. Investment-Grade Credit - credit spreads narrowed amid continued capital flows into credit markets

Q2 Detractors:

- Long U.S. Dollar vs Euro
- U.S. Real Yield – designed to rise along with inflation expectations in the U.S., the strategy suffered as prices of long-dated TIPS declined

New positions:

- Long U.S. Dollar vs British Pound - expect the upside potential for the British pound to remain subdued in the medium term as the UK enters into an uncertain period of Brexit negotiations led by a minority government
- Emerging Market Income Strategy – positioned for improving sentiment toward emerging market currencies and local currency sovereign bonds

Recommendation: Maintain and monitor the strategy

*Since strategy inception of 7/1/2006.

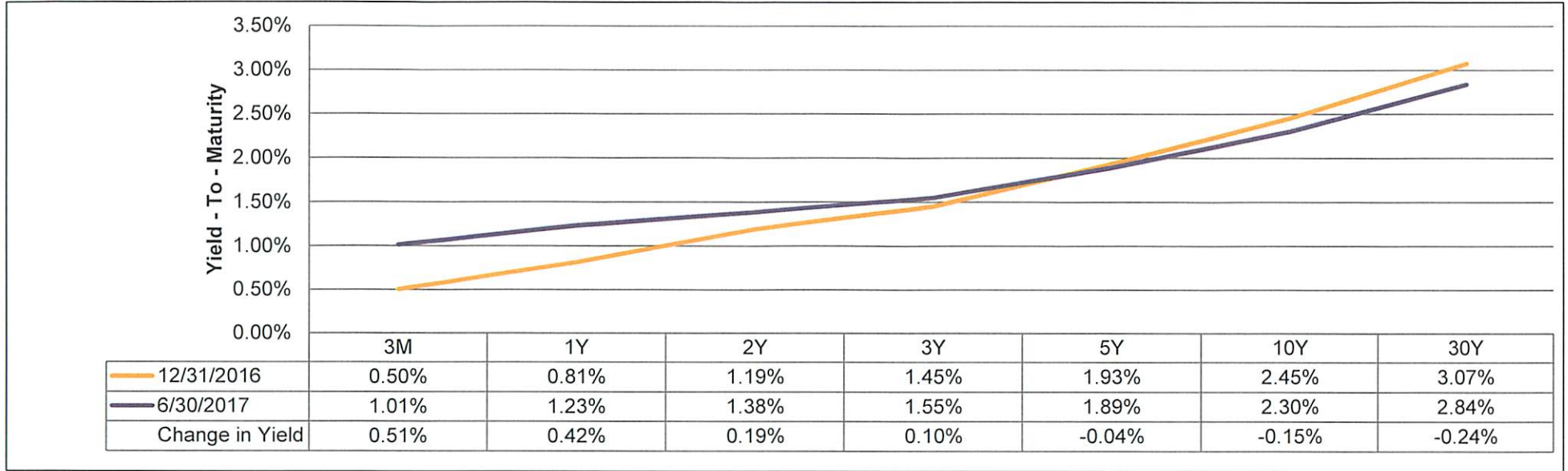
YSU FIXED INCOME PORTFOLIO LOOK-THROUGH

Current Portfolio	6.8%	15.6%	9.8%	4.8%	14.9%	48.0%	100.0%
	DFA	JPM	Prudential	Vanguard	PNC	PNC	Total Portfolio
Product Name	DFA Five - Year Global Fixed Income	JPMorgan Core Bond Fund R6	Prudential High Yield Fund	Vanguard Short Term Bond Index	PCA Intermediate Term Fixed	PCA Short Term Fixed	
Ticker	DFGBX	JCBUX	PHYZX	VBIRX	SMA	SMA	
Subadvisor	-	-	-	-	PNC Capital Advisors	PNC Capital Advisors	
Expense Ratio %	0.27%	0.35%	0.57%	0.07%	0.15%	0.15%	0.23%
Current Weighted Avg Coupon	2.3%	3.8%	6.9%	2.0%	2.5%	1.9%	2.8%
Yield to Maturity	1.7%	2.6%	5.6%	1.7%	2.2%	1.6%	2.3%
Average Maturity	3.8	7.3	6.1	2.9	4.3	2.0	3.7
Effective Duration	3.6	5.6	4.0	2.8	3.9	1.9	3.1
Average Quality Issue	AA	BBB	B	AA	AA	AA	AA
AAA	24%	60%	7%	71%	55%	66%	55%
AA	70%	5%	0%	5%	5%	3%	8%
A	6%	13%	0%	12%	16%	13%	12%
BBB	0%	16%	4%	12%	24%	18%	16%
BB	0%	1%	31%	0%	0%	0%	3%
B	0%	0%	45%	0%	0%	0%	4%
CCC & Below	0%	0%	13%	0%	0%	0%	1%
Not Rated	0%	5%	1%	0%	0%	0%	1%
Sector Breakdown							
Government	26%	27%	7%	69%	39%	38%	34%
Corporate	73%	27%	83%	28%	60%	54%	53%
Asset-Backed Securities	0%	45%	2%	2%	0%	7%	11%
Municipal	1%	0%	0%	0%	0%	0%	0%
Cash	0%	1%	8%	1%	1%	2%	2%

