



**YOUNGSTOWN
STATE
UNIVERSITY**

**BOARD OF TRUSTEES
INVESTMENT SUBCOMMITTEE**

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

**Wednesday, June 6, 2018
3:30 p.m. or immediately following
previous meeting**

**Tod Hall
Board Meeting Room**

AGENDA

- A. Disposition of Minutes for Meetings Held June 1, 2016; and March 14, 2018**
- B. Old Business**
- C. Committee Items**

1. Discussion Item

- Tab C.1.a. a. June 6, 2018 Quarterly Portfolio Asset Allocation and Investment Performance Review**
Mike Shebak, Sarah Parker and John Colla will report.

2. Action Item

- Tab C.2.a. a. Resolution to Approve Hartland's Recommendation to Rebalance the Non-Endowment Long-Term Investment Pool**
Mike Shebak, Sarah Parker and John Colla will report.

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

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June 6, 2018

YOUNGSTOWN STATE UNIVERSITY NON-ENDOWMENT & ENDOWMENT ASSETS

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Cleveland, Ohio 44114
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- I. 2018 Initiatives
- II. Market Update
- III. Non-Endowment Assets: 1Q18 Performance & Asset Allocation Review
 - Domestic & International Equity Overview
 - Rebalance Recommendation (Action)
- IV. Endowment Assets: 1Q18 Performance & Asset Allocation Review

2018 OVERSIGHT DASHBOARD

		1Q	2Q	3Q	4Q	Comments:
Strategic/ Administrative	Investment Policy Review				<input type="checkbox"/>	
	Strategic Asset Allocation Review				<input type="checkbox"/>	
	Peer Review				<input type="checkbox"/>	
	2019 Oversight Dashboard				<input type="checkbox"/>	
Portfolio	Alternative Investments Review			<input type="checkbox"/>		Review GARS
	Fixed Income Review	✓				Review Lord Abbett Short Duration
	Domestic Equity Review		✓			
	International Equity Review		✓			
	Active Equity Managers					Pending
Performance	Capital Markets Review	✓	✓	<input type="checkbox"/>	<input type="checkbox"/>	
	Quarterly Performance Review	✓	✓	<input type="checkbox"/>	<input type="checkbox"/>	
Other	Fee Review			<input type="checkbox"/>		
	ORC Compliance Review			<input type="checkbox"/>		

Last Reviewed

Investment Policy:	12/6/2017
Strategic Asset Allocation:	12/6/2017
Fee Review:	12/6/2017

Meeting Schedule

1Q- March 14, 2018
2Q- June 6, 2018
3Q- September 5, 2018
4Q- December 5, 2018

Follow-up Items

- Share class conversions have been executed following strategies in 1Q2018:
- 1) Jhancock Global Absolute Return
 - 2) Diamond Hill Long-Short
 - 3) JPMorgan Core Bond Fund
- \$8 million cash raise & realized gain completed in 1Q2018.

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MARKET UPDATE

Market update summary text.

- 1. Market update item 1
- 2. Market update item 2
- 3. Market update item 3

Market update summary text.

- 4. Market update item 4
- 5. Market update item 5
- 6. Market update item 6

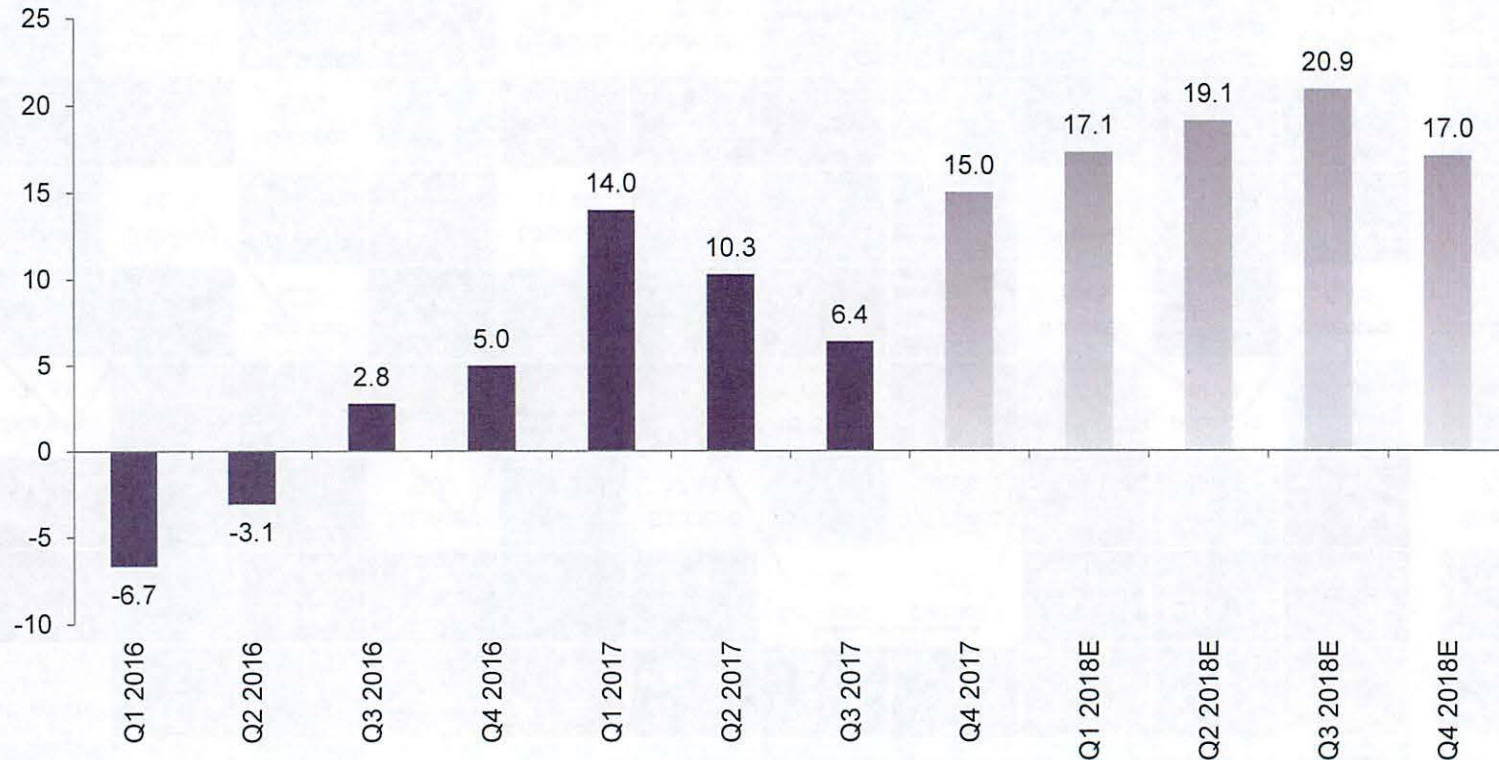
Market update summary text.

PERIODIC CHART: ASSET CLASSES

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	04/08 - 03/18	Annual	Volatility
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 37.3%	Glb Bond 4.5%	Sm/Mid 10.3%	REITs 23.4%	
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 25.0%	Em Mkt 1.4%	Large Cap 9.5%	Em Mkt 22.5%	
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 21.8%	Hdg Fnds 1.0%	Hi Yld 8.1%	Sm/Mid 18.7%	
Hdg Fnds 10.3%	Hdg Fnds -21.4%	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%	Sm/Mid 16.8%	Cash 0.0%	Balanced 7.7%	Dev Intl 18.4%	
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%	Balanced 14.5%	Sm/Mid -0.2%	REITs 7.0%	Large Cap 15.1%	
Balanced 6.2%	Hi Yld -26.4%	Large Cap 26.5%	Balanced 12.2%	Large Cap 2.1%	Hi Yld 15.5%	Hi Yld 7.4%	Hdg Fnds 3.4%	Hdg Fnds -0.3%	Balanced 8.4%	Glb Bond 9.3%	Balanced -0.7%	US Bonds 3.6%	Hi Yld 10.5%	
Large Cap 5.5%	Sm/Mid -36.8%	Balanced 18.5%	Dev Intl 7.8%	Cash 0.1%	Balanced 11.4%	REITs 3.2%	Hi Yld 2.5%	Dev Intl -0.8%	US Bonds 2.7%	REITs 9.3%	Large Cap -0.8%	Em Mkt 3.0%	Balanced 9.1%	
Cash 5.0%	Large Cap -37.0%	Hdg Fnds 11.5%	US Bonds 6.6%	Sm/Mid -2.5%	Hdg Fnds 4.8%	Cash 0.1%	Cash 0.0%	Sm/Mid -2.9%	Glb Bond 1.9%	Hdg Fnds 7.8%	Hi Yld -0.9%	Dev Intl 2.7%	Glb Bond 8.1%	
Hi Yld 2.2%	REITs -37.3%	US Bonds 5.9%	Glb Bond 6.1%	Hdg Fnds -5.7%	US Bonds 4.2%	US Bonds -2.0%	Em Mkt -2.2%	Hi Yld -4.6%	Dev Intl 1.0%	Hi Yld 7.5%	US Bonds -1.5%	Glb Bond 1.9%	Hdg Fnds 5.0%	
Sm/Mid 1.4%	Dev Intl -43.4%	Glb Bond 4.4%	Hdg Fnds 5.7%	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 3.5%	Dev Intl -1.5%	Hdg Fnds 1.6%	US Bonds 3.3%	
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 -4.5%	Em Mkt -14.9%	Cash 0.3%	Cash 0.9%	REITs -6.7%	Cash 0.3%	Cash 0.2%	

