



**YOUNGSTOWN
STATE
UNIVERSITY**

**BOARD OF TRUSTEES
INVESTMENT SUBCOMMITTEE**

**Anita A. Hackstedde, Chair
Capri S. Cafaro, Vice Chair
Molly S. Seals
James E. "Ted" Roberts
Rocco L. Core**

**Wednesday, June 5, 2019
1:00 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 6, 2019**
- B. Old Business**
- C. Committee Items**
 - 1. Discussion Item**

Tab C.1.a. a. June 5, 2019 Quarterly Portfolio Asset Allocation and Investment Performance Review
Mike Shebak, Sarah Parker and John Colla will report.

2. Action Items

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

Tab C.2.b. b. Resolution to Modify Investment of the University's Non-Endowment Policy, 3356-3-10
Neal McNally, Vice President for Finance and Business Operations, will report.

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



June 5, 2019

**YOUNGSTOWN STATE
UNIVERSITY**



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Cleveland, Ohio 44114

216.621.1090 | clearstead.com

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2019 INITIATIVES

CAPITAL MARKETS UPDATE

NON-ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION REVIEW

- ASSET ALLOCATION REVIEW
- PORTFOLIO RECOMMENDATIONS (ACTION)

ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION REVIEW

2019 OVERSIGHT DASHBOARD

		1Q	2Q	3Q	4Q	Comments:
Strategic/ Administrative	Investment Policy Review		✓			
	Strategic Asset Allocation Review		✓			Revisit with Financial Modeling
	Peer Review		✓			
	2020 Oversight Dashboard				☐	
	STAR Ohio/Plus Annual Review			☐		
	Financial Modeling					Pending
Portfolio	Fixed Income Review	✓				
	Alternative Investments Review			☐		
	Domestic Equity Review				☐	
	International Equity Review				☐	
	Active Equity Managers					Pending
Performance	Capital Markets Review	✓	✓	☐	☐	
	Quarterly Performance Review	✓	✓	☐	☐	
Other	Fee Review			☐		
	ORC Compliance Review			☐		Ongoing
	ORC Guidelines Education		✓			
	Clearstead Firm Update	✓				

Last Reviewed	
Investment Policy:	06/05/2019
Strategic Asset Allocation:	06/05/2019
Fee Review:	09/05/2018

Meeting Schedule	
1Q:	March 6, 2019
2Q:	June 5, 2019
3Q:	September 4, 2019
4Q:	December 4, 2019

QUARTERLY THEMES

WHAT HAPPENED LAST QUARTER?

- Global markets bounced back from Q4 2018
 - Q4 2018: S&P 500 -13.5%, MSCI EAFE -12.5%, MSCI EM -7.5%
 - Q1 2019: S&P 500 +13.7%, MSCI EAFE +10.0%, MSCI EM +9.9%
- The Fed pivoted to a dovish stance; 10-year U.S. Treasury fell, credit spreads narrowed
- Perceived progress on China talks eased market fears
- Global slowdown remained a theme
 - U.S. growth slowed
 - China's slowdown potentially bottomed and showed signs of recovery
 - Europe continued to struggle

WHAT IS ON OUR MINDS?

- The global slowdown has spooked the markets, but economic growth may just be moderating
- A low rate, low growth environment can persist for a long period
- Valuations are fair
- Central Banks are supportive
- Geopolitical risks continue
- Volatility likely to remain