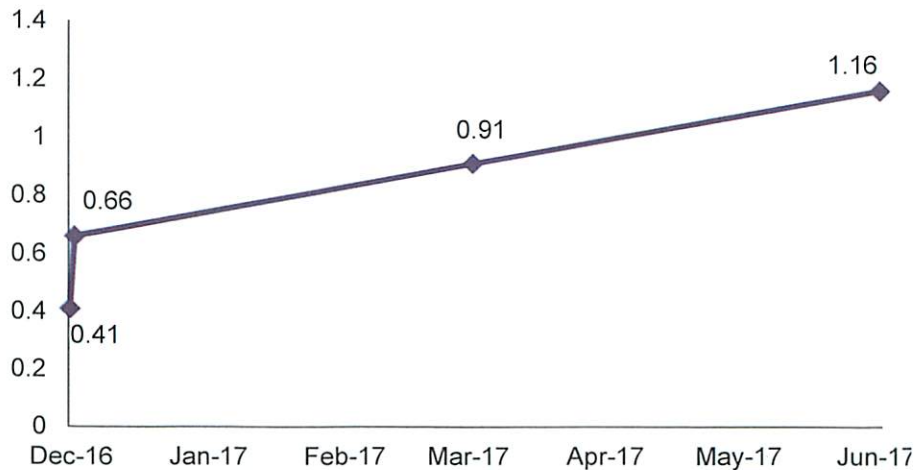
BOND RATINGS

Credit Quality	Moody's	S&P	Fitch
Investment Grade			
Prime	Aaa	AAA	AAA
High quality	Aa	AA	AA
Upper medium grade	A	A	A
Medium grade	Baa	BBB	BBB
Below Investment Grade			
Lower medium grade	Ba	BB	BB
Low grade	B	B	B
Poor	Caa	CCC	CCC
Highly speculative	Ca	CC	CC
No paying	C	C	C
Defaulted	D	D	D