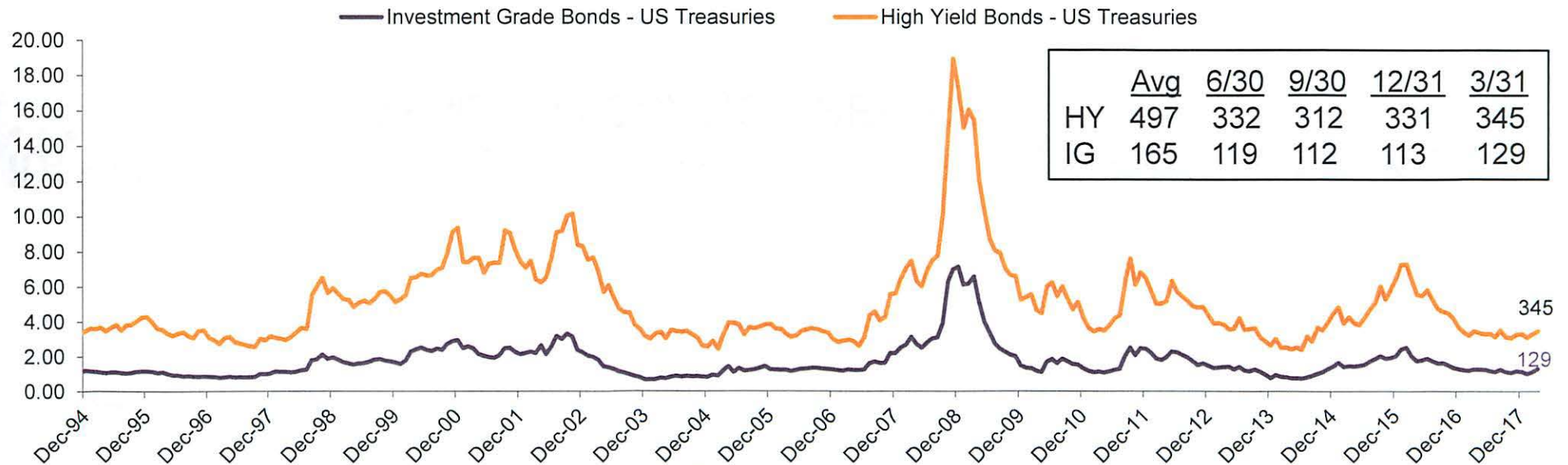
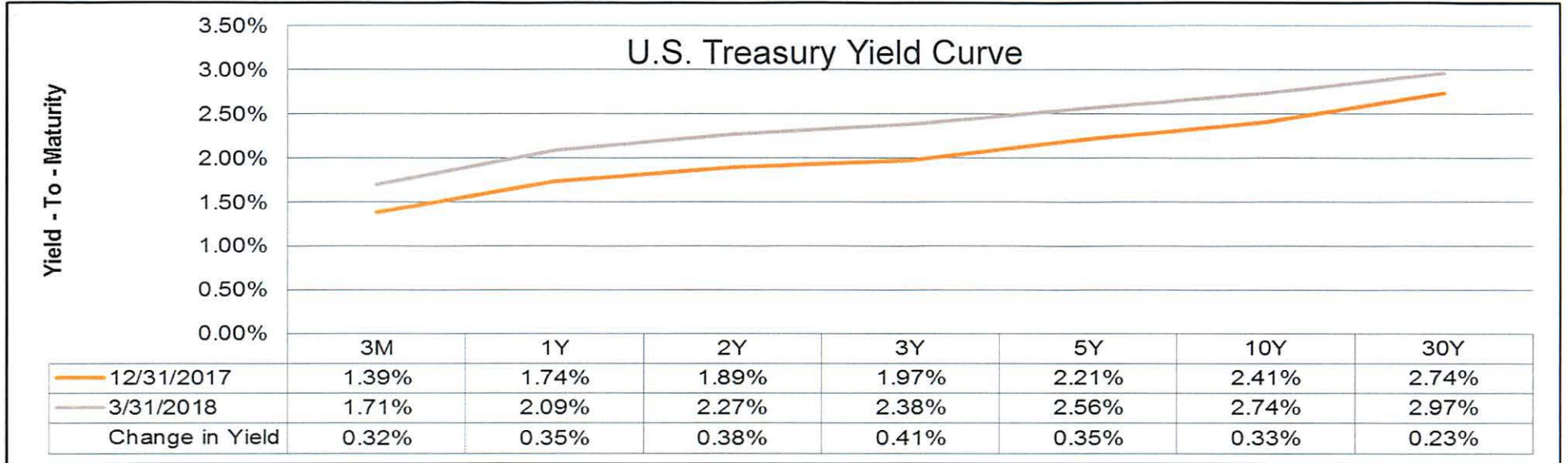
Past performance is not a guarantee of future results. Asset classes represented by: Large Cap – S&P 500 Index; Sm/Mid – Russell 2500 Index; Dev Intl – MSCI EAFE Index; Em Mkt – MSCI Emerging Markets Index; Hi Yld – Bank of America Merrill Lynch U.S. High Yield Master II; US Bonds – Barclays Capital 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 3/31/2018. Source: Zephyr Associates.

S&P 500 EARNINGS GROWTH



- 2018 estimated earnings growth 18.4%, up from Dec. 31st estimate of 13.1% and from Sept. 30th estimate of 11.3%.
- All eleven sectors projected to report year-over-year earnings growth for Q1 2018, with Energy, Materials, Technology, and Financials leading the way

FIXED INCOME: LOW YIELDS, TIGHT SPREADS



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 3/31/2018

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NON-ENDOWMENT ASSETS: 1Q18 PERFORMANCE & ASSET ALLOCATION REVIEW



NON-ENDOWMENT PERFORMANCE REVIEW

Non-Endowment Assets	Market Value	1Q2018	YTD	1 Yr	3 Yrs	5 Yrs	2017	2016	2015	Since Inception****
Operating & Short-Term Pool	\$33.805 Million	0.3%	0.3%	0.9%	0.5%	0.3%	0.7%	0.3%	0.1%	0.2%
	<i>Benchmark*</i>	0.3%	0.3%	1.1%	0.5%	0.3%	0.8%	0.4%	0.1%	0.3%
Long-Term Pool	\$52.709 Million	-0.7%	-0.7%	6.4%	4.1%	4.8%	10.5%	4.9%	-0.3%	5.1%
	<i>Benchmark**</i>	-0.6%	-0.6%	5.8%	4.0%	4.4%	9.3%	4.7%	0.3%	4.5%
Total Non-Endowment Assets	\$86.514 Million	-0.2%	-0.2%	5.3%	3.3%	3.5%	7.8%	4.0%	-0.5%	3.8%
	<i>Benchmark***</i>	-0.2%	-0.2%	3.6%	2.4%	2.5%	5.4%	2.7%	0.2%	3.0%

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

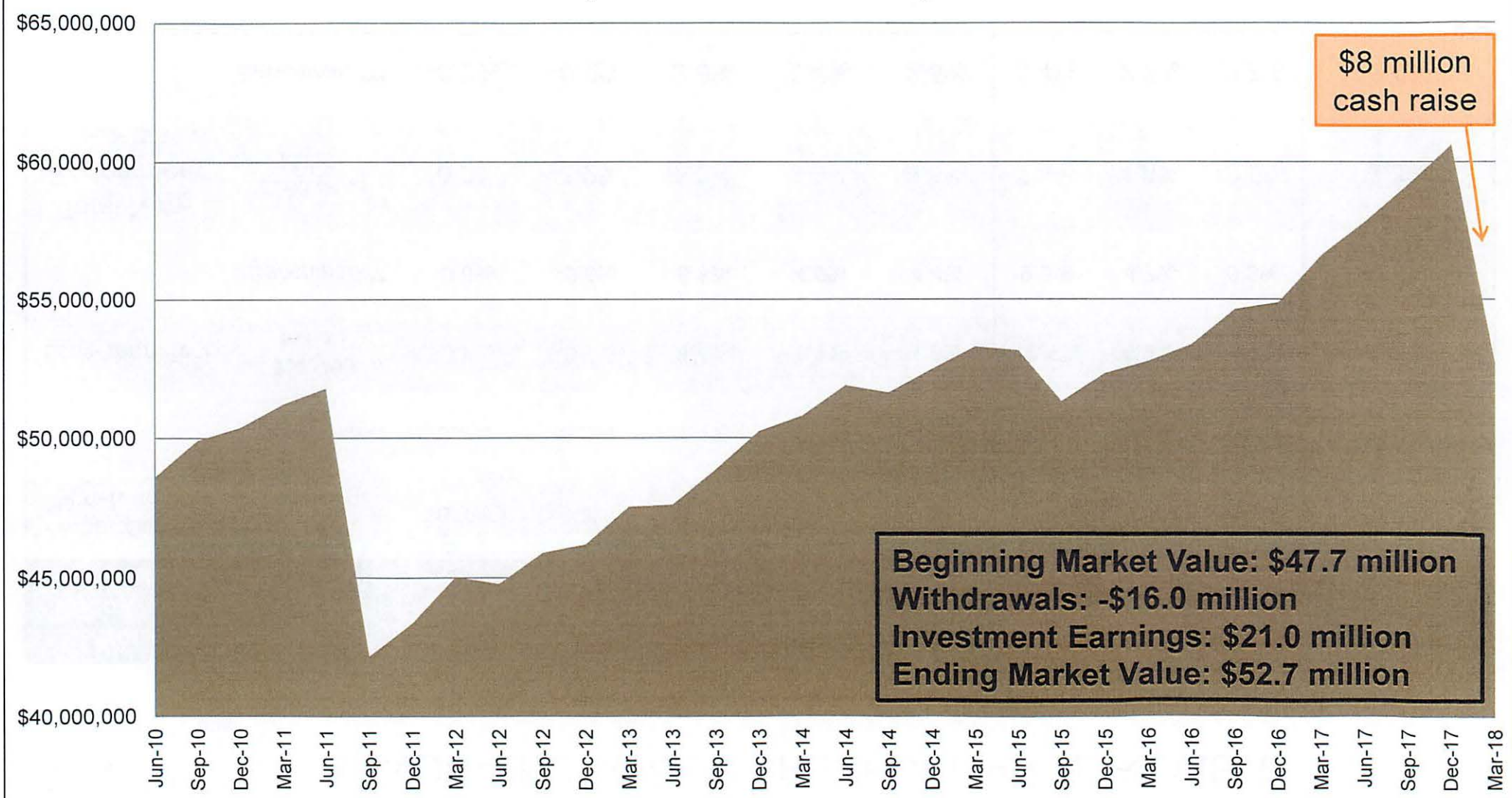
**27% Russell 3000 / 8% MSCI EAFE Gross / 15% Total Alternatives Benchmark / 30% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 20% BBgBarc US Govt/Credit Int TR

***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

ATTRIBUTION OF MARKET VALUE CHANGE: LONG-TERM POOL

**Long-Term Pool Market Value Change
(6/30/2010-3/31/2018)**



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"> 97% Cash 3% Short-Term Fixed Income 	<u>In Compliance</u>	Liquid; modest return overtime though has increased with the Fed raising rates (+0.3% 1Q18, +0.9% 1YR); investments include Star Plus money market.
Long-Term Pool	<ul style="list-style-type: none"> Domestic Equity 28% 	<p><u>In Compliance</u></p> <p>Overweight 1%</p>	<p><i>Domestic Equity (-0.3% 1Q18, +14.4% 1YR):</i> Small cap manager Loomis Sayles outpaced its respective benchmark by +2.5% for the first quarter benefitting from stock selection in technology and healthcare (+4.8% 1Q18, +22.9% 1YR).</p>
	<ul style="list-style-type: none"> International Equity 8% 	In-Line	<p><i>International Equity (-0.9% 1Q18, +15.9% 1YR):</i> William Blair International Growth outpaced the index by 1.6% in the first quarter due to stock selection across most sectors (+0.3% 1Q18, +21.3% 1YR).</p>
	<ul style="list-style-type: none"> Alternatives 15% 	In-Line	<p><i>Alternative Investments (-1.6% 1Q18, +3.7% 1YR):</i> Wells Fargo Absolute Return (GMO) led relative to all alternative investment strategies due to their tactical exposures to emerging markets and alternatives.</p>
	<ul style="list-style-type: none"> Short-Term Fixed Income 25% 	Underweight 5%	
	<ul style="list-style-type: none"> Intermediate Fixed Income 24% 	Overweight 4%	<p><i>Fixed Income (-0.6% 1Q18, +0.9% 1YR):</i> All fixed income managers produced modest negative returns due to downward price pressure of rising interest rates across the yield curve.</p>

