



**YOUNGSTOWN
STATE
UNIVERSITY**

**BOARD OF TRUSTEES
INVESTMENT SUBCOMMITTEE**

**Capri S. Cafaro, Chair
Charles T. George, Vice Chair
John R. Jakubek
Allen L. Ryan, Jr.
Victoria M. Woods**

**Wednesday, March 4, 2020
1:30 p.m. or immediately following
previous meeting**

**Kilcawley Center
President's Suites**

AGENDA

- A. Disposition of Minutes for Meeting Held December 4, 2019**
- B. Old Business**
- C. Committee Items**

1. Discussion Items

Tab C.1.a. a. Annual Disclosure of Trustee Relationships with University-Affiliated Financial Institutions
Neal McNally, Vice President for Finance and Business Operations, will report.

Tab C.1.b. b. March 4, 2020 Quarterly Portfolio Asset Allocation and Investment Performance Review
Sarah Parker and John Colla, will report.

2. Action Item

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

D. New Business

E. Adjournment



Disclosure of Relationships with University-Affiliated Financial Institutions
(Reviewed for updates February 2020)

In accordance with Youngstown State University policy 3356-3-10, Investment of the University’s Non-Endowment and Endowment Funds, members of the Board of Trustees are required to disclose relationships, beyond the ordinary customer relationships, with the financial institutions involved with the University’s non-endowment and endowment funds. Please disclose the nature of any relationships with the institutions listed below.

The financial institutions involved with the Non-Endowment Funds are as follows:

- PNC _____
- Clearstead _____
- J.P. Morgan _____
- State Treasury Asset Reserve of Ohio (STAR Ohio) _____
- Vanguard _____
- Lord Abbett _____
- Loomis Sayles _____
- Victory _____
- William Blair _____
- Dodge & Cox _____
- Dimensional Fund Advisors (DFA) _____
- Wells Fargo _____
- Diamond Hill _____
- Brookfield _____
- Prudential _____
- I have no business or familial relationship with the above institutions that require disclosure

The Financial Institutions involved with the Endowment Funds are as follows:

- PNC _____
- Huntington National Bank _____
- Clearstead _____
- Vanguard _____
- I have no business or familial relationship with the above institutions that require disclosure

SIGNED: _____ DATED: _____

For audit and compliance purposes, please return completed form to YSU, Tod Hall 214, Office of the Vice President for Finance & Business Operations by June 1, 2020.



March 4, 2020

**YOUNGSTOWN STATE
UNIVERSITY**



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Cleveland, Ohio 44114
216.621.1090 | clearstead.com

CONTENTS

1. Clearstead Firm Update
2. 2020 Initiatives
3. Capital Markets Update
4. Non-Endowment Assets: Performance & Asset Allocation Review
 - Fixed Income Review
 - Portfolio Recommendations **(ACTION)**

APPENDIX

Endowment Assets: Performance & Asset Allocation Review
Supporting Information

CLEARSTEAD FIRM UPDATE

\$21 BILLION*

ASSETS UNDER
ADVISEMENT

140+

NUMBER OF
INSTITUTIONAL CLIENTS

80+

NUMBER OF
EMPLOYEES

33

NUMBER OF EMPLOYEES
WITH CFA, CFP AND CPA
DESIGNATIONS

1989

YEAR FOUNDED

585+

HIGH NET-WORTH FAMILY
CLIENTS

35

NUMBER OF
SHAREHOLDERS

40

NUMBER OF STATES IN
WHICH WE HAVE CLIENTS

FIRM & RESEARCH UPDATES

- 30-year anniversary
- Added 11 professionals to research, institutional consulting, and private client services
- *ClearAccess* – a platform for clients to access private equity and hedge funds
- Incorporation of responsible investing into our Research Principles

ADVISORY SERVICES

- Institutional Advisory
- Discretionary Management
- 401(k) and Retirement
- Private Wealth Management

DIVERSITY & INCLUSION

- Inception of Clearstead's Diversity & Inclusion Council
- 
- Continued expansion of Clearstead's EmpowHER initiative and tripled the number of female shareholders

EMPOWHER
clearstead

THOUGHT LEADERSHIP

Roundtable events:

- *Discretionary Management: Finding an Appropriate Balance*
- *The Cost of Conscience: Charting ESG Roadmaps for Institutional Portfolios*
- *Investing in the Future: Preparing the Next Generation to Sustain Family Wealth*

Upcoming Roundtable events in 2020:

- *Accessing Private Equity for Small to Mid-Size Institutions*

*Data as of 12/31/2019.



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2020 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"/>			
	2021 Oversight Dashboard				<input type="checkbox"/>	
	STAR Ohio/Plus Annual Review			<input type="checkbox"/>		
PORTFOLIO	Fixed Income Review	✓				
	Alternative Investments Review			<input type="checkbox"/>		
	Domestic Equity Review				<input type="checkbox"/>	
	International Equity Review				<input type="checkbox"/>	
PERFORMANCE	Capital Markets Review	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Quarterly Performance Review	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
OTHER	Fee Review			<input type="checkbox"/>		
	ORC Compliance Review			<input type="checkbox"/>		
	ORC Guidelines Education		<input type="checkbox"/>			
	Clearstead Firm Update	✓				

LAST REVIEWED	
Investment Policy:	06/05/2019
Strategic Asset Allocation:	06/05/2019
Fee Review:	09/04/2019

MEETING SCHEDULE	
1Q:	March 4, 2020
2Q:	June 3, 2020
3Q:	September 2, 2020
4Q:	December 2, 2020



CAPITAL MARKETS UPDATE

QUARTERLY THEMES

WHAT HAPPENED LAST QUARTER?

- Risk assets rallied to end the year
- Large Cap U.S. Equity returned 9.1% for the quarter and was the best performing asset class in 2019 (+31.5%)
- A U.S. – China deal materialized
- Global economic growth remains modest
- More positive economic news than negative throughout the quarter

WHAT IS ON OUR MINDS?

- Investor sentiment
- The political landscape – both in the U.S. and International
- The unknown consequences of negative interest rates

HISTORICAL ASSET CLASS RETURNS

2011	2012	2013	2014	2015	2016	2017	2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	2019
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%	Cash 1.9%	REITs 16.7%	Large Cap 4.3%	REITs 7.2%	Em Mkt 11.8%	Large Cap 31.5%
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%	US Bonds 0.0%	Sm/Mid 15.8%	Dev Intl 3.7%	US Bonds 2.3%	Large Cap 9.1%	REITs 28.1%
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%	Glb Bond -0.9%	Large Cap 13.7%	Glb Bond 3.6%	Large Cap 1.7%	Sm/Mid 8.5%	Sm/Mid 27.8%
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%	Hi Yld -2.3%	Dev Intl 10.0%	US Bonds 3.1%	Hi Yld 1.2%	Dev Intl 8.2%	Dev Intl 22.0%
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%	Hdg Fnds -4.0%	Em Mkt 9.9%	Sm/Mid 3.0%	Cash 0.6%	Hi Yld 2.6%	Em Mkt 18.4%
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 -4.4%	Hi Yld 7.4%	Hi Yld 2.6%	Glb Bond 0.1%	Hdg Fnds 2.5%	Hi Yld 14.4%
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%	REITs -4.4%	Hdg Fnds 5.0%	REITs 1.8%	Hdg Fnds -1.0%	REITs 0.6%	US Bonds 8.8%
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%	Sm/Mid -10.0%	US Bonds 2.9%	Hdg Fnds 1.6%	Dev Intl -1.1%	Cash 0.5%	Hdg Fnds 7.8%
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 -13.8%	Glb Bond 1.4%	Cash 0.6%	Sm/Mid -1.3%	US Bonds 0.2%	Glb Bond 5.0%
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%	Em Mkt -14.6%	Cash 0.6%	Em Mkt 0.6%	Em Mkt -4.3%	Glb Bond 0.0%	Cash 2.3%

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 12/31/2019.
Source: Zephyr Associates.



GLOBAL ECONOMY: 2020 OUTLOOK

	2019 GDP ESTIMATES			2020 GDP ESTIMATES			2019 -2020
	CONSENSUS	IMF	OECD	CAPITAL	GOLDMAN	AVERAGE	TREND
U.S.	2.3%	2.1%	2.0%	1.9%	2.3%	2.1%	↓
China	6.1%	5.8%	5.7%	5.8%	5.8%	5.8%	↓
Eurozone	1.2%	1.4%	1.1%	0.5%	1.1%	1.0%	↓
Japan	1.1%	0.5%	0.6%	-0.2%	0.5%	0.3%	↓
UK	1.3%	1.4%	1.0%	1.3%	1.1%	1.2%	↓
India	5.2%	7.0%	6.2%	5.7%	6.4%	6.3%	↑

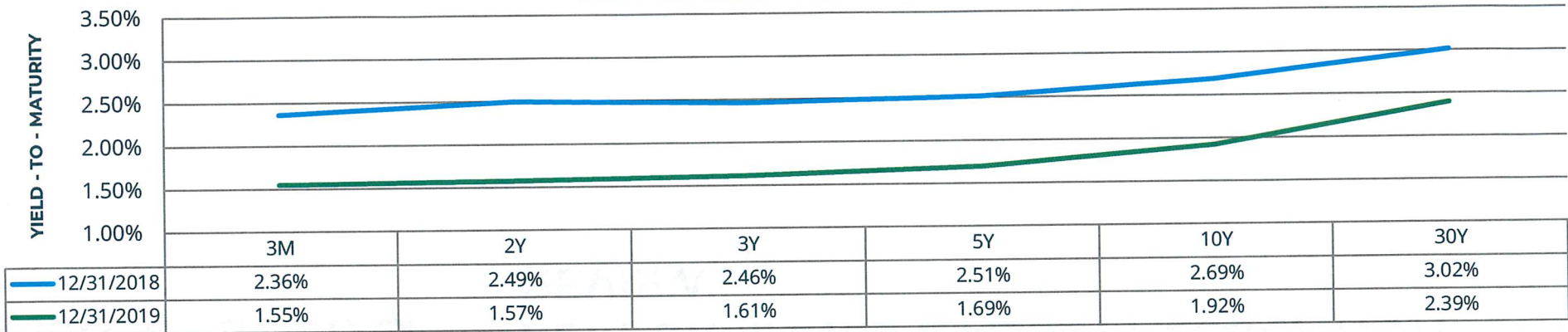
- Countries representing about two-thirds of global GDP are expected to have stagnant or modest declines in next year's growth rate
- These tepid growth rates do not suggest a robust environment for corporate growth rates

NOT LISTED ABOVE

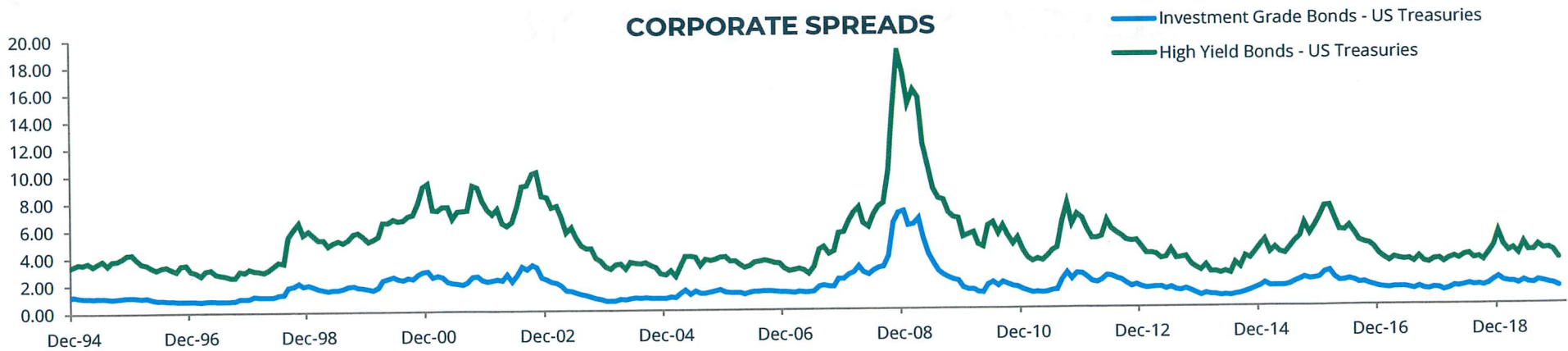
- Canada's economy is projected to accelerate to a modest 1.8% real growth in 2019
- Mexico is forecasted to achieve about 1% real growth in 2020

TREASURY YIELD CURVE & CORPORATE SPREADS

U.S. TREASURY YIELD CURVE



CORPORATE SPREADS



Source: Bloomberg.
 Data as of 12/31/2019.
 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.