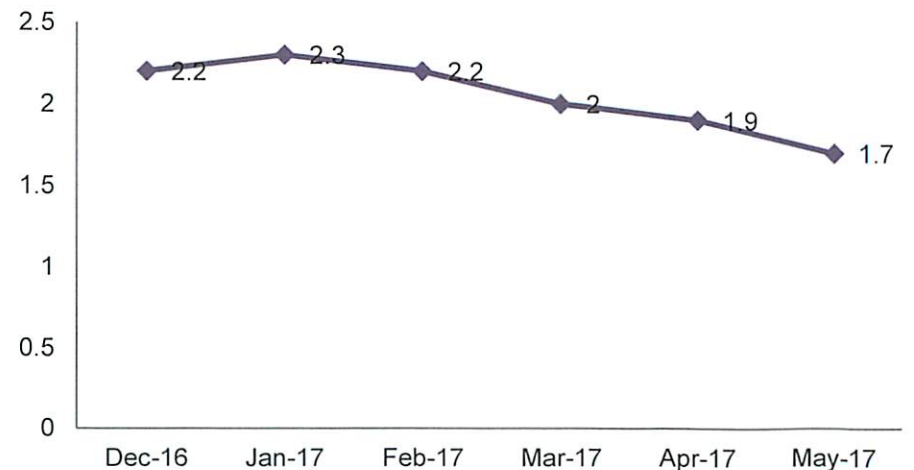
THE TREASURY YIELD CURVE



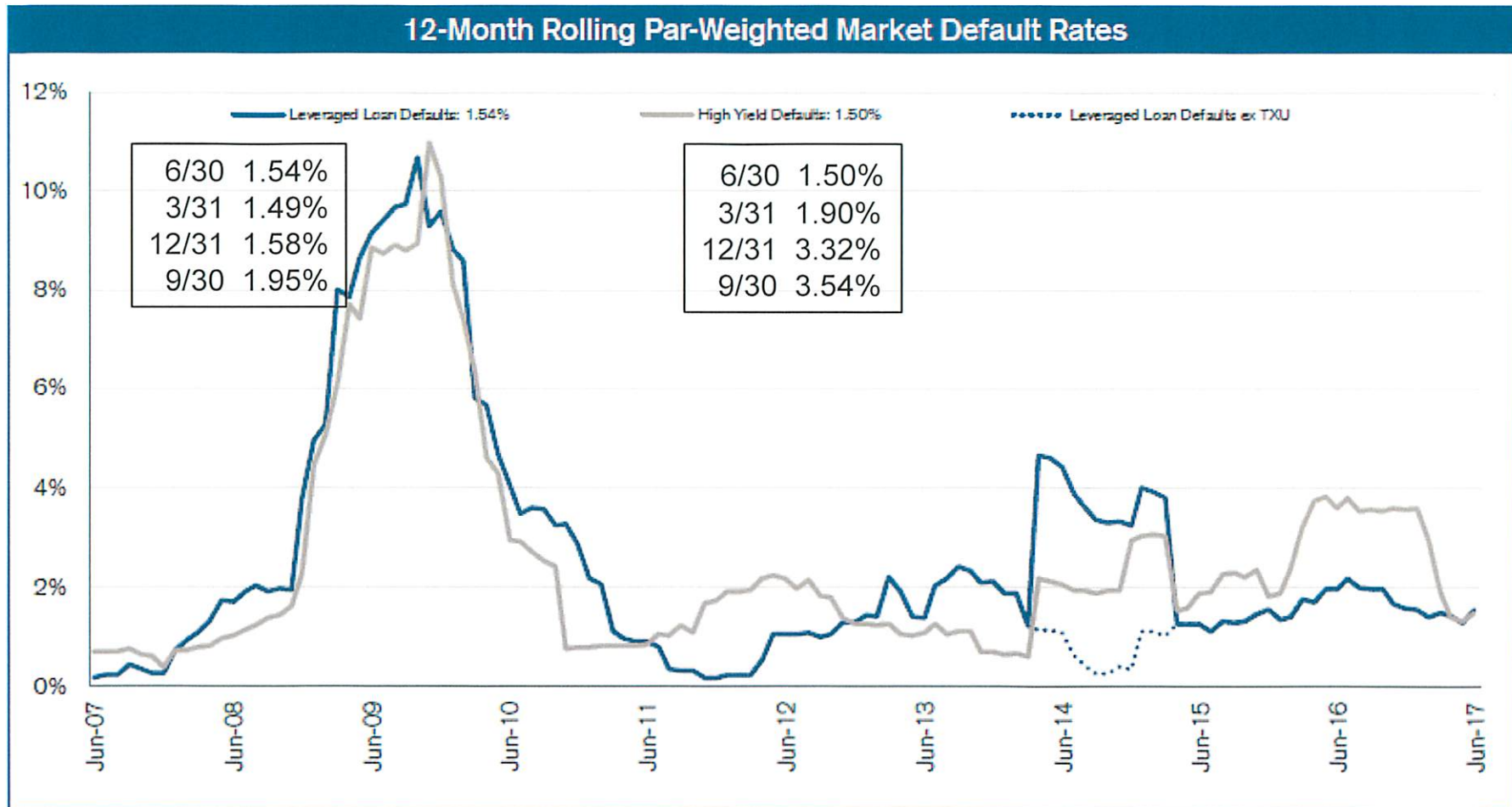
Fed Funds Rate



Inflation



Default Rates Remain Low



Source: S&P LCD, JP Morgan. Par-weighted default rates representative of LTM. Data as of June 30, 2017

All data was obtained from publicly available information, internally developed data and other third party sources believed to be reliable. Credit Suisse has not sought to independently verify information obtained from public and third party sources and makes no representations or warranties as to accuracy, completeness or reliability of such information.

Policy Compliance

As of June 30, 2017

Total Plan Asset Allocation Policy	Range	Current
Operating & Short-Term Pool	25% - 50%	19%
Long Term/ Reserves Pool	50% - 75%	81%

Operating & Short-Term Pool	Range	Current
Operating Assets	60% - 100%	94%
Short-Term Assets	0% - 40%	6%

Long Term/ Reserves Pool	Target	Range	Current
Domestic Equity	27%	20% - 35%	30%
International Equity	8%	0% - 15%	8%
Total Equity	35%	25% - 45%	38%
Alternatives	15%	0%-20%	15%
Short-Term Fixed Income	30%	25% - 45%	24%
Intermediate Fixed Income	20%	10% - 30%	22%
Cash & Cash Equivalents	0%	0% - 5%	0%