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DOMESTIC & INTERNATIONAL EQUITY OVERVIEW

DOMESTIC EQUITY PERFORMANCE REVIEW

	Ending March 31, 2018								Calendar Years				Inception Date
	2018 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	
Total Domestic Equity	-0.3	-0.3	14.4	16.2	10.1	13.1	12.2	--	21.6	11.7	0.7	15.2	Jun-10
<i>Russell 3000</i>	-0.6	-0.6	13.8	15.9	10.2	13.0	12.4	9.6	21.1	12.7	0.5	15.2	
Vanguard Institutional Index	-0.8	-0.8	14.0	15.5	10.7	13.3	12.7	9.5	21.8	11.9	1.4	15.3	Jun-10
<i>S&P 500</i>	-0.8	-0.8	14.0	15.6	10.8	13.3	12.7	9.5	21.8	12.0	1.4	15.3	
<i>Large Blend MStar MF Rank</i>	44	44	39	38	12	18	16	30	32	28	24	21	
Vanguard Mid Cap Index Adm	0.0	0.0	12.3	14.5	7.9	12.3	11.3	10.1	19.3	11.2	-1.3	13.6	Sep-10
<i>Vanguard Mid Cap Index Benchmark</i>	0.0	0.0	12.4	14.6	7.9	12.3	11.3	10.2	19.3	11.2	-1.3	13.6	
<i>Mid-Cap Blend MStar MF Rank</i>	15	15	24	45	40	14	16	34	16	74	19	21	
Loomis Sayles Sm Growth Instl	4.8	4.8	22.9	21.5	10.2	13.2	11.6	11.6	26.9	5.7	1.1	15.0	Sep-10
<i>Russell 2000 Growth</i>	2.3	2.3	18.6	20.8	8.8	12.9	11.3	11.0	22.2	11.3	-1.4	14.2	
<i>Small Growth MStar MF Rank</i>	18	18	23	38	29	25	32	31	22	85	20	26	
Victory Integrity Small Value Y	-3.7	-3.7	7.0	15.5	6.5	10.9	10.2	10.9	12.4	24.4	-6.7	12.8	Sep-10
<i>Russell 2000 Value</i>	-2.6	-2.6	5.1	16.6	7.9	10.0	9.4	8.6	7.8	31.7	-7.5	11.8	
<i>Small Value MStar MF Rank</i>	84	84	45	28	57	29	20	6	19	61	62	21	

DOMESTIC EQUITY LOOK-THROUGH

	Vanguard Institutional Index I	Vanguard Mid Cap Index Admiral	Loomis Sayles Small Cap Growth Instl	Victory Integrity Small-Cap Value Y	Current Portfolio	Russell 3000
Current Allocation	71.8%	14.4%	6.9%	6.9%	100.0%	
Ticker	VINIX	VIMAX	LSSIX	VSVIX		
Subadvisor						
Expense Ratio %	0.04	0.05	0.95	1.15	0.18	
Manager Tenure (Longest # yrs)	17	20	13	14		
# of Stock Holdings	512	343	97	135		2936
Top Ten Holdings %	20.6	7.0	14.2	13.5		17.2
Cash %	0.3	0.4	4.3	1.6	0.7	0.0
International Stock %	1.3	0.9	4.0	0.0	1.3	1.6
Turnover Ratio %	5.0	14.0	45.0	58.0	12.7	0.0
Market Cap						
Average Market Cap (\$ millions)	100,151	14,296	2,893	2,694	74,342	58,408
Market Cap Giant %	56.9	0.0	0.0	0.0	40.9	47.3
Market Cap Large %	34.4	36.9	0.0	0.0	30.0	29.4
Market Cap Mid %	8.6	63.1	16.9	14.1	17.4	17.1
Market Cap Small %	0.0	0.0	69.7	70.0	9.7	5.3
Market Cap Micro %	0.0	0.0	13.4	15.9	2.0	0.8
Sectors						
Consumer Discretionary %	12.7	16.2	14.4	12.1	13.3	12.9
Consumer Staples %	7.5	4.2	1.0	3.0	6.3	6.8
Energy %	5.5	5.0	2.3	8.1	5.4	5.2
Financials %	15.0	15.2	10.5	28.9	15.7	15.4
Health Care %	13.8	9.0	23.8	6.3	13.3	13.4
Industrials %	10.2	13.4	18.2	15.2	11.6	10.9
Technology %	25.2	19.1	27.0	8.8	23.3	24.2
Materials %	2.9	6.1	0.9	5.4	3.4	3.4
Real Estate %	2.6	6.7	0.0	7.6	3.4	3.4
Telecom %	1.9	0.6	2.0	0.0	1.6	1.7
Utilities %	2.7	4.5	0.0	4.6	2.9	2.7

Source: Morningstar.

INTERNATIONAL EQUITY PERFORMANCE REVIEW

	Ending March 31, 2018								Calendar Years				Inception Date
	2018 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	
Total International Equity	-0.9	-0.9	15.9	15.5	5.0	7.3	4.9	--	26.6	2.7	-5.9	5.9	Sep-10
MSCI EAFE	-1.7	-1.7	14.6	13.1	5.5	6.5	5.3	2.7	25.0	1.0	-0.8	6.3	
MSCI ACWI ex USA	-1.3	-1.3	16.4	14.7	6.1	5.9	4.2	2.7	27.2	4.5	-5.7	5.4	
William Blair International Growth I	0.3	0.3	21.3	14.3	6.2	7.0	6.5	3.6	29.5	-2.5	0.0	9.5	Jun-12
MSCI ACWI ex USA	-1.3	-1.3	16.4	14.7	6.1	5.9	4.2	2.7	27.2	4.5	-5.7	8.0	
Foreign Large Growth MStar MF Rank	41	41	35	52	77	71	51	72	66	60	68	59	
Dodge & Cox Internat'l Stock	-2.1	-2.1	11.0	16.8	3.8	7.3	5.6	4.1	23.9	8.3	-11.4	6.6	Sep-10
MSCI EAFE	-1.7	-1.7	14.6	13.1	5.5	6.5	5.3	2.7	25.0	1.0	-0.8	6.3	
Foreign Large Value MStar MF Rank	86	86	83	11	83	25	23	12	43	18	95	30	

INTERNATIONAL EQUITY LOOK-THROUGH

	William Blair International Growth I	Dodge & Cox International Stock	Current Portfolio	MSCI ACWI Ex USA
Current Allocation	50.1%	49.9%	100%	
Ticker	BIGIX	DODFX		
Subadvisor				
Expense Ratio %	1.13	0.64	0.89	
Manager Tenure (Longest # yrs)	5	17		
# of Stock Holdings	212	112		1866
Top Ten Holdings %	15.5	28.3		9.5
Cash %	1.6	1.4	1.5	0.0
Turnover Ratio %	101.0	17.0	59.1	0.0
Market Cap				
Average Market Cap (\$ millions)	25,369	47,273	36,306	36,032
Market Cap Giant %	45.1	70.0	57.5	58.0
Market Cap Large %	38.3	26.7	32.5	34.4
Market Cap Mid %	16.2	3.3	9.7	7.5
Market Cap Small %	0.5	0.0	0.3	0.0
Market Cap Micro %	0.0	0.0	0.0	0.0

Source: Morningstar.

INTERNATIONAL EQUITY LOOK-THROUGH

	William Blair International Growth I	Dodge & Cox International Stock	Current Portfolio	MSCI ACWI Ex USA
Sectors				
Consumer Discretionary %	14.8	16.7	15.8	11.3
Consumer Staples %	5.0	1.1	3.0	9.6
Energy %	3.4	7.6	5.5	6.7
Financials %	18.4	27.5	22.9	23.1
Real Estate %	2.5	0.6	1.5	3.2
Health Care %	7.1	15.8	11.4	7.6
Industrials %	16.8	8.0	12.4	11.9
Technology %	21.7	13.2	17.5	11.5
Materials %	7.5	6.0	6.8	8.2
Telecom %	0.1	3.5	1.8	4.0
Utilities %	2.7	0.0	1.4	2.9
Regions				
North America %	5.2	9.7	7.5	7.3
Latin America %	4.5	7.5	6.0	2.9
United Kingdom %	12.4	14.0	13.2	12.1
Developed Europe %	35.5	38.4	37.0	30.8
Emerging Europe %	0.7	1.3	1.0	1.5
Africa/Middle East %	1.7	5.4	3.5	2.4
Japan %	19.3	11.1	15.2	16.5
Australasia %	0.0	0.0	0.0	4.8
Developed Asia %	7.5	5.0	6.2	9.9
Emerging Asia %	13.1	7.7	10.4	11.9
Total MSCI Emerging %	24.1	25.9	25.0	25.0

Source: Morningstar.

REBALANCE RECOMMENDATION (ACTION)

	Market Value as of 5/4/2018		Change	New Allocation		Policy Target	Policy Range
	\$	%		\$	%		
Total Operating & Short Term	\$15,312,650	100.0%	\$0	\$15,312,650	100.0%	100.0%	
Operating Assets	\$14,243,357	93.0%	\$0	\$14,243,357	93.0%		60-100%
JPMorgan 100% U.S. Treas. MM Instl	\$9,170,443	59.9%		\$9,170,443	59.9%		
Star Plus Account*	\$5,072,914	33.1%		\$5,072,914	33.1%		
Short-Term Assets	\$1,069,294	7.0%	\$0	\$1,069,294	7.0%		0-40%
Vanguard Short-Term Federal Adm	\$1,069,294	7.0%		\$1,069,294	7.0%		
Total Long Term Reserves Pool	\$52,753,873	100%	\$0	\$52,753,873	100%	100.0%	
Domestic Equity	\$14,904,569	28.3%	-\$500,000	\$14,404,569	27.3%	27.0%	20-35%
Large Cap	\$10,692,544	20.3%	-\$500,000	\$10,192,544	19.3%		
Vanguard Instl Index	\$10,692,544	20.3%	-\$500,000	\$10,192,544	19.3%		
Small/Mid Cap	\$4,212,024	8.0%	\$0	\$4,212,024	8.0%		
Vanguard Mid Cap Index Inv	\$2,128,531	4.0%		\$2,128,531	4.0%		
Loomis Sayles Small Growth Instl	\$1,044,653	2.0%		\$1,044,653	2.0%		
Victory Integrity Small Cap Value Y	\$1,038,841	2.0%		\$1,038,841	2.0%		
International Equity	\$4,325,260	8.2%	\$500,000	\$4,825,260	9.1%	8.0%	0-15%
William Blair International Growth I	\$2,155,130	4.1%	\$250,000	\$2,405,130	4.6%		
Dodge & Cox International Stock	\$2,170,129	4.1%	\$250,000	\$2,420,129	4.6%		
Total Equity	\$19,229,828	36.5%	\$0	\$19,229,828	36.5%	35.0%	25-45%
Alternatives	\$7,840,016	14.9%	\$0	\$7,840,016	14.9%	15.0%	0-20%
Jhancock Global Absolute Return R6	\$1,740,687	3.3%		\$1,740,687	3.3%		
Wells Fargo Adv Absolute Return I	\$2,354,990	4.5%		\$2,354,990	4.5%		
Diamond Hill Long-Short Y	\$2,337,683	4.4%		\$2,337,683	4.4%		
Brookfield Global Real Estate	\$1,406,657	2.7%		\$1,406,657	2.7%		
Fixed Income	\$25,615,086	48.6%	\$0	\$25,615,086	48.6%	50.0%	
Short Term Fixed Income	\$14,692,570	27.9%	\$0	\$14,692,570	27.9%	30.0%	25-45%
YSU Short Term Bond	\$11,062,964	21.0%		\$11,062,964	21.0%		
DFA Five-Year Global	\$1,823,847	3.5%		\$1,823,847	3.5%		
Vanguard Short-Term Bond Index	\$1,816	0.0%	-\$1,816	\$0	0.0%		
Lord Abbett Short Duration	\$1,803,943	3.4%	\$1,816	\$1,805,759	3.4%		
Intermediate Fixed Income	\$10,922,516	20.7%	\$0	\$10,922,516	20.7%	20.0%	10-30%
JPMorgan Core Bond Fund I	\$4,592,868	8.7%		\$4,592,868	8.7%		
YSU Intermediate Term Fixed	\$3,931,711	7.5%		\$3,931,711	7.5%		
Prudential High Yield Q	\$2,397,937	4.5%		\$2,397,937	4.5%		
Cash	\$68,943	0.1%		\$68,943	0.1%		
Total University Assets	\$68,066,523			\$68,066,523			