NON-ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION REVIEW

NON-ENDOWMENT PERFORMANCE REVIEW (AS OF 12/31/2019)

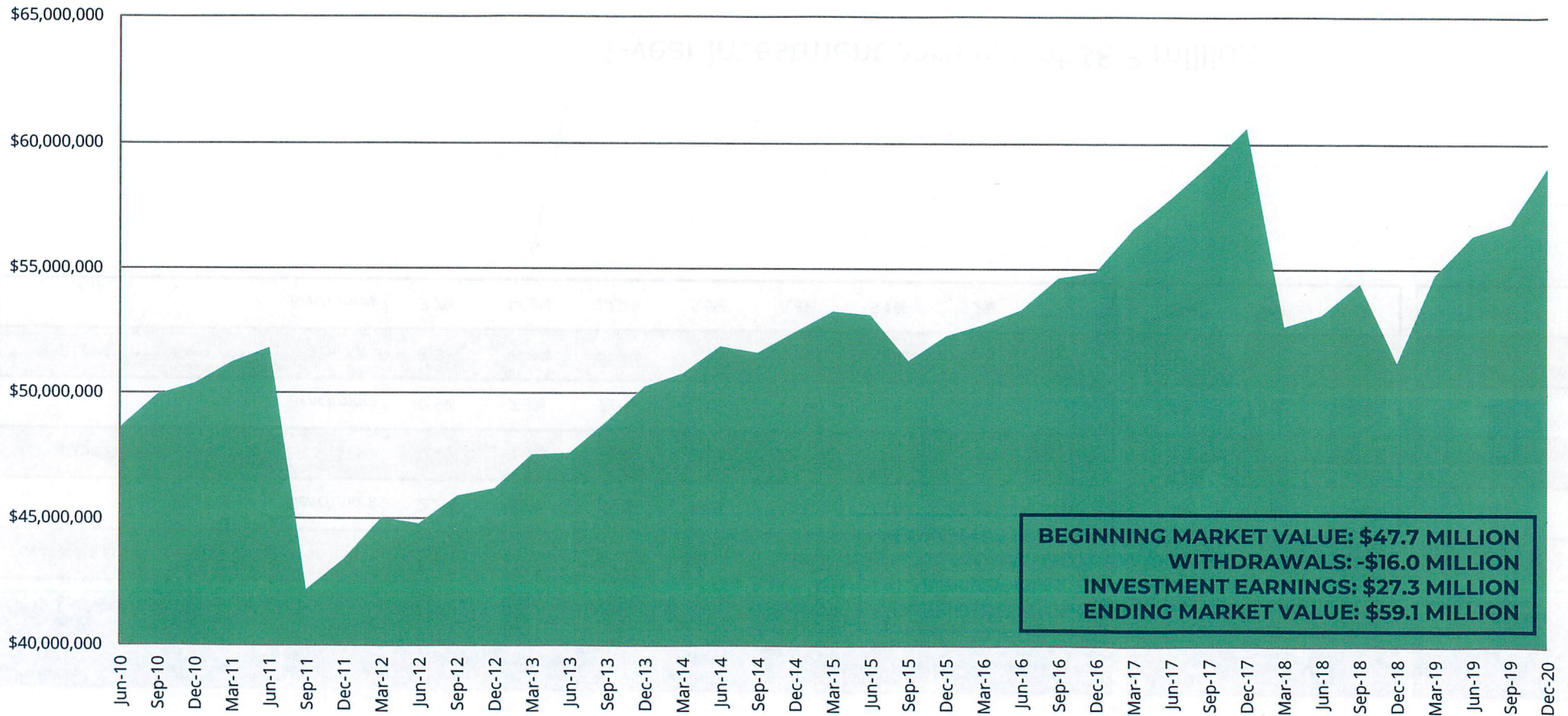
NON-ENDOWMENT ASSETS	MARKET VALUE (\$MM)	QTD	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	2019	2018	2017	SINCE INCEPTION ⁴
Total Non-Endowment Assets	\$61.538	3.1%	11.5%	11.5%	4.8%	5.8%	4.1%	4.2%	4.0%	11.5%	-1.5%	7.8%	4.0%
	<i>Benchmark¹</i>	2.2%	8.7%	8.7%	4.1%	4.5%	3.3%	3.2%	2.9%	8.7%	-0.4%	5.4%	3.2%
Operating & Short-Term Pool	\$2.471	0.4%	2.4%	2.4%	2.0%	1.6%	1.0%	0.7%	-	2.4%	1.7%	0.7%	0.6%
	<i>Benchmark²</i>	0.5%	2.3%	2.3%	2.1%	1.7%	1.1%	0.8%	-	2.3%	1.9%	0.8%	0.6%
Long-Term Pool	\$59.067	3.9%	15.3%	15.3%	5.5%	7.2%	5.2%	5.6%	-	15.3%	-3.4%	10.5%	5.4%
	<i>Benchmark³</i>	3.7%	14.2%	14.2%	5.6%	6.8%	5.1%	5.2%	-	14.2%	-2.4%	9.3%	4.9%

1-year investment earnings of \$8.3 million

1) 5% 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% MSCIEAFE Gross.
 2) 95% BofA Merrill Lynch 91-Day T-Bill / 5% Barclays 1-3 Yr. Govt.
 3) 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.
 4) Inception date for Long-Term and Short-Term Pools: June 2010, Inception Date for Total Non-Endowment Assets: March 2004.
 5) STAR Plus yield depicted above is for the first \$2.5 million invested in the fund, with any assets over \$2.5 million earning a reduced rate.

ATTRIBUTION OF MARKET VALUE CHANGE: LONG-TERM POOL

LONG-TERM POOL MARKET VALUE CHANGE (7/01/2010-12/31/2019)

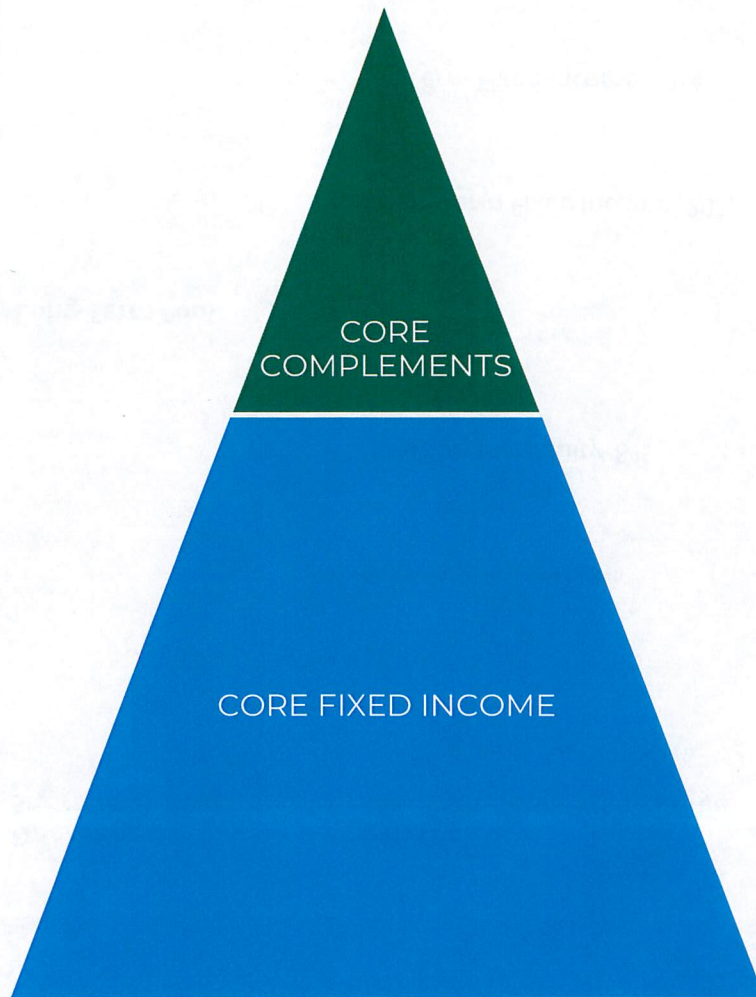


PERFORMANCE & ASSET ALLOCATION REVIEW

NON-ENDOWMENT ASSET POOL	CURRENT ASSET ALLOCATION	POLICY COMPLIANCE?	INVESTMENT MANAGER COMMENTARY
Operating & Short-Term Pool	<ul style="list-style-type: none"> • 54% Cash • 46% Short-Term Fixed Income 	<u>Review</u>	Cash & cash equivalent investments with one short-term fixed income holding; modest return over time (+0.4% 4Q19, +2.4% 2019); lower return forecasts alongside declining interest rates; investments include Vanguard Short-Term Federal Fund, Star Plus and Star Ohio investments.
Long-Term Pool	<ul style="list-style-type: none"> • Domestic Equity 28% • International Equity 8% • Alternatives 15% • Short-Term Fixed Income 28% • Int-Term Fixed Income 21% 	<p><u>In Compliance</u></p> <p>Overweight 1%</p> <p>In-Line</p> <p>In-Line</p> <p>Underweight 2%</p> <p>Overweight 1%</p>	<p><i>Domestic Equity (+8.7% 4Q19, +30.4% 2019)</i> Both small cap active managers' relative results were challenged during the quarter affected by stock selection across different sectors, though both posted strong absolute returns; Victory outpaced its respective benchmark for CY19 (Victory +8.1% 4Q19, +23.1% 2019; Loomis +9.9% 4Q19, +26.5% 2019).</p> <p><i>International Equity (+10.7% 4Q19, +26.7% 2019)</i> Both international managers outpaced respective benchmarks during the quarter and calendar year; William Blair Int'l Growth (+10.8% 4Q19, +30.7% 2019) benefitted from an overweight to technology and stock selection across a majority of sectors; Dodge & Cox International's (+10.6% 4Q19, +22.8% 2019) primary drivers of outperformance were stock selection in financials and the fund's emerging markets exposure.</p> <p><i>Alternatives (+3.0% 4Q19, +14.3% 2019)</i> The alternatives portfolio provided diversification and positive results for the quarter, with Diamond Hill leading the way throughout the calendar year (+4.5% 4Q19, +23.2% 2019).</p> <p><i>Fixed Income (+0.6% 4Q19, +6.6% 2019)</i> Five out of the University's six fixed income managers outpaced respective benchmarks for the calendar year; Credit and greater interest rate sensitivity (duration) were additive to results in 2019 as equity markets performed well and interest rates declined; PGIM High Yield led all fixed income managers in '19 (+3.1% 4Q19, +16.3% 2019).</p>

Manager details can be found in the Appendix.