In Line
 Within Tolerance
 Review

Performance Report Card

	Ending June 30, 2017								Calendar Years			Inception	
	2017 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2016 (%)	2015 (%)	2014 (%)	Return (%)	Since
Total University Assets	1.6	3.8	6.4	3.3	2.6	3.6	3.4	3.8	4.0	-0.5	2.9	3.7	Mar-04
<i>Total Policy Benchmark</i>	1.0	2.6	4.1	2.4	2.0	2.5	2.4	2.9	2.7	0.2	2.3	3.0	Mar-04
Total Operating & Short Term	0.2	0.3	0.3	0.3	0.2	0.1	0.1	--	0.3	0.1	0.1	0.1	Jun-10
<i>Total Operating & Short Term Benchmark</i>	0.2	0.3	0.5	0.4	0.3	0.2	0.2	0.6	0.4	0.1	0.1	0.2	Jun-10
JPMorgan 100% U.S. Tr Sec MM Inst	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.4	0.2	0.0	0.0	0.1	Sep-11
<i>BofA Merrill Lynch 91-Day T-Bill</i>	0.2	0.3	0.5	0.3	0.2	0.2	0.2	0.6	0.3	0.1	0.0	0.2	Sep-11
<i>Money Market - Taxable MStar MF Rank</i>	59	60	62	65	61	62	62	76	60	93	85	63	Sep-11
Vanguard Short-Term Federal Adm	0.3	0.6	-0.1	1.1	1.0	0.9	1.2	2.7	1.2	0.8	1.3	1.1	Sep-10
<i>BBgBarc US Govt 1-5 Yr TR</i>	0.4	0.8	-0.5	0.9	1.1	0.9	1.2	2.6	1.0	0.9	1.2	1.1	Sep-10
<i>Short Government MStar MF Rank</i>	54	46	42	4	22	30	32	25	17	14	33	31	Sep-10
Star Plus	0.2	0.3	0.5	0.4	0.3	--	--	--	0.4	0.2	--	0.3	Jan-14
<i>BofA Merrill Lynch 91-Day T-Bill</i>	0.2	0.3	0.5	0.3	0.2	0.2	0.2	0.6	0.3	0.1	0.0	0.2	Jan-14
Total Long Term/ Reserves Pool	2.1	5.4	8.4	4.3	3.7	5.2	5.1	--	4.9	-0.3	4.5	5.1	Jun-10
<i>Total Long Term/ Reserves Fund Benchmark</i>	1.8	4.6	7.2	4.0	3.5	4.7	4.4	4.6	4.7	0.3	4.0	4.4	Jun-10
Total Domestic Equity	3.3	9.5	19.2	9.6	9.0	14.6	15.2	--	11.7	0.7	11.6	15.2	Jun-10
<i>Russell 3000</i>	3.0	8.9	18.5	10.0	9.1	14.6	15.3	7.3	12.7	0.5	12.6	15.3	Jun-10
TRP Instl US Structured Rsch	4.1	11.2	19.7	11.2	10.0	14.8	15.4	--	10.4	2.9	12.4	15.4	Jun-10
<i>S&P 500</i>	3.1	9.3	17.9	10.7	9.6	14.6	15.4	7.2	12.0	1.4	13.7	15.4	Jun-10
<i>Large Blend MStar MF Rank</i>	11	9	24	5	5	18	14	--	56	11	45	14	Jun-10
Vanguard 500 Index Adm	3.1	9.3	17.9	10.7	9.6	14.6	15.4	7.2	11.9	1.4	13.6	15.4	Jun-10
<i>S&P 500</i>	3.1	9.3	17.9	10.7	9.6	14.6	15.4	7.2	12.0	1.4	13.7	15.4	Jun-10
<i>Large Blend MStar MF Rank</i>	40	31	44	11	12	25	16	28	28	24	21	16	Jun-10