*As of 12/31/2017

HARTLAND



independence
expertise
results

ENDOWMENT ASSETS: 1Q18 PERFORMANCE & ASSET ALLOCATION REVIEW

ENDOWMENT ASSETS PERFORMANCE & ASSET ALLOCATION REVIEW

Endowment Assets	Market Value	Asset Allocation	Composition	1Q2018	1-Yr	3-Yr	2017	2016	2015
YSU Endowment	\$10.6 million	77% Equities/ 23% Fixed Income & Cash	Stocks, Bonds, Mutual Funds	-1.3%	8.4%	7.0%	14.2%	8.5%	-0.3%
60% S&P 500 Index / 40% Barclays Index				-1.0%	8.8%	7.0%	14.2%	8.3%	1.3%
Kilcawley Center	\$106,808	60% Equities/ 40% Fixed Income	Mutual Fund	-0.9%	8.8%	5.0%	13.8%	4.9%	-5.3%
60% S&P 500 Index / 40% Barclays Index				-1.0%	8.8%	7.0%	14.2%	8.3%	1.3%
Alumni License Plate	\$543,432	60% Equities/ 40% Fixed Income	Mutual Fund	-0.9%	7.5%	6.7%	10.3%	13.8%	-0.2%
60% S&P 500 Index / 40% Barclays Index				-1.0%	8.8%	7.0%	14.2%	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)

See page 31 in appendix for detail on holdings.

Kilcawley Center & Alumni License Plate accounts- Transition to PNC as custodian completed on 11/1/2017. Historical allocation to single stock and bond positions resulted in large differences relative to benchmark. Both accounts are now currently invested in one low cost, balanced Vanguard mutual fund.

APPENDIX

IPS COMPLIANCE

As of March 31, 2018

Total Plan Asset Allocation Policy	Range	Current
Operating & Short-Term Pool	25% - 50%	39%
Long Term/ Reserves Pool	50% - 75%	61%

Operating & Short-Term Pool	Range	Current
Operating Assets	60% - 100%	97%
Short-Term Assets	0% - 40%	3%

Long Term/ Reserves Pool	Target	Range	Current
Domestic Equity	27%	20% - 35%	28%
International Equity	8%	0% - 15%	8%
Total Equity	35%	25% - 45%	36%
Alternatives	15%	0%-20%	15%
Short-Term Fixed Income	30%	25% - 45%	25%
Intermediate Fixed Income	20%	10% - 30%	24%
Cash & Cash Equivalents	0%	0% - 5%	0%

In Line
 Within Tolerance
 Review

SCHEDULE OF ASSETS

Asset Class	Market Value 12/31/17 (\$)	Market Value 3/31/18 (\$)	% of Total Plan	% of Pool	
Total University Assets	68,367,585	86,514,277	100.0	100.0	
Total Operating & Short Term	7,742,239	33,805,366	39.1	100.0	
JPMorgan 100% U.S. Tr Sec MM Inst	Cash	1,599,278	27,650,241	32.0	81.8
Star Plus	Cash	5,067,644	5,083,417	5.9	15.0
Vanguard Short-Term Federal Adm	US Fixed Income Short Term	1,075,317	1,071,708	1.2	3.2
Total Long Term/ Reserves Pool	60,625,347	52,708,911	60.9	99.9	
Total Domestic Equity	17,020,995	14,747,937	17.0	28.0	
Vanguard Institutional Index	US Stock Large Cap Core	0	10,587,388	12.2	20.1
Vanguard Mid Cap Index Inv	US Stock Mid Cap Core	0	2,123,487	2.5	4.0
Loomis Sayles Sm Growth Instl	US Stock Small Cap Growth	1,452,853	1,016,388	1.2	1.9
Victory Integrity Small Value Y	US Stock Small Cap Value	1,316,535	1,020,675	1.2	1.9
Total International Equity	5,422,034	4,304,397	5.0	8.2	
William Blair International Growth I	International	2,704,309	2,155,130	2.5	4.1
Dodge & Cox Internat'l Stock	International	2,717,725	2,149,267	2.5	4.1
Total Alternatives	9,183,816	7,846,125	9.1	14.9	
John Hancock Global Absolute Return R6	Absolute Return	0	1,752,517	2.0	3.3
Wells Fargo Adv Absolute Return Instl	All Assets	2,649,024	2,369,450	2.7	4.5
Diamond Hill Long-Short Y	Long/Short Equity	0	2,352,180	2.7	4.5
Brookfield Global Listed Real Estate I	Global Real Estate	1,748,269	1,371,978	1.6	2.6
Total Fixed Income	28,998,502	25,741,594	29.8	48.8	
JPMorgan Core Bond	US Fixed Income Core	5,108,628	4,641,814	5.4	8.8
YSU Intermediate Term Bond	US Fixed Income Core	4,418,071	3,975,679	4.6	7.5
Prudential High Yield Q	US Fixed Income High Yield	2,701,843	2,390,324	2.8	4.5
YSU Short Term Bond	US Fixed Income Short Term	13,150,241	11,106,187	12.8	21.1
Lord Abbett Short Duration Income I	US Fixed Income Short Term	0	1,801,920	2.1	3.4
Vanguard Short-Term Bond Instl	US Fixed Income Short Term	1,789,136	1,823	0.0	0.0
DFA Five-Yr Global Fxd-Inc I	Global Fixed Income	1,830,583	1,823,847	2.1	3.5
Total Cash & Cash Equivalents	0	68,857	0.1	0.1	
PNC Govt MMkt	Global Fixed Income	0	68,857	0.1	0.1

PERFORMANCE REPORT CARD

	Ending March 31, 2018									Calendar Years			
	2018 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	Inception Date
Total University Assets	-0.2	-0.2	5.3	5.5	3.3	3.5	3.4	3.7	7.8	4.0	-0.5	3.8	Mar-04
<i>Total Policy Benchmark</i>	-0.2	-0.2	3.6	3.7	2.4	2.5	2.5	2.5	5.4	2.7	0.2	3.0	
Total Operating & Short Term	0.3	0.3	0.9	0.6	0.5	0.3	0.2	--	0.7	0.3	0.1	0.2	Jun-10
<i>Total Operating & Short Term Benchmark</i>	0.3	0.3	1.1	0.7	0.5	0.3	0.3	0.4	0.8	0.4	0.1	0.3	
JPMorgan 100% U.S. Tr Sec MM Inst	0.3	0.3	0.9	0.6	0.4	0.2	0.2	0.2	0.7	0.2	0.0	0.2	Sep-11
<i>ICE BofAML 91 Days T-Bills TR</i>	0.4	0.4	1.1	0.7	0.5	0.3	0.3	0.3	0.9	0.3	0.0	0.3	
<i>Money Market - Taxable MStar MF Rank</i>	37	37	47	52	54	54	59	69	55	60	93	58	
Vanguard Short-Term Federal Adm	-0.3	-0.3	0.1	0.2	0.6	0.7	1.1	1.8	0.8	1.2	0.8	1.0	Sep-10
<i>BBgBarc US Govt 1-5 Yr TR</i>	-0.4	-0.4	-0.1	-0.1	0.5	0.6	1.1	1.7	0.7	1.0	0.9	0.9	
<i>Short Government MStar MF Rank</i>	67	67	54	42	4	25	27	27	31	17	14	28	
Star Plus	0.3	0.3	0.9	0.7	0.5	--	--	--	0.7	0.4	0.2	0.4	Jan-14
<i>ICE BofAML 91 Days T-Bills TR</i>	0.4	0.4	1.1	0.7	0.5	0.3	0.3	0.3	0.9	0.3	0.0	0.4	
Total Long Term/ Reserves Pool	-0.7	-0.7	6.4	6.8	4.1	4.8	4.8	--	10.5	4.9	-0.3	5.1	Jun-10
<i>Total Long Term/ Reserves Fund Benchmark</i>	-0.6	-0.6	5.8	6.3	4.0	4.4	4.4	4.3	9.3	4.7	0.3	4.5	
Total Domestic Equity	-0.3	-0.3	14.4	16.2	10.1	13.1	12.2	--	21.6	11.7	0.7	15.2	Jun-10
<i>Russell 3000</i>	-0.6	-0.6	13.8	15.9	10.2	13.0	12.4	9.6	21.1	12.7	0.5	15.2	
TRP Instl US Structured Rsch	-0.2	-0.2	15.8	16.7	11.5	13.7	12.9	9.8	23.8	10.4	2.9	15.4	Jun-10
<i>S&P 500</i>	-0.8	-0.8	14.0	15.6	10.8	13.3	12.7	9.5	21.8	12.0	1.4	15.3	
<i>Large Blend MStar MF Rank</i>	20	20	18	15	4	8	11	19	17	56	11	14	
Vanguard Institutional Index	-0.8	-0.8	14.0	15.5	10.7	13.3	12.7	9.5	21.8	11.9	1.4	15.3	Jun-10
<i>S&P 500</i>	-0.8	-0.8	14.0	15.6	10.8	13.3	12.7	9.5	21.8	12.0	1.4	15.3	
<i>Large Blend MStar MF Rank</i>	44	44	39	38	12	18	16	30	32	28	24	21	