FIXED INCOME PORTFOLIO STRUCTURE



CHARACTERISTICS

- Diversification
- Lower correlation to core fixed income
- Enhanced yield
- Credit risk
- Currency risk

INVESTMENTS

- Emerging markets
- High yield bonds
- Bank loans
- Tactical strategies
- Inflation hedge (TIPS)
- Global bonds

CHARACTERISTICS

- Hedge against equity volatility
- Income and stability
- Interest rate risk
- Deflation hedge

INVESTMENTS

- Investment grade; government and agencies, corporate, and mortgages
- Asset backed securities
- Intermediate-term maturities

FIXED INCOME: INVESTMENT MANAGER PERFORMANCE

	% of Portfolio	Ending December 31, 2019								Calendar Years			Inception (%)	Inception Date
		2019 Q4 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)		
Total Fixed Income	47.2	0.6	6.6	6.6	3.7	3.3	2.4	2.0	--	6.6	0.9	2.4	2.4	Jun-10
<i>Total Fixed Income Benchmark</i>		0.5	5.1	5.1	3.2	2.6	2.0	1.7	2.2	5.1	1.4	1.3	2.0	
JPMorgan Core Bond	9.0	-0.3	8.3	8.3	4.2	4.1	3.0	2.6	3.8	8.3	0.2	3.8	3.5	Aug-17
<i>BBgBarc US Aggregate TR</i>		0.2	8.7	8.7	4.3	4.0	3.0	2.7	3.7	8.7	0.0	3.5	3.6	
YSU Intermediate Term Bond	7.0	0.5	7.2	7.2	3.9	3.4	2.5	2.2	3.1	7.2	0.8	2.4	3.7	Mar-04
<i>BBgBarc US Govt/Credit Int TR</i>		0.4	6.8	6.8	3.8	3.2	2.6	2.2	3.1	6.8	0.9	2.1	3.4	
PGIM High Yield R6	4.5	3.1	16.3	16.3	7.2	7.4	6.8	6.3	--	16.3	-1.2	7.8	7.4	Dec-16
<i>BBgBarc US High Yield TR</i>		2.6	14.3	14.3	5.8	6.4	6.1	5.8	7.6	14.3	-2.1	7.5	6.4	
YSU Short Term Bond	19.2	0.6	4.3	4.3	2.9	2.3	1.8	1.4	1.6	4.3	1.6	1.1	2.5	Mar-04
<i>ICE BofAML 1-3 Yrs US Corp & Govt TR</i>		0.6	4.1	4.1	2.9	2.2	1.7	1.4	1.6	4.1	1.6	0.9	2.4	
Lord Abnett Short Duration Income I	4.4	0.9	5.6	5.6	3.5	3.2	2.9	2.6	3.5	5.6	1.4	2.7	4.1	Mar-18
<i>ICE BofAML 1-3 Yrs US Corp & Govt TR</i>		0.6	4.1	4.1	2.9	2.2	1.7	1.4	1.6	4.1	1.6	0.9	3.4	
DFA Five-Yr Global Fxd-Inc I	3.1	0.2	4.0	4.0	2.9	2.6	2.2	1.9	2.8	4.0	1.7	2.0	2.2	Jun-13
<i>FTSE WGBI 1-5 Yr Hdg USD</i>		0.2	3.9	3.9	3.0	2.4	1.9	1.7	1.9	3.9	2.1	1.1	1.9	

FIXED INCOME LOOK THROUGH ANALYSIS

Current Portfolio	18.9%	14.8%	9.6%	40.7%	9.3%	6.7%	100.0%	
	JP Morgan Core Bond	YSU Int-Term Bond	PGIM High Yield	YSU Short-Term Bond	Lord Abbett Short Duration Income	DFA Five-Yr Global Fixed Income	Current Portfolio	BarCap Aggregate Bond Index
Expense Ratio	0.50%	0.15%	0.41%	0.15%	0.32%	0.27%	0.26%	
Strategy AUM (\$1,000,000)	\$28,196	-	\$7,300	-	\$53,500	\$15,200		
Current Wgtd. Avg. Coupon	3.60%	-	6.40%	-	3.70%	-		3.18%
Yield to Maturity	3.18%	2.76%	8.20%	2.53%	2.89%	2.05%	3.23%	2.30%
Average Maturity	7.57	4.35	6.12	1.95	2.36	2.02	3.81	8.06
Effective Duration	5.70	3.83	4.50	1.81	1.79	2.00	3.11	5.88
Quality Issue							AA	AA
AAA	61%	60%	6%	72%	42%	33%	56%	70%
AA	6%	3%	0%	2%	7%	57%	7%	4%
A	12%	17%	0%	11%	9%	8%	11%	12%
BBB	14%	20%	6%	15%	31%	0%	15%	15%
BB	0%	0%	36%	0%	6%	0%	4%	0%
B	0%	0%	39%	0%	5%	0%	4%	0%
CCC & Below & Not Rated	7%	0%	13%	0%	1%	2%	3%	0%
U.S. Treasury	28%	44%	0%	35%	4%	0%	26%	40%
U.S. Agency	3%	12%	0%	11%	0%	0%	7%	1%
Invt. Grade Corporates	24%	40%	6%	46%	31%	7%	33%	25%
High Yield Corporates	0%	0%	83%	0%	7%	0%	9%	0%
Non-Agency ABS/CMOs	10%	0%	5%	0%	25%	0%	5%	0%
Non-Agency MBS/CMBS	7%	3%	0%	7%	26%	0%	7%	2%
Mort.-Passthrough	27%	0%	0%	0%	1%	0%	5%	27%
Leveraged/Bank Loans	0%	0%	4%	0%	4%	0%	1%	0%
Municipals	0%	0%	0%	0%	0%	0%	0%	0%
Non-U.S. Developed	1%	0%	1%	0%	1%	93%	6%	5%
Emerging Markets	0%	0%	2%	0%	0%	0%	0%	0%
Non-Dollar	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%
Cash	1%	1%	1%	1%	2%	0%	1%	0%

INTEREST RATE SENSITIVITY ANALYSIS

How to Read: A 50 bps increase in interest rates over a 1-year period would result in a total return of +1.7%, whereas the Barclays Aggregate Bond Index would return -0.6%.

PORTFOLIO EXPECTED RETURNS

		TIME (MONTHS)			
		6	12	18	24
INTEREST RATE CHANGE	-1.5%	6.3%	7.9%	9.5%	11.1%
	-1.0%	4.7%	6.3%	8.0%	9.6%
	-0.5%	3.2%	4.8%	6.4%	8.0%
	0.0%	1.6%	3.2%	4.8%	6.5%
	0.5%	0.1%	1.7%	3.3%	4.9%
	1.0%	-1.5%	0.1%	1.7%	3.4%
	1.5%	-3.1%	-1.4%	0.2%	1.8%

BARCAP AGG EXPECTED RETURNS

		TIME (MONTHS)			
		6	12	18	24
INTEREST RATE CHANGE	-1.5%	10.0%	11.1%	12.3%	13.4%
	-1.0%	7.0%	8.2%	9.3%	10.5%
	-0.5%	4.1%	5.2%	6.4%	7.5%
	0.0%	1.2%	2.3%	3.5%	4.6%
	0.5%	-1.8%	-0.6%	0.5%	1.7%
	1.0%	-4.7%	-3.6%	-2.4%	-1.3%
	1.5%	-7.7%	-6.5%	-5.4%	-4.2%

PORTFOLIO RECOMMENDATIONS (ACTION)

YOUNGSTOWN STATE UNIVERSITY

AS OF JANUARY 29, 2020

	TICKER	MARKET VALUE (CURRENT)	PERCENTAGE OF PORTFOLIO	CHANGES	MARKET VALUE (POST REBALANCE)	PERCENTAGE OF PORTFOLIO	POLICY TARGET	POLICY RANGE	TACTICAL +/-
Total Operating & Short Term		\$2,474,769	100.0%	\$0	\$2,474,769	100.0%	100.0%		
Operating Assets		\$1,334,793	53.9%		\$1,334,793	53.9%		60-100%	
JPMorgan 100% U.S. Treas. MM Instl	JTSXX	\$158,289	6.4%		\$158,289	6.4%			
Star Plus*	-	\$53,890	2.2%		\$53,890	2.2%			
Star Ohio*	-	\$1,122,614	45.4%		\$1,122,614	45.4%			
Short-Term Assets		\$1,139,975	46.1%		\$1,139,975	46.1%		0-40%	
Vanguard Short-Term Federal Adm	VSGDX	\$1,139,975	46.1%		\$1,139,975	46.1%			
Total Long Term Reserves Pool		\$59,216,946	100.0%	\$0	\$59,216,946	100.0%	100.0%		
Domestic Equity		\$16,693,851	28.2%		\$16,193,851	27.3%	27.0%	20-35%	0.3%
Vanguard Instl Index	VINIX	\$11,592,642	19.6%	-\$500,000	\$11,092,642	18.7%			
Vanguard Mid Cap Index Adm	VIMAX	\$2,551,885	4.3%		\$2,551,885	4.3%			
Loomis Sayles Small Growth Instl	LSSIX	\$1,314,822	2.2%		\$1,314,822	2.2%			
Victory Integrity Small Cap Value Y	VSVIX	\$1,234,503	2.1%		\$1,234,503	2.1%			
International Equity		\$4,711,027	8.0%		\$4,711,027	8.0%	8.0%	0-15%	0.0%
William Blair International Growth I	BIGIX	\$2,419,356	4.1%		\$2,419,356	4.1%			
Dodge & Cox International Stock	DODFX	\$2,291,671	3.9%		\$2,291,671	3.9%			
Total Equity		\$21,404,878	36.1%		\$20,904,878	35.3%	35.0%	25-45%	0.3%
Alternatives		\$8,678,335	14.7%		\$8,678,335	14.7%	15.0%	0-20%	-0.3%
JPMorgan Strategic Income Opps Fd	JSOSX	\$2,162,876	3.7%		\$2,162,876	3.7%			
Wells Fargo Adv Absolute Return I	WABIX	\$2,230,747	3.8%		\$2,230,747	3.8%			
Diamond Hill Long-Short Y	DIAYX	\$2,410,536	4.1%		\$2,410,536	4.1%			
Brookfield Global Real Estate	BLRIX	\$1,874,176	3.2%		\$1,874,176	3.2%			
Fixed Income		\$29,133,675	49.2%		\$29,633,675	50.0%	50.0%	35-75%	0.0%
YSU Short Term Bond	-	\$11,810,428	19.9%		\$11,810,428	19.9%			
Lord Abbett Short Duration	LLDYX	\$2,719,230	4.6%	\$500,000	\$3,219,230	5.4%			
DFA Five-Year Global	DFGBX	\$1,943,719	3.3%		\$1,943,719	3.3%			
JPMorgan Core Bond Fund Sel	WOBDX	\$5,569,877	9.4%		\$5,569,877	9.4%			
YSU Intermediate Term Fixed	-	\$4,346,393	7.3%		\$4,346,393	7.3%			
Prudential High Yield Bond R6	PHYQX	\$2,744,027	4.6%		\$2,744,027	4.6%			
Cash & Cash Equivalents		\$58	0.0%		\$58	0.0%	0.0%	0-5%	0.0%
Equity Account Cash	-	\$58	0.0%		\$58	0.0%			
Total University Assets		\$61,691,714			\$61,691,714				