Performance Report Card

	Ending June 30, 2017								Calendar Years			Inception	
	2017 Q2 (%)	YTD (%)	1Yr (%)	2Yrs (%)	3Yrs (%)	5Yrs (%)	7Yrs (%)	10Yrs (%)	2016 (%)	2015 (%)	2014 (%)	Return (%)	Since
Vanguard Mid Cap Index Adm	2.8	9.1	17.2	7.8	8.1	14.8	15.2	7.5	11.2	-1.3	13.8	13.7	Sep-10
<i>Vanguard Mid Cap Index Benchmark</i>	2.8	9.2	17.3	7.8	8.1	14.8	15.2	7.5	11.2	-1.3	13.8	13.8	Sep-10
<i>Mid-Cap Blend MStar MF Rank</i>	19	11	52	37	20	13	17	35	74	19	7	21	Sep-10
Loomis Sayles Sm Growth Instl	5.6	14.2	23.3	5.0	7.7	13.5	15.7	8.7	5.7	1.1	1.1	14.2	Sep-10
<i>Russell 2000 Growth</i>	4.4	10.0	24.4	5.4	7.6	14.0	15.2	7.8	11.3	-1.4	5.6	13.7	Sep-10
<i>Small Growth MStar MF Rank</i>	28	17	50	59	46	43	32	22	85	20	67	32	Sep-10
Victory Integrity Sm-Cap Value Y	-0.6	0.5	23.1	7.3	5.6	14.0	14.2	7.4	24.4	-6.7	7.3	13.1	Sep-10
<i>Russell 2000 Value</i>	0.7	0.5	24.9	10.3	7.0	13.4	13.5	5.9	31.7	-7.5	4.2	12.5	Sep-10
<i>Small Value MStar MF Rank</i>	89	59	24	63	53	36	30	25	61	62	18	24	Sep-10
Total International Equity	5.8	14.5	22.8	2.7	1.1	9.4	--	--	2.7	-5.9	-1.4	5.2	Sep-10
<i>MSCIEAFE</i>	6.1	13.8	20.3	3.9	1.1	8.7	7.9	1.0	1.0	-0.8	-4.9	5.8	Sep-10
<i>MSCI ACWI ex USA</i>	5.8	14.1	20.5	4.0	0.8	7.2	6.7	1.1	4.5	-5.7	-3.9	4.5	Sep-10
William Blair International Growth I	6.9	14.5	15.8	2.5	1.6	8.2	8.0	1.8	-2.5	0.0	-2.9	8.2	Jun-12
<i>MSCI ACWI ex USA</i>	5.8	14.1	20.5	4.0	0.8	7.2	6.7	1.1	4.5	-5.7	-3.9	7.2	Jun-12
<i>Foreign Large Growth MStar MF Rank</i>	86	89	79	85	75	76	77	69	60	68	38	76	Jun-12
Dodge & Cox Internat'l Stock	4.8	14.5	30.4	2.8	0.6	10.2	8.8	2.3	8.3	-11.4	0.1	6.5	Sep-10
<i>MSCIEAFE</i>	6.1	13.8	20.3	3.9	1.1	8.7	7.9	1.0	1.0	-0.8	-4.9	5.8	Sep-10
<i>Foreign Large Value MStar MF Rank</i>	71	12	3	60	41	9	19	13	18	95	2	23	Sep-10
Total Alternatives	1.8	4.3	7.5	2.7	--	--	--	--	3.5	--	--	1.0	Mar-15
<i>Total Alternatives Benchmark</i>	1.1	3.5	4.8	1.0	--	--	--	--	1.5	--	--	--	Mar-15
John Hancock Global Absolute Return I	1.2	1.7	3.6	-0.7	1.3	2.6	--	--	-2.5	1.7	4.0	2.1	Mar-16
<i>HFRI Relative Value (Total) Index</i>	0.5	2.7	7.7	3.7	3.1	5.4	5.6	4.8	7.7	-0.3	4.0	8.7	Mar-16