PERFORMANCE REPORT CARD

	Ending March 31, 2018								Calendar Years				Inception Date
	2018 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	
Vanguard 500 Index Adm	-0.8	-0.8	14.0	15.5	10.7	13.3	12.7	9.5	21.8	11.9	1.4	15.3	Jun-10
S&P 500	-0.8	-0.8	14.0	15.6	10.8	13.3	12.7	9.5	21.8	12.0	1.4	15.3	
Large Blend MStar MF Rank	44	44	39	38	12	18	16	30	32	28	24	21	
Vanguard Mid Cap Index Inv	0.0	0.0	12.3	14.5	7.9	12.3	11.3	10.1	19.3	11.2	-1.3	13.6	Sep-10
Vanguard Mid Cap Index Benchmark	0.0	0.0	12.4	14.6	7.9	12.3	11.3	10.2	19.3	11.2	-1.3	13.6	
Mid-Cap Blend MStar MF Rank	15	15	24	45	40	14	16	34	16	74	19	21	
Vanguard Mid Cap Index Adm	0.0	0.0	12.3	14.5	7.9	12.3	11.3	10.1	19.3	11.2	-1.3	13.6	Sep-10
Vanguard Mid Cap Index Benchmark	0.0	0.0	12.4	14.6	7.9	12.3	11.3	10.2	19.3	11.2	-1.3	13.6	
Mid-Cap Blend MStar MF Rank	15	15	24	45	40	14	16	34	16	74	19	21	
Loomis Sayles Sm Growth Instl	4.8	4.8	22.9	21.5	10.2	13.2	11.6	11.6	26.9	5.7	1.1	15.0	Sep-10
Russell 2000 Growth	2.3	2.3	18.6	20.8	8.8	12.9	11.3	11.0	22.2	11.3	-1.4	14.2	
Small Growth MStar MF Rank	18	18	23	38	29	25	32	31	22	85	20	26	
Victory Integrity Small Value Y	-3.7	-3.7	7.0	15.5	6.5	10.9	10.2	10.9	12.4	24.4	-6.7	12.8	Sep-10
Russell 2000 Value	-2.6	-2.6	5.1	16.6	7.9	10.0	9.4	8.6	7.8	31.7	-7.5	11.8	
Small Value MStar MF Rank	84	84	45	28	57	29	20	6	19	61	62	21	
Total International Equity	-0.9	-0.9	15.9	15.5	5.0	7.3	4.9	--	26.6	2.7	-5.9	5.9	Sep-10
MSCI EAFE	-1.7	-1.7	14.6	13.1	5.5	6.5	5.3	2.7	25.0	1.0	-0.8	6.3	
MSCI ACWI ex USA	-1.3	-1.3	16.4	14.7	6.1	5.9	4.2	2.7	27.2	4.5	-5.7	5.4	
William Blair International Growth I	0.3	0.3	21.3	14.3	6.2	7.0	6.5	3.6	29.5	-2.5	0.0	9.5	Jun-12
MSCI ACWI ex USA	-1.3	-1.3	16.4	14.7	6.1	5.9	4.2	2.7	27.2	4.5	-5.7	8.0	
Foreign Large Growth MStar MF Rank	41	41	35	52	77	71	51	72	66	60	68	59	

PERFORMANCE REPORT CARD

	Ending March 31, 2018								Calendar Years				
	2018 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	Inception Date
Dodge & Cox Internat'l Stock	-2.1	-2.1	11.0	16.8	3.8	7.3	5.6	4.1	23.9	8.3	-11.4	6.6	Sep-10
MSCI EAFE	-1.7	-1.7	14.6	13.1	5.5	6.5	5.3	2.7	25.0	1.0	-0.8	6.3	
Foreign Large Value MStar MF Rank	86	86	83	11	83	25	23	12	43	18	95	30	
Total Alternatives	-1.6	-1.6	3.7	4.6	1.8	--	--	--	7.9	3.5	--	1.3	Mar-15
Total Alternatives Benchmark	-0.7	-0.7	5.2	5.1	1.9	--	--	--	8.4	1.5	--	1.9	
John Hancock Global Absolute Return R6	-1.6	-1.6	1.6	1.5	-0.8	1.5	--	--	3.7	-2.5	1.7	1.5	Mar-16
HFRI Relative Value (Total) Index	0.3	0.3	3.2	6.7	3.6	4.1	4.5	5.2	5.1	7.7	-0.3	6.7	
Multialternative MStar MF Rank	71	71	61	68	74	81	--	--	67	88	12	68	
Wells Fargo Adv Absolute Return Instl	0.7	0.7	8.3	8.0	3.2	3.6	--	--	12.6	3.0	-4.6	2.3	Mar-15
HFRI Fund of Funds Composite Index	0.6	0.6	5.9	6.0	2.0	3.4	2.6	1.6	7.8	0.5	-0.3	2.1	
Diamond Hill Long-Short Y	-2.0	-2.0	0.9	6.9	4.3	6.7	7.1	4.4	6.0	10.5	-1.4	4.3	Mar-15
HFRX Equity Hedge Index	1.2	1.2	8.3	7.1	2.1	3.1	1.0	0.0	10.0	0.1	-2.3	2.1	
Long-Short Credit Mstar MF Rank	99	99	75	14	17	1	3	1	10	10	42	17	
Brookfield Global Listed Real Estate I	-4.2	-4.2	2.7	3.8	1.7	6.0	--	--	10.1	6.3	-1.4	-0.8	Jul-17
FTSE NAREIT Developed	-4.5	-4.5	3.2	2.1	1.5	4.1	6.0	3.4	10.4	4.1	-0.8	-1.3	
Global Real Estate MStar MF Rank	78	78	92	50	73	22	--	--	81	10	72	92	
Total Fixed Income	-0.6	-0.6	0.9	0.8	1.1	1.2	1.8	--	2.4	1.6	0.8	1.9	Jun-10
Total Fixed Income Benchmark	-0.5	-0.5	0.3	0.5	0.8	1.0	1.5	2.1	1.3	1.6	0.8	1.5	
JPMorgan Core Bond	-1.3	-1.3	1.5	1.0	1.3	1.7	2.9	3.9	3.8	2.3	0.7	-1.4	Aug-17
BBgBarc US Aggregate TR	-1.5	-1.5	1.2	0.8	1.2	1.8	2.9	3.6	3.5	2.6	0.6	-1.5	
Intermediate-Term Bond MStar MF Rank	43	43	51	74	63	69	72	67	57	83	23	61	

PERFORMANCE REPORT CARD

	Ending March 31, 2018								Calendar Years				
	2018 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	Inception Date
YSU Intermediate Term Bond	-1.0	-1.0	0.6	0.5	0.9	1.2	2.2	3.3	2.4	2.0	0.5	3.6	Mar-04
BBgBarc US Govt/Credit Int TR	-1.0	-1.0	0.4	0.4	0.9	1.2	2.3	2.9	2.1	2.1	1.1	3.3	
Intermediate-Term Bond MStar MF Rank	17	17	90	89	90	93	95	90	94	90	34	86	
Prudential High Yield Q	-0.5	-0.5	4.2	9.4	5.5	5.3	--	--	7.8	15.3	-2.6	5.8	Dec-16
BBgBarc US High Yield TR	-0.9	-0.9	3.8	9.9	5.2	5.0	6.3	8.3	7.5	17.1	-4.5	5.2	
High Yield Bond MStar MF Rank	31	31	26	40	16	15	--	--	27	30	38	24	
YSU Short Term Bond	-0.4	-0.4	0.3	0.5	0.7	0.7	1.0	1.8	1.1	1.1	0.6	2.4	Mar-04
ICE BofAML 1-3 Yrs US Corp & Govt TR	-0.2	-0.2	0.3	0.5	0.7	0.8	1.0	1.6	0.9	1.3	0.7	2.2	
Short-Term Bond MStar MF Rank	68	68	88	93	93	93	97	87	89	90	46	76	
Lord Abnett Short Duration Income I	-0.2	-0.2	1.5	2.6	2.0	2.0	2.9	4.2	2.7	4.0	0.9	--	Mar-18
ICE BofAML 1-3 Yrs US Corp & Govt TR	-0.2	-0.2	0.3	0.5	0.7	0.8	1.0	1.6	0.9	1.3	0.7	--	
Short-Term Bond MStar MF Rank	47	47	24	16	14	7	5	3	14	12	23	--	
Vanguard Short-Term Bond Instl	-0.5	-0.5	0.2	0.3	0.7	0.9	--	--	1.2	1.5	1.0	1.1	Dec-11
BBgBarc US Govt/Credit 1-5 Yr. TR	-0.5	-0.5	0.2	0.4	0.8	0.9	1.4	2.1	1.3	1.6	1.0	1.2	
Short-Term Bond MStar MF Rank	82	82	94	97	92	81	--	--	87	84	15	91	
DFA Five-Yr Global Fxd-Inc I	-0.4	-0.4	0.8	0.5	1.2	1.4	2.3	2.9	2.0	1.8	1.4	1.8	Jun-13
Citi WGBI 1-5 Yr Hdg USD	0.2	0.2	1.0	0.8	1.1	1.2	1.6	1.9	1.1	1.5	1.0	1.3	
World Bond MStar MF Rank	93	93	96	99	93	66	61	64	93	80	3	72	
Total Cash & Cash Equivalents	--	--	--	--	--	--	--	--	--	--	--	--	Mar-18
ICE BofAML 91 Days T-Bills TR	0.4	0.4	1.1	0.7	0.5	0.3	0.3	0.3	0.9	0.3	0.0	--	
PNC Govt MMkt	--	--	--	--	--	--	--	--	--	--	--	--	Mar-18
ICE BofAML 91 Days T-Bills TR	0.4	0.4	1.1	0.7	0.5	0.3	0.3	0.3	0.9	0.3	0.0	--	

- Total Policy Benchmark = 45% ICE BofAML 91 Days T-Bills TR / 17% ICE BofAML 1-3 Yrs US Corp & Govt TR / 11% BBgBarc US Govt/Credit Int TR / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE

- Total Operating & Short Term Benchmark = 95% ICE BofAML 91 Days T-Bills TR / 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% ICE BofAML 1-3 Yrs US Corp & Govt TR / 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

- Total Fixed Income Benchmark = 64% ICE BofAML 1-3 Yrs US Corp & Govt TR / 36% BBgBarc US Govt/Credit Int TR

PERFORMANCE REPORT CARD- ENDOWMENT ASSETS

	Ending March 31, 2018								Calendar Years				Inception Date
	2018 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	
YSU Endowment Fund	-1.3	-1.3	8.4	8.2	7.0	--	--	--	14.2	8.5	-0.3	8.2	Jun-13
60/40 S&P 500/BBgBarc US Aggregate	-1.0	-1.0	8.8	9.5	7.0	8.7	8.9	7.4	14.2	8.3	1.3	9.0	
Kilcawley Center	-0.9	-0.9	8.8	9.6	5.0	--	--	--	13.8	4.9	-5.3	6.7	Jun-13
60/40 S&P 500/BBgBarc US Aggregate	-1.0	-1.0	8.8	9.5	7.0	8.7	8.9	7.4	14.2	8.3	1.3	9.0	
The Alumni License Plate Account Endowment Fund	-0.9	-0.9	7.5	9.4	6.7	--	--	--	10.3	13.8	-0.2	7.3	Jun-13
60/40 S&P 500/BBgBarc US Aggregate	-1.0	-1.0	8.8	9.5	7.0	8.7	8.9	7.4	14.2	8.3	1.3	9.0	
Vanguard Balanced Index Adm	-0.9	-0.9	8.7	9.7	6.6	8.5	8.7	7.6	13.9	8.8	0.5	6.8	Jun-17
Vanguard Balanced Benchmark	-0.9	-0.9	8.7	9.8	6.7	8.6	8.8	7.4	13.8	8.8	0.7	6.7	

ENDOWMENT HOLDINGS

- YSU Endowment (Huntington)
 - Equity Mutual Funds – 12% (15 Mutual Funds & ETFs)
 - Stocks – 65% (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 – 7%
- Kilcawley (PNC)
 - Vanguard Balanced Index Fund (Adm) – 100%
- Alumni License Plate (PNC)
 - Vanguard Balanced Index Fund (Adm) – 100%

EXECUTIVE SUMMARY

Capital Markets: 2017's optimism seems to have faded with markets lacking a clear catalyst to move higher and instead found obstacles in policy uncertainties.