*As of 12/31/2019



APPENDIX



**ENDOWMENT ASSETS:
PERFORMANCE & ASSET ALLOCATION
REVIEW**

ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION (AS OF 12/31/2019)

ENDOWMENT ASSETS	MARKET VALUE	ASSET ALLOCATION	COMPOSITION	QTD	YTD	1 YR	2 YR	3 YR	5 YR	2019	2018	2017	SINCE INCEPTION ²
YSU Endowment Fund	\$11.8 MM	78% Equity / 22% Fixed Income & Cash	Stocks, Bonds, Mutual Funds	5.8%	23.8%	23.8%	8.6%	10.4%	7.8%	23.8%	-4.8%	14.2%	8.9%
			<i>Benchmark¹</i>	5.5%	22.2%	22.2%	9.2%	10.9%	8.4%	22.2%	-2.3%	14.2%	9.6%
Alumni License Plate Account	\$12,156	60% Equity / 40% Fixed Income	Mutual Fund	3.9%	18.5%	18.5%	7.8%	8.6%	7.8%	18.5%	-2.0%	10.3%	7.9%
			<i>Benchmark¹</i>	5.5%	22.2%	22.2%	9.2%	10.9%	8.4%	22.2%	-2.3%	14.2%	9.6%

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 & Fixed Income Guidelines
 - YSU Endowment (In-Line)
 - Kilcawley Center (In-Line)
 - Alumni (In-Line)

1) Benchmark: 60% S&P 500 / 40% BBgBarc US Aggregate.
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.

ENDOWMENT HOLDINGS

YSU ENDOWMENT (HUNTINGTON)

- Equity Mutual Funds – 11% (5-10 Mutual Funds & ETFs)
- Stocks – 66% (45-60 U.S. Large/Mid-Cap Stocks)
- Fixed Income Mutual Funds – 2% (Federated Total Return Bond)
- Bonds – 18% (10-15 Bonds, U.S. Corporate / Gov't / Asset Backed Debt)
- Cash – 3%

ALUMNI LICENSE PLATE (PNC)

- Vanguard Balanced Index Fund (Adm) – 100%



SUPPORTING INFORMATION

EXECUTIVE SUMMARY

	Ending December 31, 2019			2019	YTD
	Market Value 9/30/19 (\$)	Market Value 12/31/19 (\$)	% of Portfolio	Q4 (%)	(%)
Total University Assets	80,241,710	61,537,834	100.0	3.1	11.5
<i>Total Policy Benchmark</i>				2.2	8.7
Total Operating & Short Term	23,402,164	2,470,536	4.0	0.4	2.4
<i>Total Operating & Short Term Benchmark</i>				0.5	2.3
Total Long Term/ Reserves Pool	56,839,546	59,067,298	96.0	3.9	15.3
<i>Total Long Term/ Reserves Fund Benchmark</i>				3.7	14.2
Total Domestic Equity	15,415,315	16,503,656	26.8	8.7	30.4
<i>Russell 3000</i>				9.1	31.0
Total International Equity	4,055,770	4,749,001	7.7	10.7	26.7
<i>MSCI EAFE</i>				8.2	22.0
Total Alternatives	8,500,903	8,755,157	14.2	3.0	14.3
<i>Total Alternatives Benchmark</i>				2.7	11.7
Total Fixed Income	28,867,501	29,059,426	47.2	0.6	6.6
<i>Total Fixed Income Benchmark</i>				0.5	5.1
Total Cash & Cash Equivalents	58	58	0.0	0.3	2.0
<i>ICE BofAML 91 Days T-Bills TR</i>				0.5	2.3

- 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

- Total Alternatives Benchmark = 25% FTSE NAREIT Developed TR USD / 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

ASSET ALLOCATION GUIDELINES COMPLIANCE

As of December 31, 2019

Total Plan Asset Allocation Policy	Range	Current
Operating & Short-Term Pool	25% - 50%	23%
Long Term/ Reserves Pool	50% - 75%	77%

Operating & Short-Term Pool	Range	Current
Operating Assets	60% - 100%	54%
Short-Term Assets	0% - 40%	46%

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%	28%
Intermediate Fixed Income	20%	10% - 30%	21%
Cash & Cash Equivalents	0%	0% - 5%	0%

In Line
 Within Tolerance
 Review

SCHEDULE OF ASSETS

	Asset Class	Market Value 9/30/19 (\$)	Market Value 12/31/19 (\$)	% of Total Plan	% of Pool
Total University Assets		80,241,710	61,537,834	100.0	100.0
Total Operating & Short Term		23,402,164	2,470,536	4.0	100.0
JPMorgan 100% U.S. Tr Sec MM Inst	Cash	15,121,833	158,290	0.3	6.4
Star Plus	Cash	2,546,258	53,890	0.1	2.2
Vanguard Short-Term Federal Adm	US Fixed Income Short Term	1,130,762	1,135,742	1.8	46.0
STAR Ohio		4,603,310	1,122,614	1.8	45.4
Total Long Term/ Reserves Pool		56,839,546	59,067,298	96.0	100.0
Total Domestic Equity		15,415,315	16,503,656	26.8	27.9
Vanguard Institutional Index	US Stock Large Cap Core	10,952,129	11,430,380	18.6	19.4
Vanguard Mid Cap Index Inv	US Stock Mid Cap Core	2,358,940	2,521,150	4.1	4.3
Loomis Sayles Sm Growth Instl	US Stock Small Cap Growth	1,122,152	1,273,959	2.1	2.2
Victory Integrity Small Value Y	US Stock Small Cap Value	982,095	1,278,167	2.1	2.2
Total International Equity		4,055,770	4,749,001	7.7	8.0
William Blair International Growth I	International	2,068,239	2,394,138	3.9	4.1
Dodge & Cox Internat'l Stock	International	1,987,530	2,354,863	3.8	4.0
Total Alternatives		8,500,903	8,755,157	14.2	14.8
JPMorgan Strategic Income Opps Sel	Absolute Return	2,148,690	2,160,991	3.5	3.7
Wells Fargo Adv Absolute Return Instl	All Assets	2,141,448	2,254,755	3.7	3.8
Diamond Hill Long-Short Y	Long/Short Equity	2,368,018	2,473,515	4.0	4.2
Brookfield Global Listed Real Estate I	Global Real Estate	1,842,746	1,865,895	3.0	3.2
Total Fixed Income		28,867,501	29,059,426	47.2	49.2
JPMorgan Core Bond	US Fixed Income Core	5,520,539	5,511,890	9.0	9.3
YSU Intermediate Term Bond	US Fixed Income Core	4,304,775	4,325,478	7.0	7.3
PGIM High Yield R6	US Fixed Income High Yield	2,676,159	2,758,896	4.5	4.7
YSU Short Term Bond	US Fixed Income Short Term	11,743,217	11,813,859	19.2	20.0
Lord Abbett Short Duration Income I	US Fixed Income Short Term	2,689,225	2,712,802	4.4	4.6
DFA Five-Yr Global Fxd-Inc I	Global Fixed Income	1,933,586	1,936,500	3.1	3.3
Total Cash & Cash Equivalents		58	58	0.0	0.0
PNC Govt MMkt	Cash	58	58	0.0	0.0

ATTRIBUTION OF MARKET VALUE

TOTAL UNIVERSITY INVESTMENTS

	2019 Q1	2019 Q2	2019 Q3	Fourth Quarter	One Year
Beginning Market Value	\$60,511,374	\$83,687,856	\$69,388,069	\$80,241,710	\$60,511,374
Contributions	\$24,509,030	\$9,281	\$18,008,937	\$2,508,867	\$45,036,115
Withdrawals	-\$5,009,030	-\$16,009,281	-\$7,708,919	-\$23,508,867	-\$52,236,096
Net Cash Flow	\$19,500,000	-\$16,000,000	\$10,300,018	-\$21,000,000	-\$7,199,982
Net Investment Change	\$3,676,483	\$1,700,212	\$553,622	\$2,296,124	\$8,226,442
Ending Market Value	\$83,687,856	\$69,388,069	\$80,241,710	\$61,537,834	\$61,537,834
Net Change	\$23,176,483	-\$14,299,788	\$10,853,641	-\$18,703,876	\$1,026,460

LONG-TERM POOL

	2019 Q1	2019 Q2	2019 Q3	Fourth Quarter	One Year
Beginning Market Value	\$51,238,803	\$54,765,726	\$56,347,789	\$56,839,546	\$51,238,803
Contributions	\$8,053	\$7,745	\$8,562	\$8,052	\$32,413
Withdrawals	-\$8,053	-\$7,745	-\$8,544	-\$8,052	-\$32,394
Net Cash Flow	\$0	\$0	\$18	\$0	\$18
Net Investment Change	\$3,526,923	\$1,582,063	\$491,738	\$2,227,752	\$7,828,477
Ending Market Value	\$54,765,726	\$56,347,789	\$56,839,546	\$59,067,298	\$59,067,298
Net Change	\$3,526,923	\$1,582,063	\$491,757	\$2,227,752	\$7,828,495