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Performance Report Card

	Ending June 30, 2017								Calendar Years			Inception	
	2017 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2016 (%)	2015 (%)	2014 (%)	Return (%)	Since
Wells Fargo Adv Absolute Return Instl	2.7	7.4	9.7	2.3	0.7	4.3	--	--	3.0	-4.6	0.9	0.7	Mar-15
<i>CPI +3%</i>	1.2	2.9	4.9	4.5	4.0	4.3	4.7	4.7	4.7	3.5	4.4	5.1	Mar-15
Diamond Hill Long-Short I	0.7	3.6	15.9	5.8	4.7	9.6	9.2	4.7	10.5	-1.4	7.5	5.1	Mar-15
<i>HFRI Equity Hedge (Total) Index</i>	2.1	6.1	12.3	3.3	3.0	6.3	5.2	2.7	5.5	-1.0	1.8	3.7	Mar-15
<i>Long-Short MStar MF Rank</i>	61	59	13	27	31	32	43	47	15	53	18	18	Mar-15
Voya Global Real Estate I	3.0	4.2	-1.8	3.3	1.6	6.2	8.8	2.2	0.4	-1.7	14.0	-0.5	Mar-15
<i>FTSE NAREIT Developed</i>	2.7	4.8	0.2	5.7	3.7	7.5	9.9	2.0	4.1	-0.8	15.0	1.6	Mar-15
<i>Global Real Estate MStar MF Rank</i>	64	85	96	85	87	90	74	59	75	77	55	96	Mar-15
Total Fixed Income	0.9	1.7	0.5	1.8	1.6	1.5	2.1	--	1.6	0.8	2.1	2.1	Jun-10
<i>Total Fixed Income Benchmark</i>	0.5	1.1	0.1	1.3	1.3	1.3	1.7	2.9	1.6	0.8	1.7	1.7	Jun-10
JPMorgan Core Bond Ultra	1.6	2.5	-0.1	2.9	2.6	2.4	3.5	5.0	2.5	1.0	5.4	3.3	Apr-11
<i>BBgBarc US Aggregate TR</i>	1.4	2.3	-0.3	2.8	2.5	2.2	3.2	4.5	2.6	0.6	6.0	3.2	Apr-11
<i>Intermediate-Term Bond MStar MF Rank</i>	40	56	77	58	37	68	64	41	76	14	63	59	Apr-11
YSU Intermediate Term Bond	1.0	1.8	0.0	1.8	1.6	1.8	2.6	4.2	2.0	0.5	3.0	3.8	Mar-04
<i>BBgBarc US Govt/Credit Int TR</i>	0.9	1.7	-0.2	2.0	1.9	1.8	2.6	3.9	2.1	1.1	3.1	3.5	Mar-04
<i>Intermediate-Term Bond MStar MF Rank</i>	90	91	75	94	92	93	94	80	90	34	91	84	Mar-04
Prudential High Yield Z	2.3	5.3	12.5	7.4	4.9	7.0	8.1	7.5	15.3	-2.6	2.8	7.3	Dec-16
<i>BBgBarc US High Yield TR</i>	2.2	4.9	12.7	7.0	4.5	6.9	8.2	7.7	17.1	-4.5	2.5	6.9	Dec-16
<i>High Yield Bond MStar MF Rank</i>	13	14	29	8	9	17	18	15	30	38	22	18	Dec-16
YSU Short Term Bond	0.4	0.8	0.5	1.0	0.9	1.0	1.2	2.4	1.1	0.6	0.7	2.5	Mar-04
<i>BofA Merrill Lynch US Corp & Gov 1-3 Yrs</i>	0.3	0.7	0.3	1.0	0.9	1.0	1.1	2.3	1.3	0.7	0.8	2.4	Mar-04
<i>Short-Term Bond MStar MF Rank</i>	89	89	89	92	85	90	95	77	90	46	88	76	Mar-04

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Performance Report Card

	Ending June 30, 2017								Calendar Years			Inception	
	2017 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2016 (%)	2015 (%)	2014 (%)	Return (%)	Since
Vanguard Short-Term Bond Instl	0.6	1.1	0.1	1.3	1.3	1.2	--	--	1.5	1.0	1.3	1.3	Dec-11
<i>BBgBarc US Govt/Credit 1-5 Yr. TR</i>	<i>0.6</i>	<i>1.1</i>	<i>0.1</i>	<i>1.4</i>	<i>1.3</i>	<i>1.3</i>	<i>1.7</i>	<i>3.0</i>	<i>1.6</i>	<i>1.0</i>	<i>1.4</i>	<i>1.4</i>	<i>Dec-11</i>
<i>Short-Term Bond MStar MF Rank</i>	<i>56</i>	<i>72</i>	<i>99</i>	<i>73</i>	<i>59</i>	<i>77</i>	<i>--</i>	<i>--</i>	<i>84</i>	<i>15</i>	<i>48</i>	<i>83</i>	<i>Dec-11</i>
DFA Five-Yr Global Fxd-Inc I	0.8	1.6	-0.1	1.9	1.9	1.9	2.6	3.3	1.8	1.4	2.9	2.1	Jun-13
<i>Citi WGBI 1-5 Yr Hdg USD</i>	<i>0.4</i>	<i>0.6</i>	<i>0.3</i>	<i>1.3</i>	<i>1.3</i>	<i>1.4</i>	<i>1.5</i>	<i>2.5</i>	<i>1.5</i>	<i>1.0</i>	<i>1.9</i>	<i>1.4</i>	<i>Jun-13</i>
<i>World Bond MStar MF Rank</i>	<i>82</i>	<i>86</i>	<i>72</i>	<i>89</i>	<i>35</i>	<i>59</i>	<i>72</i>	<i>81</i>	<i>80</i>	<i>3</i>	<i>42</i>	<i>59</i>	<i>Jun-13</i>

-Total Policy Benchmark = 45% BofA Merrill Lynch 91-Day T-Bill / 17% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 11% BBgBarc US Govt/Credit Int TR / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE

- Total Operating & Short Term Benchmark = 95% BofA Merrill Lynch 91-Day T-Bill / 5% BBgBarc US Govt 1-3 Yr TR