U.S. Equities: If one ignored short-term market movements you might think the quarter was a boring one with the S&P 500 down 0.8%.

Welcome Back Volatility: The calm seas of 2017 have turned choppy. Macro events have moved markets on a seemingly daily basis.

Trump and Tariffs: Trump's tariff plans led to concerns regarding retaliatory responses, particularly from China. This is a noteworthy event that will likely be with us for most of 2018 and heighten market volatility given the uncertainty.

Economic Conditions: By many measures the U.S. economy continues to show steady gains as evidenced by Q4 GDP growth of 2.9%. However, some global business indicators ("soft data") are suggesting a decline in the growth rate, though supportive of relatively strong global growth. Inflation indicators point to weak price pressures in most economies.

Monetary Policy: The tide may be turning toward less accommodative monetary policy. The Fed hiked rates by 0.25% in March with market expectations for two additional 0.25% rate increases in 2018. While monetary policy stimulus is likely to be withdrawn gradually, accelerating GDP growth and/or rising inflation could quicken the pace of rate hikes.

Valuations: Valuations declined based largely on strong earnings and also the market decline. U.S. equity valuations are near long-term averages; 16.8x one year forward P/E on MSCI US Equity Index. International equity valuations are more attractive, growth is reasonably strong and monetary policies are more supportive of growth.

Earnings: 2018 earnings estimates reflect an 18.4% year-over-year increase for the S&P 500. Q4-17 growth was 15.0%.

Fixed Income: There was a predominantly parallel shift in the treasury yield curve and credit spreads remain tight. Liquid credit assets are not priced to generate significant gains, yet a positive economic environment could keep defaults low and enable investors to "clip coupon". Short duration asset yields are improving.

Risks: Macroeconomic events, namely waning Central Bank monetary policy, politics and escalating trade tension. The economic environment suggests a pro-risk tilt in portfolios, however, the maturing cycle and other risks reinforce the need for broad diversification.

HISTORICAL ASSET CLASS RETURNS

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Q1 2018
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 37.3%	Glb Bond 4.5%
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 25.0%	Em Mkt 1.4%
Cash 2.1%	Sm/Mid 34.4%	Em Mkt 18.9%	Glb Bond 5.2%	Dev Intl 17.3%	Dev Intl 22.8%	Sm/Mid 7.1%	US Bonds 0.6%	Large Cap 12.0%	Large Cap 21.8%	Hdg Fnds 1.0%
Hdg Fnds -21.4%	Dev Intl 31.8%	Hi Yld 15.2%	Hi Yld 4.4%	Sm/Mid 17.9%	Hdg Fnds 9.0%	US Bonds 6.0%	Cash 0.1%	Em Mkt 11.2%	Sm/Mid 16.8%	Cash 0.0%
Hi Yld -26.4%	REITs 27.5%	Large Cap 15.1%	Large Cap 2.1%	Large Cap 16.0%	Hi Yld 7.4%	Hdg Fnds 3.4%	Hdg Fnds -0.3%	REITs 9.3%	Glb Bond 9.3%	Sm/Mid -0.2%
Sm/Mid -36.8%	Large Cap 26.5%	Dev Intl 7.8%	Cash 0.1%	Hi Yld 15.6%	REITs 3.2%	Hi Yld 2.5%	Dev Intl -0.8%	US Bonds 2.7%	REITs 9.3%	Large Cap -0.8%
Large Cap -37.0%	Hdg Fnds 11.5%	US Bonds 6.6%	Sm/Mid -2.5%	Hdg Fnds 4.8%	Cash 0.1%	Cash 0.0%	Sm/Mid -2.9%	Glb Bond 1.9%	Hdg Fnds 7.8%	Hi Yld -0.9%
REITs -37.3%	US Bonds 5.9%	Glb Bond 6.1%	Hdg Fnds -5.7%	US Bonds 4.2%	US Bonds -2.0%	Em Mkt -2.2%	Hi Yld -4.6%	Dev Intl 1.0%	Hi Yld 7.5%	US Bonds -1.5%
Dev Intl -43.4%	Glb Bond 4.4%	Hdg Fnds 5.7%	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 3.5%	Dev Intl -1.5%
Em Mkt -53.3%	Cash 0.2%	Cash 0.1%	Em Mkt -18.4%	Cash 0.1%	Glb Bond -4.9%	Dev Intl -4.5%	Em Mkt -14.9%	Cash 0.3%	Cash 0.9%	REITs -6.7%

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 3/31/2018. Source: Zephyr Associates.

ECONOMIC PROJECTIONS

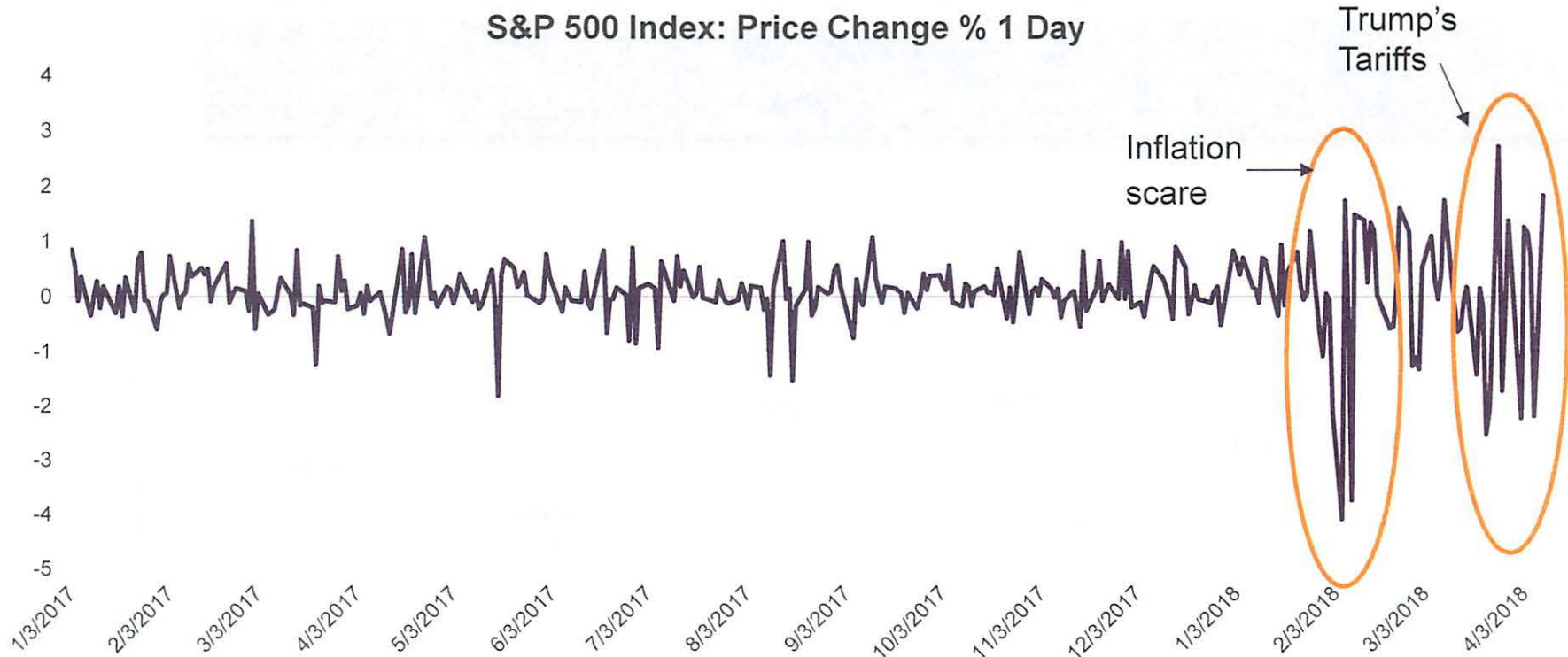
Federal Reserve Board Members and Bank Presidents

		2018	2019	2020	Longer Run*
GDP	March 2018	2.7%	2.4%	2.0%	1.8%
	Dec. 2017	2.5%	2.1%	2.0%	1.8%
Unemployment Rate	March 2018	3.8%	3.6%	3.6%	4.5%
	Dec. 2017	3.9%	3.9%	4.0%	4.6%
Core PCE Inflation	March 2018	1.9%	2.1%	2.1%	
	Dec. 2017	1.9%	2.0%	2.0%	
Federal Funds Rate	March 2018	2.1%	2.9%	3.4%	2.9%
	Dec. 2017	2.1%	2.7%	3.1%	2.8%
# of Implied 25 bps Rate Hikes	March 2018	3	3	3	
	Dec. 2017	3	2	2	