PERFORMANCE REPORT CARD

	% of Portfolio	Ending December 31, 2019								Calendar Years			Inception (%)	Inception Date
		2019 Q4 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)		
Total University Assets	100.0	3.1	11.5	11.5	4.8	5.8	4.1	4.2	4.0	11.5	-1.5	7.8	4.0	Mar-04
<i>Total Policy Benchmark</i>		2.2	8.7	8.7	4.1	4.5	3.3	3.2	2.9	8.7	-0.4	5.4	3.2	
Total Operating & Short Term	4.0	0.4	2.4	2.4	2.0	1.6	1.0	0.7	--	2.4	1.7	0.7	0.6	Jun-10
<i>Total Operating & Short Term Benchmark</i>		0.5	2.3	2.3	2.1	1.7	1.1	0.8	0.6	2.3	1.9	0.8	0.6	
JPMorgan 100% U.S. Tr Sec MM Inst	0.3	0.4	2.0	2.0	1.8	1.5	0.9	0.6	0.5	2.0	1.7	0.7	0.5	Sep-11
<i>ICE BofAML 91 Days T-Bills TR</i>		0.5	2.3	2.3	2.1	1.7	1.1	0.8	0.6	2.3	1.9	0.9	0.7	
Vanguard Short-Term Federal Adm	1.8	0.4	4.2	4.2	2.8	2.1	1.7	1.3	1.7	4.2	1.4	0.8	1.4	Sep-10
<i>BBgBarc US Govt 1-5 Yr TR</i>		0.3	4.2	4.2	2.9	2.1	1.7	1.3	1.7	4.2	1.5	0.7	1.4	
STAR Plus	0.1	0.3	2.2	2.2	2.0	1.6	1.1	--	--	2.2	1.8	0.7	0.9	Jan-14
<i>ICE BofAML 91 Days T-Bills TR</i>		0.5	2.3	2.3	2.1	1.7	1.1	0.8	0.6	2.3	1.9	0.9	0.9	
STAR Ohio	1.8	0.5	2.3	2.3	--	--	--	--	--	2.3	--	--	2.3	Jun-18
<i>ICE BofAML 91 Days T-Bills TR</i>		0.5	2.3	2.3	2.1	1.7	1.1	0.8	0.6	2.3	1.9	0.9	2.2	
Total Long Term/ Reserves Pool	96.0	3.9	15.3	15.3	5.5	7.2	5.2	5.6	--	15.3	-3.4	10.5	5.4	Jun-10
<i>Total Long Term/ Reserves Fund Benchmark</i>		3.7	14.2	14.2	5.6	6.8	5.1	5.2	5.0	14.2	-2.4	9.3	4.9	
Total Domestic Equity	26.8	8.7	30.4	30.4	10.9	14.4	11.0	14.3	--	30.4	-5.7	21.6	14.7	Jun-10
<i>Russell 3000</i>		9.1	31.0	31.0	11.4	14.6	11.2	14.4	13.4	31.0	-5.2	21.1	14.9	
Vanguard Institutional Index	18.6	9.1	31.5	31.5	12.1	15.2	11.7	14.7	13.5	31.5	-4.4	21.8	15.1	Jun-10
<i>S&P 500</i>		9.1	31.5	31.5	12.1	15.3	11.7	14.7	13.6	31.5	-4.4	21.8	15.2	
Vanguard Mid Cap Index Inv	4.1	6.8	30.9	30.9	8.9	12.3	9.2	13.2	13.1	30.9	-9.3	19.3	12.9	Sep-10
<i>Vanguard Mid Cap Index Benchmark</i>		6.9	31.1	31.1	9.1	12.4	9.3	13.3	13.1	31.1	-9.2	19.3	13.0	
Loomis Sayles Sm Growth Instl	2.1	9.9	26.5	26.5	12.7	17.3	11.5	14.5	14.4	26.5	0.4	26.9	14.3	Sep-10
<i>Russell 2000 Growth</i>		11.4	28.5	28.5	7.9	12.5	9.3	13.1	13.0	28.5	-9.3	22.2	12.9	
Victory Integrity Small Value Y	2.1	8.1	23.1	23.1	0.1	4.0	5.5	10.2	11.0	23.1	-18.6	12.4	10.8	Sep-10
<i>Russell 2000 Value</i>		8.5	22.4	22.4	3.3	4.8	7.0	10.1	10.6	22.4	-12.9	7.8	10.6	
Total International Equity	7.7	10.7	26.7	26.7	2.0	9.6	5.0	6.5	--	26.7	-17.8	26.6	5.4	Sep-10
<i>MSCI EAFE</i>		8.2	22.0	22.0	2.6	9.6	5.7	6.3	5.5	22.0	-13.8	25.0	5.8	
<i>MSCI ACWI ex USA</i>		8.9	21.5	21.5	2.1	9.9	5.5	5.4	5.0	21.5	-14.2	27.2	5.0	

PERFORMANCE REPORT CARD

	% of Portfolio	Ending December 31, 2019								Calendar Years			Inception Inception Date	
		2019 Q4 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)		
William Blair International Growth I	3.9	10.8	30.7	30.7	3.7	11.7	6.3	6.6	7.2	30.7	-17.7	29.5	8.2	Jun-12
MSCI ACWI ex USA		8.9	21.5	21.5	2.1	9.9	5.5	5.4	5.0	21.5	-14.2	27.2	6.9	
Dodge & Cox Internat'l Stock	3.8	10.6	22.8	22.8	0.3	7.7	3.7	6.1	5.8	22.8	-18.0	23.9	5.6	Sep-10
MSCI EAFE		8.2	22.0	22.0	2.6	9.6	5.7	6.3	5.5	22.0	-13.8	25.0	5.8	
Total Alternatives	14.2	3.0	14.3	14.3	3.6	5.1	--	--	--	14.3	-6.0	7.9	2.7	Mar-15
Total Alternatives Benchmark		2.7	11.7	11.7	3.4	5.0	--	--	--	11.7	-4.3	8.4	2.7	
JPMorgan Strategic Income Opps Sel	3.5	0.6	4.0	4.0	2.4	2.7	2.9	2.5	3.1	4.0	0.8	3.3	2.1	Sep-18
BBgBarc US Universal TR		0.5	9.3	9.3	4.4	4.3	3.4	3.0	4.1	9.3	-0.3	4.1	8.4	
Wells Fargo Adv Absolute Return Instl	3.7	5.3	11.2	11.2	2.5	5.7	3.0	3.7	--	11.2	-5.6	12.6	2.3	Mar-15
HFR1 Fund of Funds Composite Index		3.0	8.3	8.3	2.0	3.9	2.4	3.4	2.8	8.3	-4.0	7.8	2.1	
Diamond Hill Long-Short Y	4.0	4.5	23.2	23.2	7.1	6.7	5.8	8.4	7.0	23.2	-6.9	6.0	6.1	Mar-15
HFRX Equity Hedge Index		2.6	10.7	10.7	0.1	3.3	1.5	2.8	1.2	10.7	-9.4	10.0	1.1	
Brookfield Global Listed Real Estate I	3.0	1.3	20.4	20.4	5.2	6.8	5.0	7.0	--	20.4	-8.1	10.1	5.8	Jul-17
FTSE NAREIT Developed TR USD		1.7	21.9	21.9	7.3	8.3	5.6	6.6	8.4	21.9	-5.6	10.4	7.4	
Total Fixed Income	47.2	0.6	6.6	6.6	3.7	3.3	2.4	2.0	--	6.6	0.9	2.4	2.4	Jun-10
Total Fixed Income Benchmark		0.5	5.1	5.1	3.2	2.6	2.0	1.7	2.2	5.1	1.4	1.3	2.0	
JPMorgan Core Bond	9.0	-0.3	8.3	8.3	4.2	4.1	3.0	2.6	3.8	8.3	0.2	3.8	3.5	Aug-17
BBgBarc US Aggregate TR		0.2	8.7	8.7	4.3	4.0	3.0	2.7	3.7	8.7	0.0	3.5	3.6	
YSU Intermediate Term Bond	7.0	0.5	7.2	7.2	3.9	3.4	2.5	2.2	3.1	7.2	0.8	2.4	3.7	Mar-04
BBgBarc US Govt/Credit Int TR		0.4	6.8	6.8	3.8	3.2	2.6	2.2	3.1	6.8	0.9	2.1	3.4	
PGIM High Yield R6	4.5	3.1	16.3	16.3	7.2	7.4	6.8	6.3	--	16.3	-1.2	7.8	7.4	Dec-16
BBgBarc US High Yield TR		2.6	14.3	14.3	5.8	6.4	6.1	5.8	7.6	14.3	-2.1	7.5	6.4	
YSU Short Term Bond	19.2	0.6	4.3	4.3	2.9	2.3	1.8	1.4	1.6	4.3	1.6	1.1	2.5	Mar-04
ICE BofAML 1-3 Yrs US Corp & Govt TR		0.6	4.1	4.1	2.9	2.2	1.7	1.4	1.6	4.1	1.6	0.9	2.4	
Lord Abbett Short Duration Income I	4.4	0.9	5.6	5.6	3.5	3.2	2.9	2.6	3.5	5.6	1.4	2.7	4.1	Mar-18
ICE BofAML 1-3 Yrs US Corp & Govt TR		0.6	4.1	4.1	2.9	2.2	1.7	1.4	1.6	4.1	1.6	0.9	3.4	

PERFORMANCE REPORT CARD

	% of Portfolio	Ending December 31, 2019								Calendar Years			Inception (%)	Inception Date
		2019 Q4 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)		
DFA Five-Yr Global Fxd-Inc I	3.1	0.2	4.0	4.0	2.9	2.6	2.2	1.9	2.8	4.0	1.7	2.0	2.2	Jun-13
FTSE WGBI 1-5 Yr Hdg USD		0.2	3.9	3.9	3.0	2.4	1.9	1.7	1.9	3.9	2.1	1.1	1.9	
Total Cash & Cash Equivalents	0.0	0.3	2.0	2.0	--	--	--	--	--	2.0	--	--	1.9	Mar-18
ICE BofAML 91 Days T-Bills TR		0.5	2.3	2.3	2.1	1.7	1.1	0.8	0.6	2.3	1.9	0.9	2.2	
PNC Govt MMkt	0.0	0.3	2.0	2.0	--	--	--	--	--	2.0	--	--	1.9	Mar-18
ICE BofAML 91 Days T-Bills TR		0.5	2.3	2.3	2.1	1.7	1.1	0.8	0.6	2.3	1.9	0.9	2.2	

- 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 TR USD / 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

U.S. ECONOMIC PROJECTIONS

FEDERAL RESERVE BOARD MEMBERS & BANK PRESIDENTS

		2019	2020	2021	2022	LONGER RUN*
GDP	December 2019	2.2%	2.0%	1.9%	1.8%	1.9%
	September 2019	2.2%	2.0%	1.9%	1.8%	1.9%
Unemployment Rate	December 2019	3.6%	3.5%	3.6%	3.7%	4.1%
	September 2019	3.7%	3.7%	3.8%	3.9%	4.2%
Core PCE Inflation	December 2019	1.6%	1.9%	2.0%	2.0%	
	September 2019	1.8%	1.9%	2.0%	2.0%	
Federal Funds Rate	December 2019	1.6%	1.6%	1.9%	2.1%	2.5%
	September 2019	1.9%	1.9%	2.1%	2.4%	2.5%
# of implied 25 bps rate changes year	September 2019	0	0	1 Up	1 Up	
	June 2019	0	0	1 Up	1 UP	

*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.
Data as of 12/11/2019.