-Total Long Term/ Reserves Fund Benchmark = 27% Russell 3000 / 8% MSCI EAFE / 15% Total Alternatives Benchmark / 30% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 20% BBgBarc US Govt/Credit Int TR

- Vanguard Mid Cap Index Benchmark = 100% CRSP US Mid Cap TR USD

- Total Alternatives Benchmark = 25% FTSE NAREIT Developed / 75% HFRI Fund of Funds Composite Index

- CPI +3% = Consumer Price Index Shifted

- Total Fixed Income Benchmark = 64% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 36% BBgBarc US Govt/Credit Int TR

Performance Report Card

	Ending June 30, 2017								Calendar Years			Inception	
	2017 Q2 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2016 (%)	2015 (%)	2014 (%)	Return (%)	Since
YSU Endowment Fund	1.6	5.6	9.5	7.7	6.2	--	--	--	8.5	-0.3	10.5	8.0	Jun-13
<i>60/40 S&P 500/BBgBarc US Aggregate</i>	2.4	6.5	10.3	7.7	6.9	9.6	10.6	6.4	8.3	1.3	10.6	9.1	Jun-13
Kilcawley Center	2.5	6.3	10.4	7.5	2.2	--	--	--	4.9	-5.3	8.6	6.4	Jun-13
<i>60/40 S&P 500/BBgBarc US Aggregate</i>	2.4	6.5	10.3	7.7	6.9	9.6	10.6	6.4	8.3	1.3	10.6	9.1	Jun-13
The Alumni License Plate Account Endowment Fund	1.3	3.1	9.8	7.1	5.5	--	--	--	13.8	-0.2	7.1	7.1	Jun-13
<i>60/40 S&P 500/BBgBarc US Aggregate</i>	2.4	6.5	10.3	7.7	6.9	9.6	10.6	6.4	8.3	1.3	10.6	9.1	Jun-13
Vanguard Balanced Index Adm	2.4	6.3	10.6	7.2	6.5	9.6	10.5	6.6	8.8	0.5	10.0	0.6	Jun-17
<i>Vanguard Balanced Benchmark</i>	2.4	6.3	10.7	7.2	6.5	9.6	10.5	6.4	8.8	0.7	10.0	0.5	Jun-17

ENDOWMENT HOLDINGS

- YSU Endowment (Huntington)
 - Equity Mutual Funds – 10% (14 Mutual Funds & ETFs)
 - Stocks – 66% (50-60 Stocks, U.S. Large Cap)
 - Fixed Income Mutual Funds – 2% (Federated Total Return Bond)
 - Bonds – 14% (7 Bonds, U.S. Corporate Debt)
 - Cash – 8%
- Kilcawley (Farmer's Trust)
 - Vanguard Balanced Index Fund (Adm) – 100%
- Alumni License Plate (Farmer's Trust)
 - Vanguard Balanced Index Fund (Adm) – 100%

DEFINITIONS AND 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.

DEFINITIONS AND DISCLOSURES

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.



**RESOLUTION TO APPROVE
HARTLAND'S RECOMMENDATION TO REBALANCE THE
NON-ENDOWMENT LONG-TERM INVESTMENT POOL**

WHEREAS, the Investment Subcommittee of the Board of Trustees of Youngstown State University is responsible for identification of asset classes, strategic asset allocation, acceptable asset ranges above and below the strategic asset allocation, and selecting investment managers, pursuant to University policy 3356-03-10; and

WHEREAS, the Investment Subcommittee has consulted with the University's investment advisors and recommends rebalancing the Non-Endowment Long-Term Investment Pool.

NOW, THEREFORE, BE IT RESOLVED, that the Investment Subcommittee of the Board of Trustees of Youngstown State University does hereby approve the rebalance, as shown on page 16 of the September 6, 2017. Investment Subcommittee Agenda item C.1.a.

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REBALANCE RECOMMENDATION (ACTION)