*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 3/21/2018

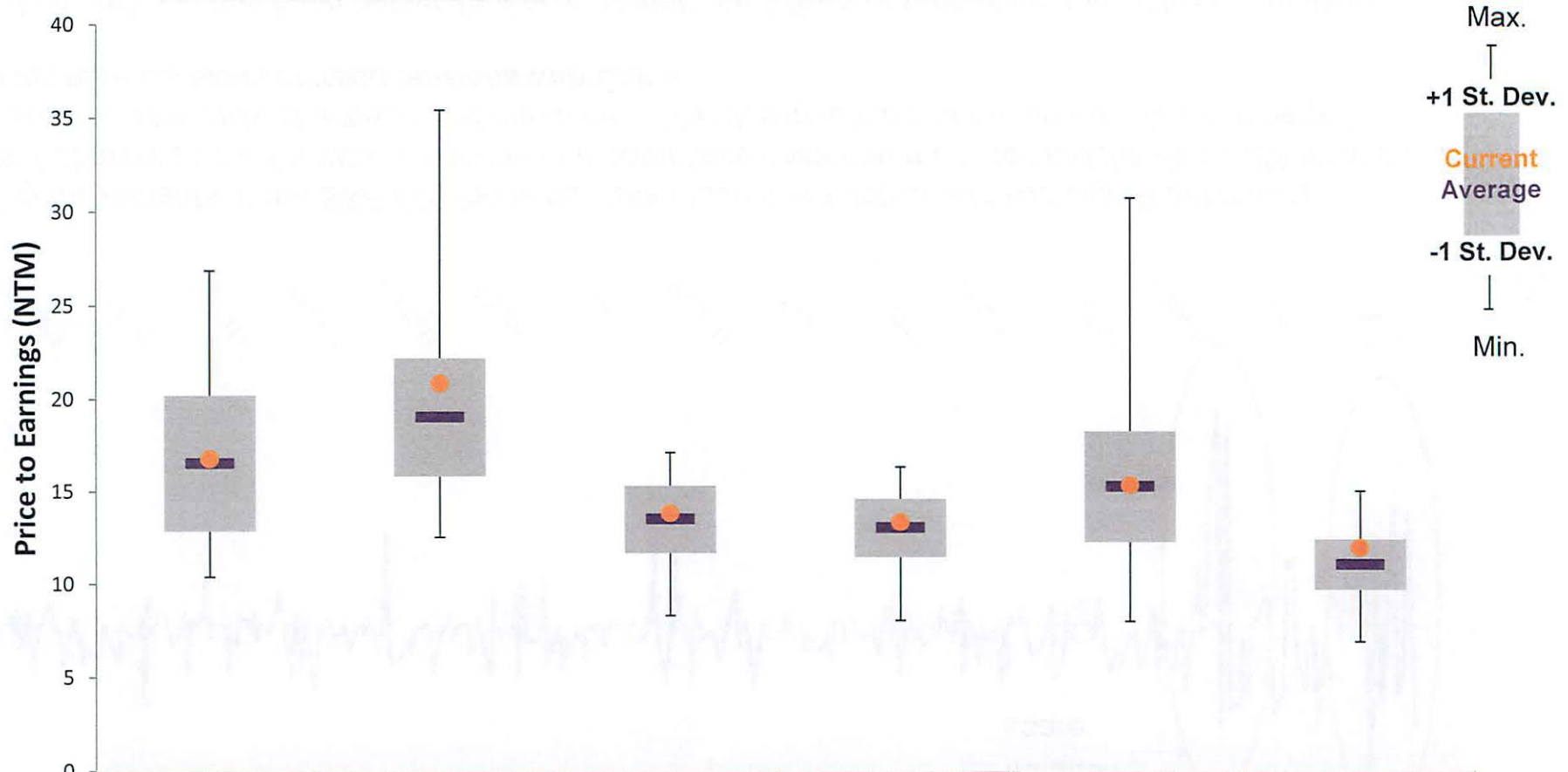
MACRO DRIVERS: THE FED AND TARIFFS



One-day movements of the S&P 500 Index became much more active with two significant macro drivers. February's volatility was a reaction to a potentially hastened move toward the Fed's 2% inflation target and the possibility of accelerated rate hikes. March's gyrations stemmed from fears of negative economic repercussions of trade tensions with China.

Since then, inflation has been below the Fed's "target", and Trump's tariff plans (and China's retaliation) are still changing. Much of the present rhetoric is a form of posturing.

GLOBAL EQUITY VALUATIONS



	MSCI USA	MSCI USA Small	MSCI EAFE	MSCI ACWI ex USA	MSCI ACWI ex USA Small	MSCI EM
Current P/E (NTM)	16.8	20.8	13.8	13.3	15.3	11.9
Average P/E (NTM)	16.5	19.1	13.4	13.0	15.2	11.0

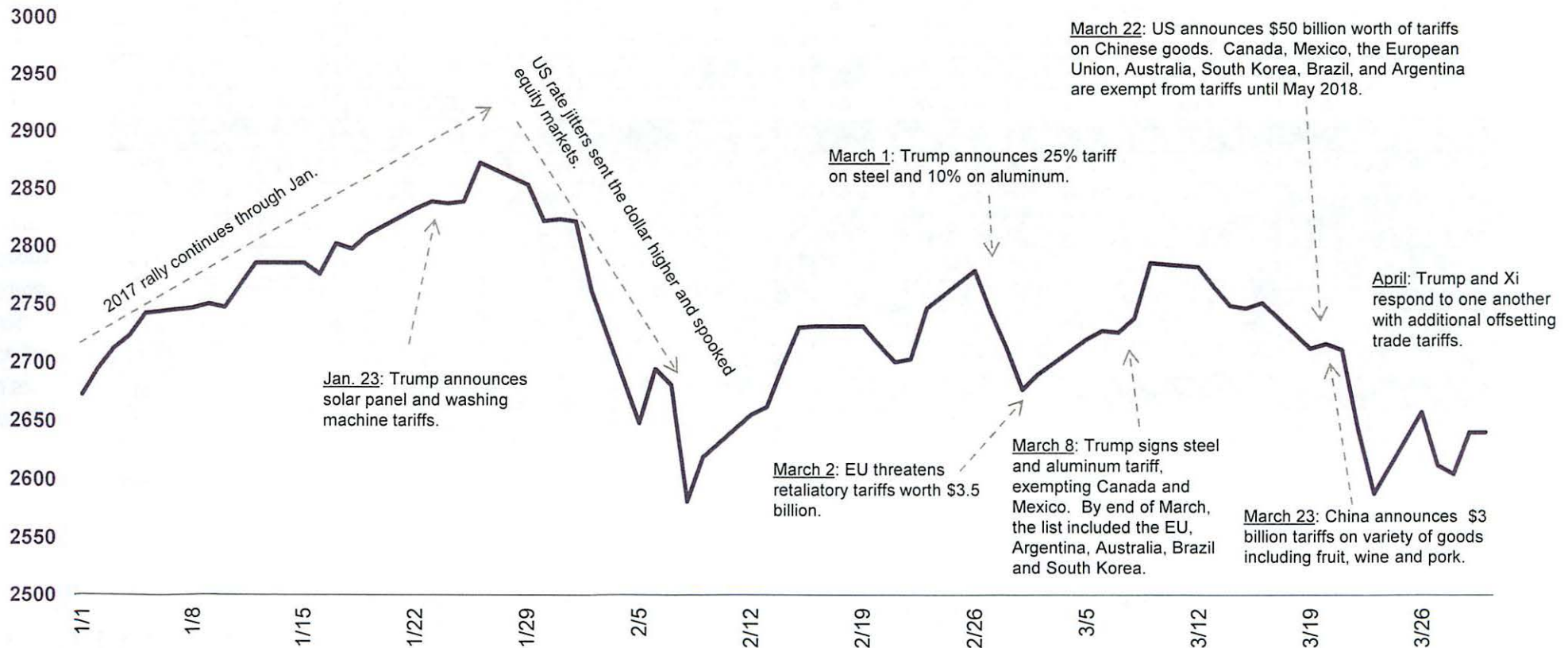
Source: MSCI. Data as of 03/31/2018. Average taken over full index history.

TRADE WAR: QUID PRO QUO

Reasons not to overreact:

- To put this trade conversation in perspective, \$150 billion of exports each is equivalent to 0.8% and 1.2% of GDP in the US and China, respectively.
- Most importantly, the series of tariff announcements are likely a negotiating tactic. Both China and the US have indicated their willingness to come to the negotiating table. Unfortunately markets tend to react poorly to uncertainty, and this situation could take months to resolve. After the May 22nd deadline for business consultations, the US government still has 180 days to decide whether to move forward, leaving many opportunities for negotiations.

S&P 500 Index Price Movement: 1Q-18



Source: Capital Economics, "Is it time to worry about a trade war?" Apr. 6, 2018. Bloomberg, Data as of 3/31/18 Past performance is no guarantee of future results.

GLOBAL GROWTH REMAINS STRONG

	April 16	May 16	June 16	July 16	Aug 16	Sep 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17	May 17	June 17	July 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18
World	51.3	50.9	51.1	51.7	51.5	51.7	53.1	53.2	53.6	53.9	53.5	53.8	53.7	53.8	53.7	53.6	54.0	54.0	54.0	54.1	54.4	54.6	54.8	53.3
U.S.	55.1	53.3	55.7	54.6	51.4	56.0	54.3	55.9	56.4	56.4	57.6	55.4	57.5	56.9	57.4	54.2	55.7	59.9	59.9	57.5	56.3	59.8	59.6	58.9
Canada	52.2	52.1	51.8	51.9	51.1	50.3	51.1	51.5	51.8	53.5	54.7	55.5	55.9	55.1	54.7	55.5	54.6	55.0	54.3	54.4	54.7	55.9	55.6	55.7
U.K.	52.0	53.2	52.6	47.4	53.5	53.7	54.8	55.3	56.7	55.2	53.8	54.9	56.2	54.3	53.8	54.1	54.0	54.1	55.8	54.8	54.9	53.4	54.5	52.5
Eurozone	53.0	53.1	53.1	53.2	52.9	52.6	53.3	53.9	54.4	54.4	56.0	56.4	56.8	56.8	56.3	55.7	55.7	56.7	56.0	57.5	58.1	58.8	57.1	55.2
Germany	53.6	54.5	54.4	55.3	53.3	52.8	55.1	55.0	55.2	54.8	56.1	57.1	56.7	57.4	56.4	54.7	55.8	57.7	56.6	57.3	58.9	59.0	57.6	55.1
France	50.2	50.9	49.6	50.1	51.9	52.7	51.6	51.4	53.1	54.1	55.9	56.8	56.6	56.9	56.6	55.6	55.2	57.1	57.4	60.3	59.6	59.6	57.3	56.3
Italy	53.1	50.8	52.6	52.2	51.9	51.1	51.1	53.4	52.9	52.8	54.8	54.2	56.8	55.2	54.5	56.2	55.8	54.3	53.9	56.0	56.5	59.0	56.0	53.5
Greece	49.7	48.4	50.4	48.7	50.4	49.2	48.6	48.3	49.3	46.6	47.7	46.7	48.2	49.6	50.5	50.5	52.2	52.8	52.1	52.2	53.1	55.2	56.1	55.0
Ireland	58.1	59.1	59.2	56.5	56.9	54.8	54.0	55.5	58.4	59.3	57.8	56.9	61.1	59.5	57.6	57.0	58.2	57.6	56.0	57.7	60.2	59.0	56.8	53.7
Japan	48.9	49.2	49.0	50.1	49.8	48.9	51.3	52.0	52.8	52.3	52.2	52.9	52.6	53.4	52.9	51.8	51.9	51.7	53.4	52.2	52.2	52.8	52.2	51.3
Australia	53.4	51.0	51.8	56.4	46.9	49.8	50.9	54.2	55.4	51.2	59.3	57.5	59.2	54.8	55.0	56.7	54.1	53.1	53.1	54.3	55.5	54.2	54.3	55.4
EM	49.9	49.5	49.9	51.5	51.3	51.1	51.8	51.4	51.9	51.9	52.1	52.5	51.9	52.2	51.5	51.5	52.1	51.8	51.5	51.9	53.0	53.6	53.3	52.3
China	50.8	50.5	50.3	51.9	51.8	51.4	52.9	52.9	53.5	52.2	52.6	52.1	51.2	51.5	51.1	51.9	52.4	51.4	51.0	51.6	53.0	53.7	53.3	51.8
India	52.8	50.9	51.1	52.4	54.6	52.4	55.4	49.1	47.6	49.4	50.7	52.3	51.3	52.5	52.7	46.0	49.0	51.1	51.3	50.3	53.0	52.5	49.7	50.8
Russia	51.3	51.2	53.5	53.5	52.9	53.1	53.7	55.8	56.6	58.3	55.4	56.3	55.3	56.0	54.8	53.4	54.2	54.8	53.2	56.3	56.0	54.8	55.2	53.2
Brazil	39.0	38.3	42.3	46.4	44.4	46.1	44.9	45.3	45.2	44.7	46.6	48.7	50.4	50.4	48.5	49.4	49.6	51.1	49.5	48.9	48.8	50.7	53.1	51.5
S. Africa	47.9	50.2	49.6	49.9	49.8	50.7	50.5	50.8	51.6	51.3	50.5	50.7	50.3	50.2	49.0	50.1	49.8	48.5	49.6	48.8	48.4	49.0	51.4	51.1

- The developed world, including the United States and the Eurozone carried strong economic momentum into 2018, coming off of their January highs for the latter two months of the quarter
- Out of the 15 countries listed, all 15 are reporting PMI figures above 50, which indicates expansion. Emerging markets, including China, are taking a breather from a strong momentum exhibited in 2017
- U.S. is showing the strongest expansion with a PMI of 58.9, and Greece joins the ranks of France, Germany, and Italy in leading the group in the Eurozone. South Africa has crossed the "50" threshold during the quarter, while India recovered from a slip during the month of February.