GLOBAL GROWTH MODERATING

		Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	12M Trend
Global	Mfg	51.4	50.7	50.6	50.5	50.4	49.8	49.4	49.3	49.5	49.7	49.8	50.3	50.1	
	Serv	53.0	52.6	53.3	53.7	52.7	51.6	51.9	52.5	51.8	51.4	51.0	51.6	52.1	
US	Mfg	53.8	54.9	53.0	52.4	52.6	50.5	50.6	50.4	50.3	51.1	51.3	52.6	52.4	
	Serv	54.4	54.2	56.0	55.3	53.0	50.9	51.5	53.0	50.7	50.9	50.6	51.6	52.8	
Eurozone	Mfg	51.4	50.5	49.3	47.5	47.9	47.7	47.6	46.5	47.0	45.7	45.9	46.9	46.3	
	Serv	51.2	51.2	52.8	53.3	52.8	52.9	53.6	53.2	53.5	51.6	52.2	51.9	52.8	
UK	Mfg	54.3	52.8	52.1	55.1	53.1	49.4	48.0	48.0	47.4	48.3	49.6	48.9	47.5	
	Serv	51.2	50.1	51.3	48.9	50.4	51.0	50.2	51.4	50.6	49.5	50.0	49.3	50.0	
Japan	Mfg	52.6	50.3	48.9	49.2	50.2	49.8	49.3	49.4	49.3	48.9	48.4	48.9	48.4	
	Serv	51.0	51.6	52.3	52.0	51.8	51.7	51.9	51.8	53.3	52.8	49.7	50.3	49.4	
China	Mfg	49.7	48.3	49.9	50.8	50.2	50.2	49.4	49.9	50.4	51.4	51.7	51.8	51.5	
	Serv	53.9	53.6	51.1	54.4	54.5	52.7	52.0	51.6	52.1	51.3	51.1	53.5	52.3	
India	Mfg	53.2	53.9	54.3	52.6	51.8	52.7	52.1	52.5	51.4	51.4	50.6	51.2	52.7	
	Serv	53.2	52.2	52.5	52.0	51.0	50.2	49.6	53.8	52.4	48.7	49.2	52.7	53.3	
S. Korea	Mfg	49.8	48.3	47.2	48.8	50.2	48.4	47.5	47.3	49.0	48.0	48.4	49.4	50.1	

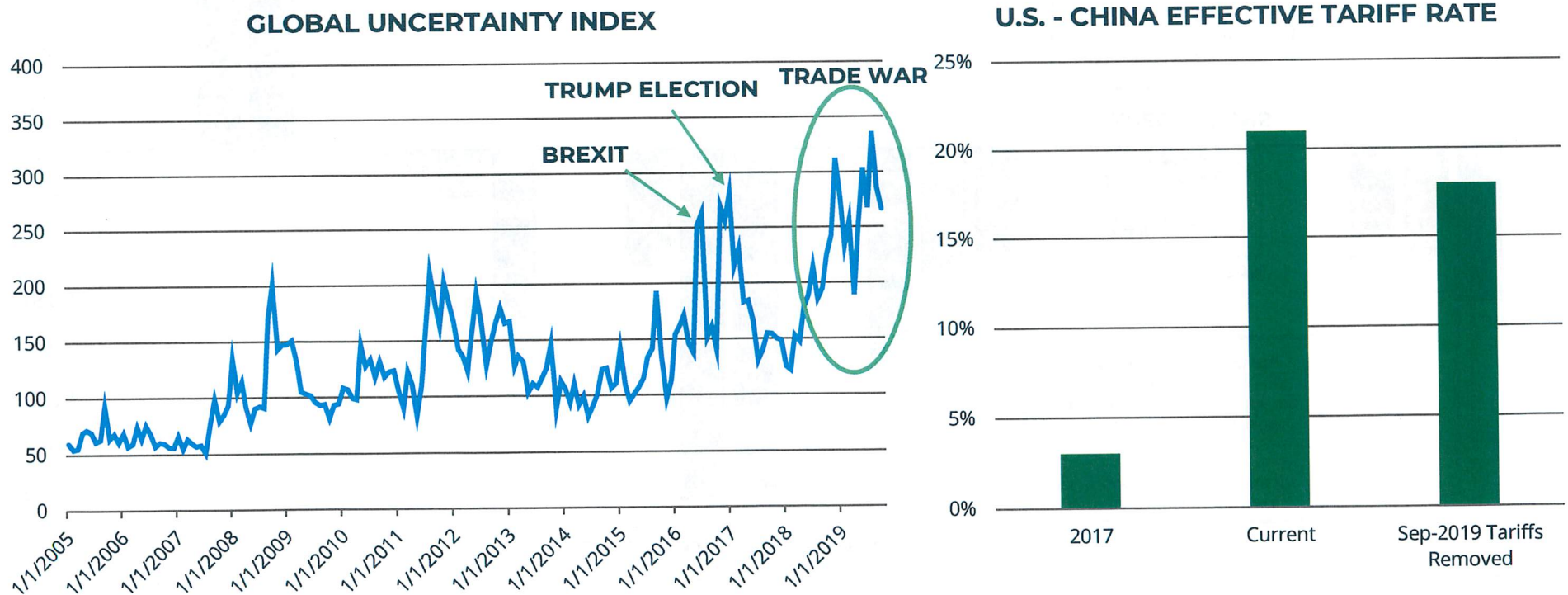
- Global manufacturing PMI moved above 50 for the first time since April 2019
- Global growth seems to have stabilized – no longer weakening – but nothing suggests a rapid acceleration of global growth in the near term

Source: Bloomberg, JPMorgan/Markit Global PMI.

U.S. - CHINA TRADE DEAL: PHASE I

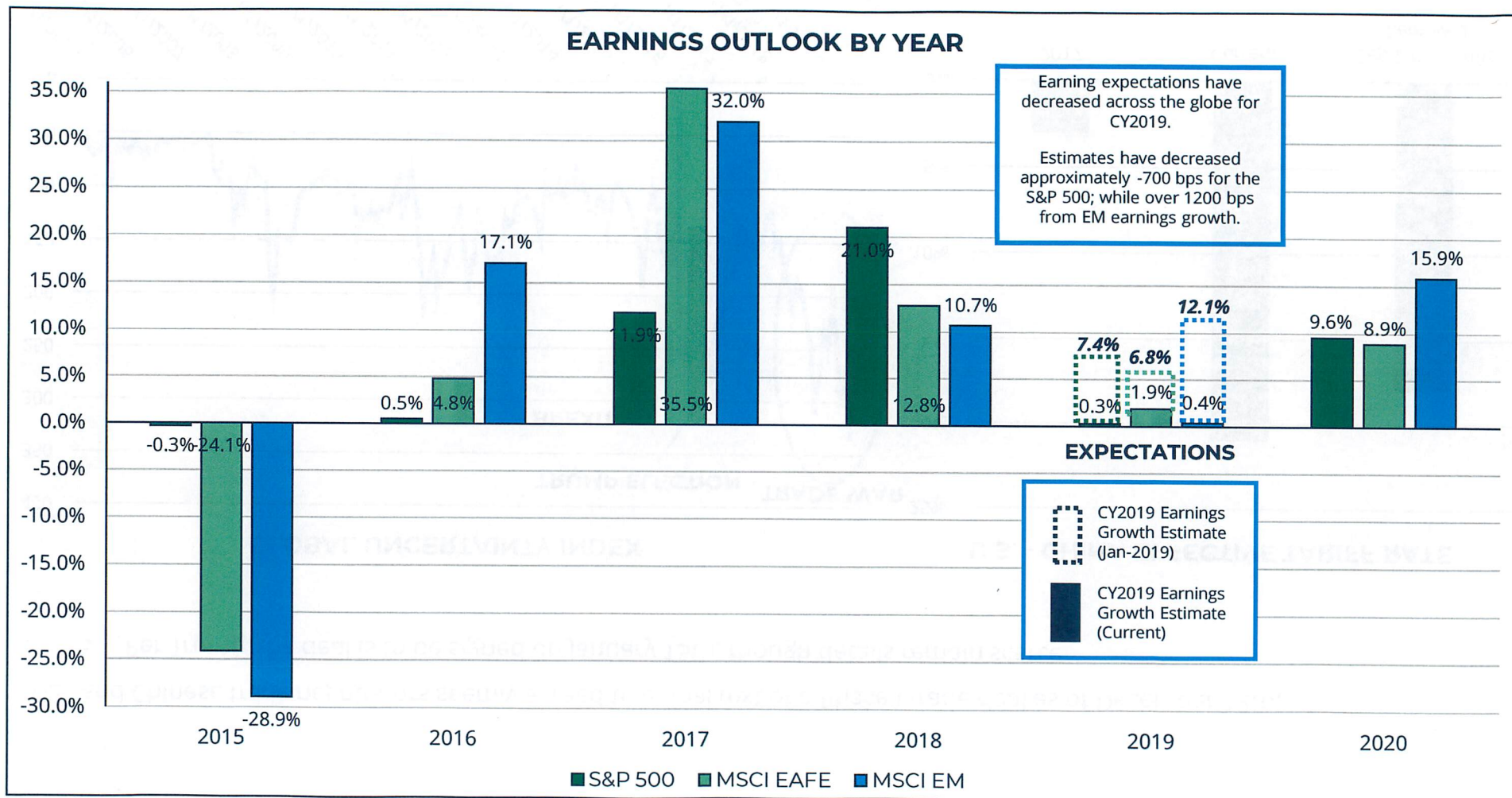
U.S. and Chinese trade negotiators seemly agreed to a final text of a Phase I trade deal as of December 12th.

- o Per Trump, the deal is to be signed on January 15th, though details remain scarce



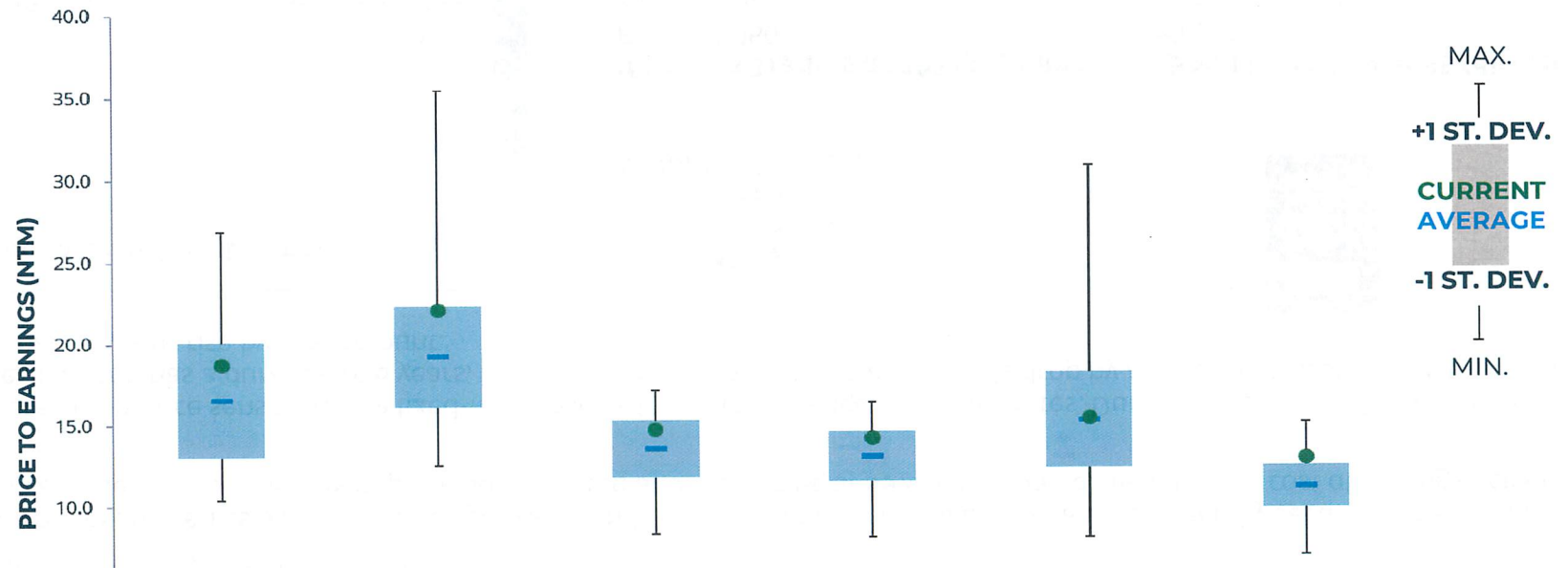
Source: Clearstead, Bloomberg, Capital Economics.