	Market Value as of 7/31/2017		Change	New Allocation		Policy Target	Policy Range	Difference
	\$	%		\$	%			
Total Operating & Short Term	\$6,176,666	100.0%	\$0	\$6,176,666	100.0%	100.0%		
Operating Assets	\$5,100,012	82.6%	\$0	\$5,100,012	82.6%		60-100%	
JPMorgan 100% U.S. Treas. MM Instl	\$55,171	0.9%		\$55,171	0.9%			
Star Plus Account*	\$5,044,841	81.7%		\$5,044,841	81.7%			
Short-Term Assets	\$1,076,654	17.4%	\$0	\$1,076,654	17.4%		0-40%	
Vanguard Short-Term Federal Adm	\$1,076,654	17.4%		\$1,076,654	17.4%			
Total Long Term Reserves Pool	\$58,443,464	100.0%	\$0	\$58,443,464	100.0%	100.0%		
Domestic Equity	\$17,077,627	29.2%	-\$750,000	\$16,327,627	27.9%	27.0%	20-35%	0.9%
Large Cap	\$12,086,293	20.7%	-\$500,000	\$11,586,293	19.8%			
TRP Instl US Structured Research	\$4,967,086	8.5%		\$4,967,086	8.5%			
Vanguard 500 Index Adm	\$7,119,207	12.2%	-\$500,000	\$6,619,207	11.3%			
Small/Mid Cap	\$4,991,334	8.5%	-\$250,000	\$4,741,334	8.1%			
Vanguard Mid Cap Index Adm	\$2,481,517	4.2%	-\$250,000	\$2,231,517	3.8%			
Loomis Sayles Small Growth Instl	\$1,318,514	2.3%		\$1,318,514	2.3%			
Victory Integrity Small Cap Value Y	\$1,191,303	2.0%		\$1,191,303	2.0%			
International Equity	\$5,118,202	8.8%	\$0	\$5,118,202	8.8%	8.0%	0-15%	0.8%
William Blair International Growth I	\$2,497,320	4.3%		\$2,497,320	4.3%			
Dodge & Cox International Stock	\$2,620,882	4.5%		\$2,620,882	4.5%			
Total Equity	\$22,195,829	38.0%	-\$750,000	\$21,445,829	36.7%	35.0%	25-45%	1.7%
Alternatives	\$8,952,287	15.3%	\$0	\$8,952,287	15.3%	15.0%	0-20%	0.3%
Jhancock Global Absolute Return I	\$2,053,518	3.5%		\$2,053,518	3.5%			
Wells Fargo Adv Absolute Return I	\$2,564,933	4.4%		\$2,564,933	4.4%			
Diamond Hill Long-Short I	\$2,644,751	4.5%		\$2,644,751	4.5%			
Voya Global Real Estate I	\$0	0.0%		\$0	0.0%			
Brookfield Global Real Estate	\$1,689,084	2.9%		\$1,689,084	2.9%			
Fixed Income	\$27,295,348	46.7%	\$750,000	\$28,045,348	48.0%	50.0%		
Short Term Fixed Income	\$16,476,875	28.2%	\$250,000	\$16,726,875	28.6%	30.0%	25-45%	-1.4%
YSU Short Term Bond	\$12,854,062	22.0%	\$250,000	\$13,104,062	22.4%			
DFA Five-Year Global	\$1,831,530	3.1%		\$1,831,530	3.1%			
Vanguard Short Term Bond Index	\$1,791,282	3.1%		\$1,791,282	3.1%			
Intermediate Fixed Income	\$10,818,473	18.5%	\$500,000	\$11,318,473	19.4%	20.0%	10-30%	-0.6%
JPMorgan Core Bond Ultra R6	\$4,166,730	7.1%	\$500,000	\$4,666,730	8.0%			
YSU Intermediate Term Bond	\$3,991,476	6.8%		\$3,991,476	6.8%			
Prudential High Yield Z	\$2,660,267	4.6%		\$2,660,267	4.6%			
Total University Assets	\$64,620,130			\$64,620,130				



**RESOLUTION TO APPROVE
HARTLAND'S RECOMMENDATION TO CHANGE CUSTODIANS OF
ENDOWMENT ASSETS**

WHEREAS, the Investment Subcommittee of the Board of Trustees of Youngstown State University is responsible for selecting and monitoring investment managers, selecting an investment consulting organization, to control costs of administering and managing the funds pursuant to University policy; and

WHEREAS, the Investment Subcommittee has consulted with the University's investment advisors and recommends changing custodians to PNC Bank for the Endowment Assets held at Farmer's Trust.

NOW, THEREFORE, BE IT RESOLVED, that the Investment Subcommittee of the Board of Trustees of Youngstown State University does hereby approve the change in custodian for the Kilcawley Center & Alumni License Plate Accounts held at Farmer's Trust to PNC Bank, as shown on page 20 of the September 6, 2017, Investment Subcommittee Agenda item C.1.a.

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CUSTODIAN REVIEW (ACTION)

- Hartland recommends consolidating Endowment assets to the same custodian as the Non-Endowment assets (PNC Bank)
- Assets held at Farmer's Trust are not being managed
- PNC Bank's custodian fee is 0.03% (3 bps)
- Huntington will continue to manage and hold the YSU Endowment (\$10 million)

- **Recommendation:** Move assets currently at Farmer's Trust to PNC Bank
 - Kilcawley Center
 - Alumni License Plate