Source: Bloomberg. The above numbers represent the composite Purchasing Managers Index (PMI), unless otherwise indicated. PMI indicates the health of the economy, where a number above "50" indicates expansion and below "50" implies contraction. World (JPMorgan); U.S. (ISM); Canada, Eurozone, Germany, France, Greece, EM, Russia, Brazil (Markit); U.K. (Markit/CIPS); Italy (Markit/ADACI); Ireland (Investec); Japan, India (Nikkei); Australia (Australian Industry Group); China (Caixin); South Africa (Standard Bank). All numbers are "composite," both manufacturing and non-manufacturing, except for Canada, Greece, and Australia. The indexes for those countries are for the manufacturing sector, based on availability.

INTERNATIONAL RETURNS & CURRENCY IMPACT

Developed Markets (MSCI EAFE)

	USD Return	Local Return	Weighting
AUSTRALIA	-6.2%	-4.3%	6.6%
AUSTRIA	2.2%	-0.2%	0.3%
BELGIUM	0.5%	-1.9%	1.1%
DENMARK	-1.5%	-3.7%	1.8%
FINLAND	8.2%	5.7%	1.0%
FRANCE	0.3%	-2.0%	10.9%
GERMANY	-3.6%	-5.9%	9.7%
HONG KONG	-1.4%	-1.0%	3.6%
IRELAND	-5.9%	-8.1%	0.5%
ISRAEL	-5.3%	-4.7%	0.5%
ITALY	5.4%	2.9%	2.5%
JAPAN	0.8%	-4.8%	24.6%
NETHERLANDS	1.0%	-1.2%	3.7%
NEW ZEALAND	-5.1%	-6.5%	0.2%
NORWAY	2.3%	-1.9%	0.7%
PORTUGAL	3.1%	0.7%	0.2%
SINGAPORE	2.8%	0.8%	1.4%
SPAIN	-1.7%	-4.0%	3.2%
SWEDEN	-2.4%	-0.1%	2.7%
SWITZERLAND	-4.3%	-6.0%	7.8%
UNITED KINGDOM	-3.9%	-7.3%	17.3%

Quarter -1.5% -4.3%

Emerging Markets (MSCI EM)

	USD Return	Local Return	Weighting
BRAZIL	12.4%	12.6%	7.5%
CHILE	1.5%	-0.4%	1.2%
CHINA	1.8%	2.1%	29.9%
COLOMBIA	4.9%	-1.9%	0.4%
CZECH REPUBLIC	6.4%	3.3%	0.2%
EGYPT	10.9%	9.9%	0.1%
GREECE	-6.8%	-9.0%	0.3%
HUNGARY	-1.0%	-2.7%	0.3%
INDIA	-7.0%	-4.9%	8.1%
INDONESIA	-7.2%	-5.8%	2.1%
KOREA	-0.5%	-0.9%	15.1%
MALAYSIA	8.5%	3.7%	2.5%
MEXICO	0.9%	-5.9%	2.9%
PERU	10.3%	10.3%	0.4%
PHILIPPINES	-11.6%	-7.6%	1.0%
POLAND	-8.2%	-9.5%	1.2%
RUSSIA	9.4%	9.3%	3.6%
SOUTH AFRICA	-4.2%	-8.3%	6.8%
TAIWAN	5.7%	3.6%	11.8%
THAILAND	9.0%	4.5%	2.4%
TURKEY	-5.0%	-0.7%	1.0%

Quarter 1.4% 0.7%

DOMESTIC EQUITY LOOK-THROUGH

	Vanguard Institutional Index I	Vanguard Mid Cap Index Admiral	Loomis Sayles Small Cap Growth Instl	Victory Integrity Small-Cap Value Y	Current Portfolio	Russell 3000
Valuation						
Price/Earnings Ratio	21.8	21.8	35.6	19.3	22.6	21.4
Price/Book Ratio	3.2	2.7	4.7	1.9	3.1	3.0
Price/Sales Ratio	2.2	1.9	3.4	1.1	2.2	2.1
Price/Cash Flow Ratio	14.0	12.6	22.8	8.9	14.1	13.6
Growth						
Historical Sales Growth (Last 5 yrs)	3.7	4.1	9.2	0.8	3.9	1.4
Historical Earnings Growth (Last 4 yrs)	7.1	7.7	11.0	-0.4	6.9	9.7
Long-Term Earnings Growth (5 yr est.)	11.8	12.9	14.7	10.2	12.1	11.9
Other						
Dividend Yield %	2.0	1.6	0.3	1.4	1.8	1.9
Debt to Capital %	44.0	43.1	36.0	38.8	42.9	43.4
Return on Equity %	21.0	14.7	4.8	9.1	18.1	19.2
Return on Investment Capital %	12.8	8.5	1.4	6.2	10.9	11.4

Source: Morningstar.

INTERNATIONAL EQUITY LOOK-THROUGH

	William Blair International Growth I	Dodge & Cox International Stock	Current Portfolio	MSCI ACWI Ex USA
Valuation				
Price/Earnings Ratio	20.0	19.3	19.7	16.7
Price/Book Ratio	2.7	1.5	2.1	1.7
Price/Sales Ratio	1.9	1.3	1.6	1.3
Price/Cash Flow Ratio	11.7	7.4	9.5	9.2
Growth				
Historical Sales Growth (Last 5 yrs)	2.3	-4.6	-1.2	-6.1
Historical Earnings Growth (Last 4 yrs)	11.5	-2.5	4.5	0.6
Long-Term Earnings Growth (5 yr est.)	13.2	10.1	11.6	10.6
Other				
Dividend Yield %	1.8	2.9	2.3	3.0
Debt to Capital %	29.4	38.5	33.9	31.8
Return on Equity %	20.5	10.1	15.3	15.4
Return on Investment Capital %	15.7	7.8	11.8	11.5

Source: Morningstar.

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.

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.



**YOUNGSTOWN
STATE
UNIVERSITY**

**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 18 of the June 6, 2018, Investment Subcommittee Agenda item C.1.a.

**Board of Trustees Meeting
June 7, 2018
YR 2018-**

REBALANCE RECOMMENDATION (ACTION)

	Market Value as of 5/4/2018		Change	New Allocation		Policy Target	Policy Range
	\$	%		\$	%		
Total Operating & Short Term	\$15,312,650	100.0%	\$0	\$15,312,650	100.0%	100.0%	
Operating Assets	\$14,243,357	93.0%	\$0	\$14,243,357	93.0%		60-100%
JPMorgan 100% U.S. Treas. MM Instl	\$9,170,443	59.9%		\$9,170,443	59.9%		
Star Plus Account*	\$5,072,914	33.1%		\$5,072,914	33.1%		
Short-Term Assets	\$1,069,294	7.0%	\$0	\$1,069,294	7.0%		0-40%
Vanguard Short-Term Federal Adm	\$1,069,294	7.0%		\$1,069,294	7.0%		
Total Long Term Reserves Pool	\$52,753,873	100%	\$0	\$52,753,873	100%	100.0%	
Domestic Equity	\$14,904,569	28.3%	-\$500,000	\$14,404,569	27.3%	27.0%	20-35%
Large Cap	\$10,692,544	20.3%	-\$500,000	\$10,192,544	19.3%		
Vanguard Instl Index	\$10,692,544	20.3%	-\$500,000	\$10,192,544	19.3%		
Small/Mid Cap	\$4,212,024	8.0%	\$0	\$4,212,024	8.0%		
Vanguard Mid Cap Index Inv	\$2,128,531	4.0%		\$2,128,531	4.0%		
Loomis Sayles Small Growth Instl	\$1,044,653	2.0%		\$1,044,653	2.0%		
Victory Integrity Small Cap Value Y	\$1,038,841	2.0%		\$1,038,841	2.0%		
International Equity	\$4,325,260	8.2%	\$500,000	\$4,825,260	9.1%	8.0%	0-15%
William Blair International Growth I	\$2,155,130	4.1%	\$250,000	\$2,405,130	4.6%		
Dodge & Cox International Stock	\$2,170,129	4.1%	\$250,000	\$2,420,129	4.6%		
Total Equity	\$19,229,828	36.5%	\$0	\$19,229,828	36.5%	35.0%	25-45%
Alternatives	\$7,840,016	14.9%	\$0	\$7,840,016	14.9%	15.0%	0-20%
Jhancock Global Absolute Return R6	\$1,740,687	3.3%		\$1,740,687	3.3%		
Wells Fargo Adv Absolute Return I	\$2,354,990	4.5%		\$2,354,990	4.5%		
Diamond Hill Long-Short Y	\$2,337,683	4.4%		\$2,337,683	4.4%		
Brookfield Global Real Estate	\$1,406,657	2.7%		\$1,406,657	2.7%		
Fixed Income	\$25,615,086	48.6%	\$0	\$25,615,086	48.6%	50.0%	
Short Term Fixed Income	\$14,692,570	27.9%	\$0	\$14,692,570	27.9%	30.0%	25-45%
YSU Short Term Bond	\$11,062,964	21.0%		\$11,062,964	21.0%		
DFA Five-Year Global	\$1,823,847	3.5%		\$1,823,847	3.5%		
Vanguard Short-Term Bond Index	\$1,816	0.0%	-\$1,816	\$0	0.0%		
Lord Abbett Short Duration	\$1,803,943	3.4%	\$1,816	\$1,805,759	3.4%		
Intermediate Fixed Income	\$10,922,516	20.7%	\$0	\$10,922,516	20.7%	20.0%	10-30%
JPMorgan Core Bond Fund I	\$4,592,868	8.7%		\$4,592,868	8.7%		
YSU Intermediate Term Fixed	\$3,931,711	7.5%		\$3,931,711	7.5%		
Prudential High Yield Q	\$2,397,937	4.5%		\$2,397,937	4.5%		
Cash	\$68,943	0.1%		\$68,943	0.1%		
Total University Assets	\$68,066,523			\$68,066,523			

*As of 12/31/2017