GLOBAL EARNINGS GROWTH



Source: Bloomberg, FactSet.
Data as of 12/31/2019.

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)	18.7	22.1	14.7	14.1	15.3	12.8
Average P/E (NTM)	16.6	19.2	13.5	13.0	15.2	11.0

Source: Bloomberg as of 12/31/2019. Average taken over full index history. MSCI USA- 1994 - Current; MSCI USA Small- 1994 - Current; MSCI EAFE- 2003 - Current; MSCI ACWI ex USA- 2003 - Current; MSCI ACWI ex USA Small- 1994 - Current; MSCI EM- 2003 - Current.

FIXED INCOME 101

What is a Bond?: An investment in which an investor loans money to an entity (typically corporate or governmental) for a defined period of time in exchange for interest. Interest is typically returned semi-annually and face value is paid at maturity, assuming no default.

Face Value: The amount the bond will be worth at maturity, and is the reference amount used when calculating interest payments.

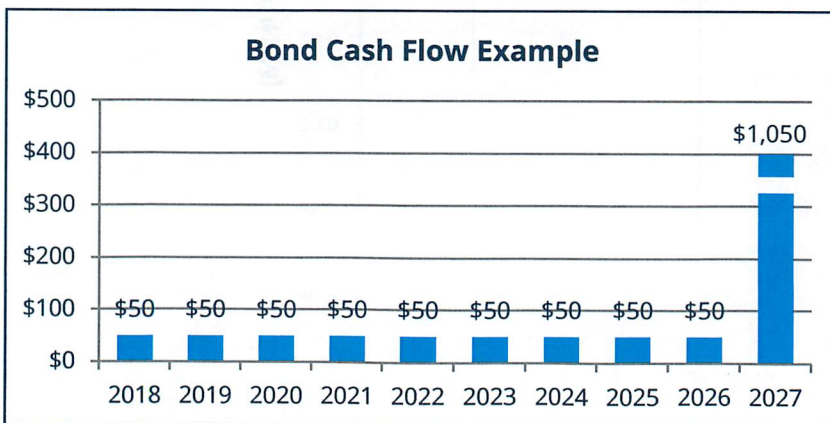
Coupon Rate: The rate of interest the bond issuer will pay on the face value of the bond, expressed as an annual percentage. For example, a 5% coupon rate means that bondholders will receive $5\% \times \$1,000$ face value = \$50 annually.

Maturity Date: The date on which the bond will mature and the bond issuer is contracted to repay the face value.

Yield To Maturity: The discount rate at which the sum of all future cash flows (coupon income, reinvestment of coupon income, and maturing principal) is equal to the current price of the bond.

Price: The bond price is expressed as a percentage of par value and converted to a point scale. Par value is generally set at 100, representing 100% of a bond's face value of \$1,000. For example, a bond quoted at 99 is trading at 99% of face value, meaning the cost of buying each bond is \$990.

Duration: A measure of the price sensitivity of a fixed-income investment to a change in interest rates. Duration is expressed as a number of years. For example, if a bond has a duration of 6 years, its price will rise about 6% if market yields drop by a percentage point, and its price will fall by about 6% if market yields rise by that amount.



Bond Example

Face Value: \$1,000
Coupon: 5% (\$50/ annually)
Maturity: 12/31/2027



If Bond is Trading at 105 (premium)

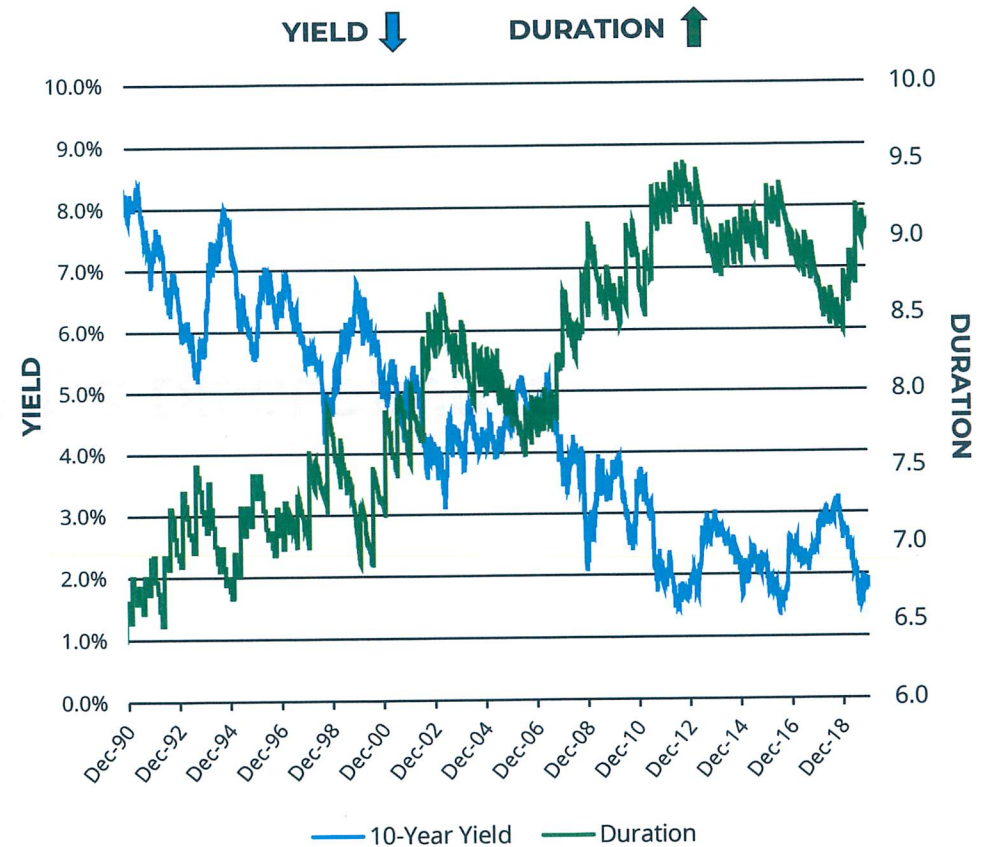
Price: \$1,050
Yield-to-maturity: 4.4%
Duration: 7.5

If Bond is Trading at 95 (discount)

Price: \$950
Yield-to-maturity: 5.7%
Duration: 7.4

YIELD VS. DURATION

10-YEAR U.S. TREASURY YIELD



Sources: Clearstead, Bloomberg.



DEFINITIONS & DISCLOSURES

DEFINITIONS & DISCLOSURES

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 **Wilshire 4500 Index** is comprised of all stocks in the Wilshire 5000 Index minus the stocks in the S&P 500. The **Wilshire Real Estate Securities Index (RESI)** is comprised of publically traded real estate equity securities.

All MSCI indices are gross, defined as With Gross Dividends. Gross total return indices reinvest as much as possible of a company's dividend distributions. The reinvested amount is equal to the total dividend amount distributed to persons residing in the country of the dividend-paying company. Gross total return indices do not, however, include any tax credits. The **MSCI EAFE (Europe, Australasia, Far East) Gross Index** is designed to measure developed market equity performance, excluding the U.S. and Canada. The **MSCI Emerging Markets (EM) Gross Index** is designed to measure global emerging market equity performance. The **MSCI World Gross Index** is designed to measure global developed market equity performance. The **MSCI World Index Ex-U.S. Gross Index** is designed to measure the equity market performance of developed markets and excludes the U.S. The **MSCI Europe Gross Index** is an unmanaged index considered representative of developed European countries. The **MSCI Japan Gross Index** is an unmanaged index considered representative of stocks of Japan. The **MSCI Pacific ex Japan Gross Index** is an unmanaged index considered representative of stocks of Asia/Pacific countries excluding Japan. The **MSCI ACWI (All Country) Asia ex Japan Gross Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding Japan. The **MSCI ACWI Gross Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the U.S. The **MSCI ACWI ex USA Small Cap Growth Gross Index** is a market capitalization weighted total return index measured in U.S. dollars based on share prices and reinvested net dividends that is designed to measure the equity market performance of the small cap growth segments of developed and emerging markets, excluding the U.S. The **MSCI Canada Gross Index** is designed to measure the performance of the large and midcap segments of the Canada market. The **MSCI EAFE Small Cap Gross Index** measures the performance of small cap stocks in European, Australasian, and Far Eastern markets. The **MSCI EAFE Value Gross Index** is a market capitalization-weighted index that monitors the performance of value stocks from Europe, Australasia, and the Far East. The **MSCI EM Latin America Gross Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of emerging markets in Latin America. The **MSCI Pacific Free Japan Gross Index** measures the performance of the Australian, Hong Kong, New Zealand, and Singapore equity markets. The **MSCI World Small Cap Gross Index** is designed to measure the equity market performance of the small cap segment of developed markets. The **MSCI US Small Cap 1750 Gross Index** represents the universe of small capitalization companies in the US equity market. The **MSCI US Mid Cap 450 Index** represents the universe of medium capitalization companies in the US equity market. The **MSCI US Prime Market 750 Index** represents the universe of large and medium capitalization companies in the US equity market. The **MSCI US Prime Market Value Index** represents the value companies of the MSCI US Prime Market 750 Index. The **MSCI US Prime Market Growth Index** represents the growth companies of the MSCI US Prime Market 750 Index.

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 CMBS 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 US 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 1-5 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 five 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 **BC U.S. 1-3 Year Government Bond Index** is composed of treasury bond and agency bond index that have maturities of one to five years. The **BC 1-3 Year US Treasury Index** measures the performance of U.S. Treasury securities that have a maturity between 1 to 3 years. The **BC US Government Credit Index** measures the performance of U.S. Government and corporate bonds rated investment grade or better, with maturities of at least one year.

The **BC High Yield Index** covers the universe of fixed rate, non-investment grade debt, Pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, and 144As are also included. The **BC Intermediate Government Index** measures the performance of intermediate U.S. government securities. The **BC Intermediate Government/Credit Bond Index** measures the performance of intermediate term U.S. government and corporate bonds. The **BC U.S. Long Term Corporate Index** measures the performance of investment-grade, fixed-rate, taxable securities issued by industrial, utility, and financial companies, with maturities greater than 10 years. The **BC Global Credit Hedged USD Index** contains investment grade and high yield credit securities from the Multiverse represented in US Dollars on a hedged basis. The **BC Long AA+ U.S. Credit Index** measures the performance of investment grade corporate debt and agency bonds that are dollar denominated and have a maturity of greater than 10 years. The **BC U.S. Gov/Credit 5-10 Year Index** includes all medium and large issues of U.S. government, investment-grade corporate, and investment-grade international dollar-denominated bonds that have maturities between 5 and 10 years and are publicly issued.

The **Cambridge U.S. Private Equity 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 returns 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. Please Note: the performance of this index lags by 1 quarter.

The **Bank of America (BoFA) Merrill Lynch (ML) 91-day T-bill Index** includes U.S. Treasury bills with a remaining maturity from 1 up to 3 months. The **BoFA ML U.S. High Yield Master Index & Bank of America ML U.S. High Yield Master II Index** track 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. The **BoFA ML All US Convertible Index** consists of convertible bonds traded in the U.S. dollar denominated investment grade and non investment grade convertible securities sold into the U.S. market and publicly traded in the United States. The **BoFA ML US Corp & Gov 1-3 Year Hedged Index** tracks the performance of U.S. domestic government and corporate public debt issued in the U.S. domestic bond market with at least 1 yr and less than 3 yrs remaining to maturity, including U.S. Treasury, U.S. agency, foreign government, supranational and corporate securities. The **BoFA ML U.S. High-Yield BB-B Constrained Index** is a modified market capitalization-weighted index of U.S. dollar-denominated, below-investment-grade corporate debt publicly issued in the U.S. domestic market. The **BoFA Merrill Lynch US Year Treasury 1-3 Year Index** tracks the performance of the direct sovereign debt of the U.S. Government having a maturity of at least one year and less than three years. The **BoFA ML Treasury 1 Year Index** tracks the performance of the direct sovereign debt of the U.S. Government having a maturity of at least one year. The **BoFA ML Treasury Current 2 Year Index** tracks the most recently issued 2-year U.S. Treasury note. The **BoFA ML CMBS Fixed Rate AAA Index** is a subset of the BoFA ML U.S. Fixed Rate CMBS Index including all securities rated AAA. The **BoFA ML U.S. Fixed Rate CMBS Index** tracks the performance of U.S. dollar-denominated investment-grade fixed rate commercial mortgage-backed securities publicly issued in the U.S. domestic market. The **BoFA ML U.S. Dollar 3-Month LIBOR Index** represents the London interbank offered rate (LIBOR) with a constant 3-month average maturity.

The **Citi Select MLP Index** is a USD denominated, price return index, comprised of the common units of up to 30 of the most liquid master limited partnership in the Energy Sector. The **Citi Group World Government Index (WGBI) 1-5 Year Hedged USD Index** is a comprehensive measure of the total return performance of the government bond markets of approximately 22 countries with maturities ranging from one to five years. The **Citi Group WGBI Index** is a market capitalization weighted bond index consisting of the government bond markets of the multiple countries. The **Citi Group WGBI ex US Index** is a market capitalization weighted bond index consisting of the government bond markets of the multiple countries, excluding the U.S. The **Citi Group 3-Month U.S. Treasury Bill Index** performance is an average of the last 3-Month Treasury Bill issues.

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. Please Note: the performance of this index lags by 1 quarter. The **NCREIF Timberland Index** is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only.

The **Ibbotson Intermediate Government Bond Index** is measured using a one-bond portfolio with a maturity near 5 years. The **Ibbotson Emerging Markets Bond Index Plus (EMBI+) Index** tracks total returns for traded external debt instruments (external financing foreign currency denominated fixed income) in the emerging markets. The **JPMorgan GBI Global ex-US Index** represents the total return performance of major non-US, bond markets.

The **HFR Funds of Funds Index (HFRi FOF)** is an equal weighted index designed to measure the performance of hedge fund (fund manager) performance. 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. **HFR Relative Value Index** tracks investment managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income 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. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction. **HFRi Fund of Funds Conservative Index** is an equal-weighted index representing funds or funds that invest with multiple managers focused on consistent performance and lower volatility via absolute strategies. **HFRi ED-Merge Arbitrage** strategies which employ an investment process primarily focused on opportunities in equity and equity related investments of companies which are currently engaged in a corporate transaction.

The **FTSE All-World ex US Index** comprises large and midcap stocks providing coverage of developed and emerging markets, excluding the U.S. The **FTSE NAREIT Developed Index** is a global market capitalization weighted index composed of listed real estate securities from developed market countries in North America, Europe, and Asia. The **FTSE NAREIT Developed ex U.S. Index** is a global market capitalization weighted index composed of listed real estate securities from developed market countries in North America, Europe, and Asia, excluding the U.S. The **FTSE High Dividend Yield Index** comprises stocks that are characterized by higher-than-average dividend yields, and is based on the US component of the FTSE Global Equity Index Series (GEIS). 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 **FTSE NAREIT Equity REIT Index** is an unmanaged index reflecting performance of the U.S. real estate investment trust market.

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. Please Note: the performance of this index lags by 1 month.

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 (DJ) US 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. The **DJ U.S. Total Stock Market Index** is an all-inclusive measure composed of all U.S. equity securities with readily available prices. The **DJ U.S. Completion Total Stock Market Index** is a subset of the DJ U.S. Total Stock Market Index that excludes contracts of the S&P 500. 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 **Dow Jones Target Date (Today, 2010, 2015, 2020, 2025, 2030, 2035, 2040, 2045, 2050, 2055) Indices** were created to benchmark portfolios of stocks, bonds and cash. Each index is made up of composite indices representing these three asset classes. The asset class indices are weighted differently within each target date index depending on the time horizon. Each month, the allocations among the asset class indices are rebalanced to reflect an increasingly conservative asset mix.

The **Morningstar Lifetime Allocation Index** series consists of 13 indices (Income, 2000, 2005, 2010, 2015, 2020, 2025, 2030, 2035, 2040, 2045, 2050, 2055) available in three risk profiles: aggressive, moderate, and conservative. The indices are built on asset allocation methodologies developed by Ibbotson Associates, a leader in asset allocation research and a Morningstar company since 2006. The indices provide pure asset class exposure to global equities, global fixed-income, commodities, and Treasury Inflation-Protected Securities (TIPS) by using existing Morningstar indices as allocation building blocks. The portfolio allocations are held in proportions appropriate to the U.S. investor's number of years until retirement. The Conservative, Moderate and Aggressive risk profiles are for investors who are comfortable with below-average exposure to equity market volatility, investors who are comfortable with average exposure to equity market volatility and well-funded investors who are comfortable with above average exposure to equity market volatility, respectively.

These reports are not to be construed as an offer or the solicitation of an offer to buy or sell securities mentioned herein. Information contained in these reports are based on sources and data believed reliable. The information used to construct these reports was received via a variety of sources. These reports are for informational purposes only and are not intended to satisfy any compliance or regulatory conditions set forth by any governing body of the securities industry. These reports do not take the place of any brokerage statements, any fund company statements, or tax forms. You are urged to compare this report with the statement you receive from your custodian covering the same period. Differences in positions may occur due to reporting dates used and whether certain assets are not maintained by your custodian. There may also be differences in the investment values shown due to the use of differing valuation sources and methods. 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.

This evaluation report has been prepared for the exclusive use of a specific client and no part of it may be used by any investment manager without permission of that client and Clearstead.

Evaluation of investment managers covers both quantitative and qualitative aspects. In addition to the investment performance evaluation, we monitor ownership structure, track key-employee information, and hold regular meetings with each investment management organization employed by our clients.

The data presented in this report have been calculated on a time-weighted rate of return basis. All returns are net of investment advisory fees, but gross of Clearstead advisory fees and custodian fees, unless otherwise labeled. The deduction of Clearstead advisory fees and custodian fees would have the effect of decreasing the indicated investment performance.

The performance data shown represent past performance. Past performance is not indicative of future results. Current performance data may be lower or higher than the performance data presented.

Returns for periods longer than one year are annualized. Each number is independently rounded.

A current copy of Hartland & Co.'s ADV-Part 2 is available to all clients upon request.





**YOUNGSTOWN
STATE
UNIVERSITY**

**RESOLUTION TO APPROVE
CLEARSTEAD'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 3356-3-10; 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 March 4, 2020, Investment Subcommittee Agenda item C.1.b.

**Board of Trustees Meeting
March 5, 2020
YR 2020-**

PORTFOLIO RECOMMENDATIONS (ACTION)

YOUNGSTOWN STATE UNIVERSITY

AS OF JANUARY 29, 2020

	TICKER	MARKET VALUE (CURRENT)	PERCENTAGE OF PORTFOLIO	CHANGES	MARKET VALUE (POST REBALANCE)	PERCENTAGE OF PORTFOLIO	POLICY TARGET	POLICY RANGE	TACTICAL + / -
Total Operating & Short Term		\$2,474,769	100.0%	\$0	\$2,474,769	100.0%	100.0%		
Operating Assets		\$1,334,793	53.9%		\$1,334,793	53.9%		60-100%	
JPMorgan 100% U.S. Treas. MM Instl	JTSXX	\$158,289	6.4%		\$158,289	6.4%			
Star Plus*	-	\$53,890	2.2%		\$53,890	2.2%			
Star Ohio*	-	\$1,122,614	45.4%		\$1,122,614	45.4%			
Short-Term Assets		\$1,139,975	46.1%		\$1,139,975	46.1%		0-40%	
Vanguard Short-Term Federal Adm	VSGDX	\$1,139,975	46.1%		\$1,139,975	46.1%			
Total Long Term Reserves Pool		\$59,216,946	100.0%	\$0	\$59,216,946	100.0%	100.0%		
Domestic Equity		\$16,693,851	28.2%		\$16,193,851	27.3%	27.0%	20-35%	0.3%
Vanguard Instl Index	VINIX	\$11,592,642	19.6%	-\$500,000	\$11,092,642	18.7%			
Vanguard Mid Cap Index Adm	VIMAX	\$2,551,885	4.3%		\$2,551,885	4.3%			
Loomis Sayles Small Growth Instl	LSSIX	\$1,314,822	2.2%		\$1,314,822	2.2%			
Victory Integrity Small Cap Value Y	VSVIX	\$1,234,503	2.1%		\$1,234,503	2.1%			
International Equity		\$4,711,027	8.0%		\$4,711,027	8.0%	8.0%	0-15%	0.0%
William Blair International Growth I	BIGIX	\$2,419,356	4.1%		\$2,419,356	4.1%			
Dodge & Cox International Stock	DODFX	\$2,291,671	3.9%		\$2,291,671	3.9%			
Total Equity		\$21,404,878	36.1%		\$20,904,878	35.3%	35.0%	25-45%	0.3%
Alternatives		\$8,678,335	14.7%		\$8,678,335	14.7%	15.0%	0-20%	-0.3%
JPMorgan Strategic Income Opps Fd	JSOSX	\$2,162,876	3.7%		\$2,162,876	3.7%			
Wells Fargo Adv Absolute Return I	WABIX	\$2,230,747	3.8%		\$2,230,747	3.8%			
Diamond Hill Long-Short Y	DIAYX	\$2,410,536	4.1%		\$2,410,536	4.1%			
Brookfield Global Real Estate	BLRIX	\$1,874,176	3.2%		\$1,874,176	3.2%			
Fixed Income		\$29,133,675	49.2%		\$29,633,675	50.0%	50.0%	35-75%	0.0%
YSU Short Term Bond	-	\$11,810,428	19.9%		\$11,810,428	19.9%			
Lord Abbett Short Duration	LLDYX	\$2,719,230	4.6%	\$500,000	\$3,219,230	5.4%			
DFA Five-Year Global	DFGBX	\$1,943,719	3.3%		\$1,943,719	3.3%			
JPMorgan Core Bond Fund Sel	WOBDX	\$5,569,877	9.4%		\$5,569,877	9.4%			
YSU Intermediate Term Fixed	-	\$4,346,393	7.3%		\$4,346,393	7.3%			
Prudential High Yield Bond R6	PHYQX	\$2,744,027	4.6%		\$2,744,027	4.6%			
Cash & Cash Equivalents		\$58	0.0%		\$58	0.0%	0.0%	0-5%	0.0%
Equity Account Cash	-	\$58	0.0%		\$58	0.0%			
Total University Assets		\$61,691,714			\$61,691,714				

*As of 12/31/2019