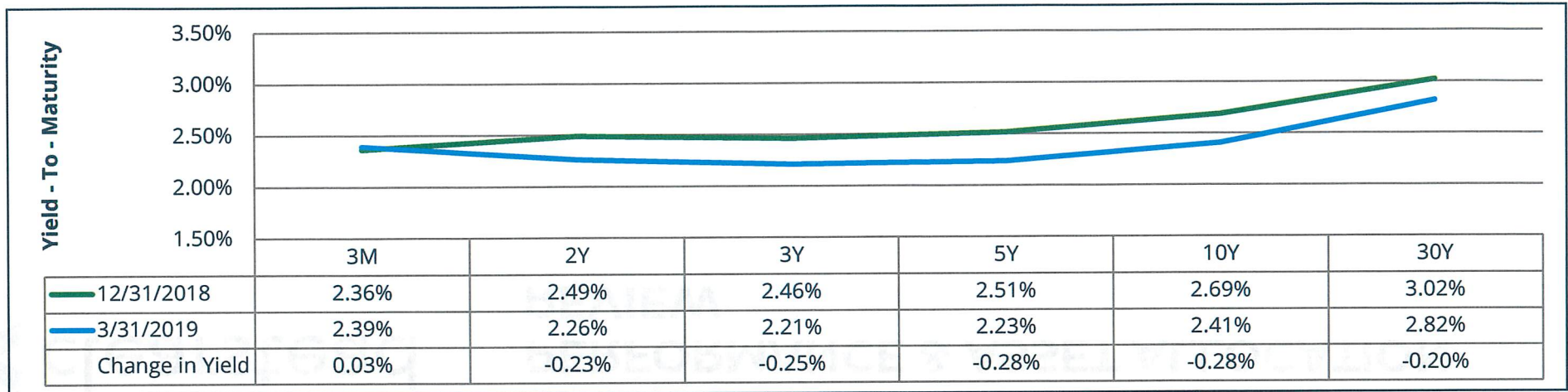
HISTORICAL ASSET CLASS RETURNS

2010	2011	2012	2013	2014	2015	2016	2017	2018	Q1 2019
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%	Cash 1.9%	REITs 16.7%
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%	US Bonds 0.0%	Sm/Mid 15.8%
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%	Glb Bond -0.9%	Large Cap 13.7%
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%	Hi Yld -2.3%	Dev Intl 10.0%
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%	Hdg Fnds -4.0%	Em Mkt 9.9%
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 -4.4%	Hi Yld 7.4%
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%	REITs -4.4%	Hdg Fnds 5.0%
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%	Sm/Mid -10.0%	US Bonds 2.9%
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 -13.8%	Glb Bond 1.4%
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%	Em Mkt -14.6%	Cash 0.6%

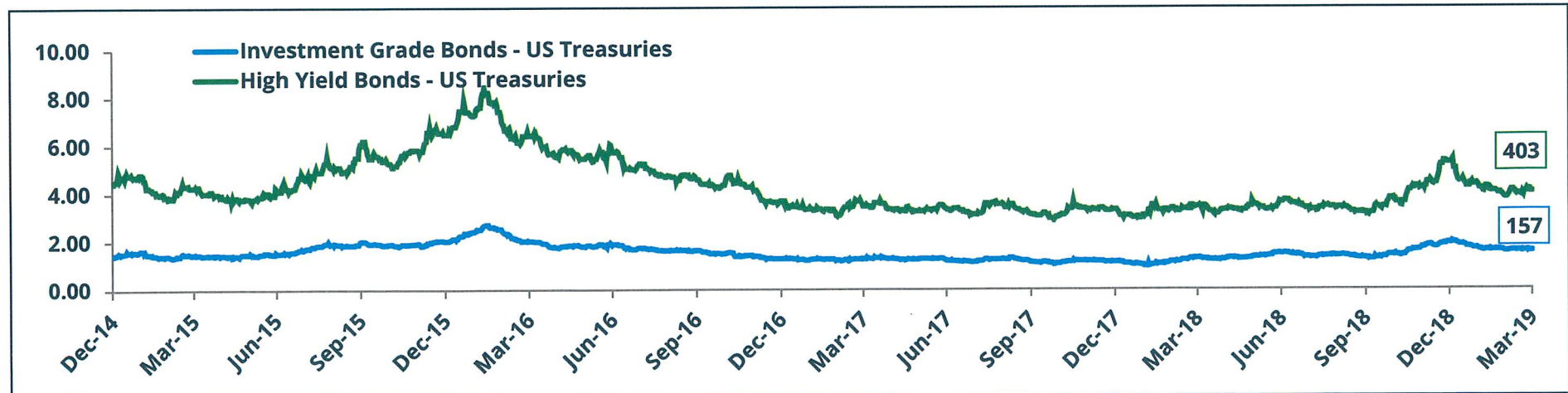
Past performance is no guarantee of future results. Asset classes represented by: Large Cap – S&P 500 Index; Sm/Mid – Russell 2500 Index; Dev Intl – MSCI EAFE Index; Em Mkt – MSCI Emerging Markets Index; Hi Yld – Bank of America Merrill Lynch U.S. High Yield Master II; US Bonds – Barclays Capital U.S. 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 3/31/2019. Source: Zephyr Associates.

FIXED INCOME YIELD ENVIRONMENT

U.S. TREASURY YIELDS



CORPORATE BOND SPREADS

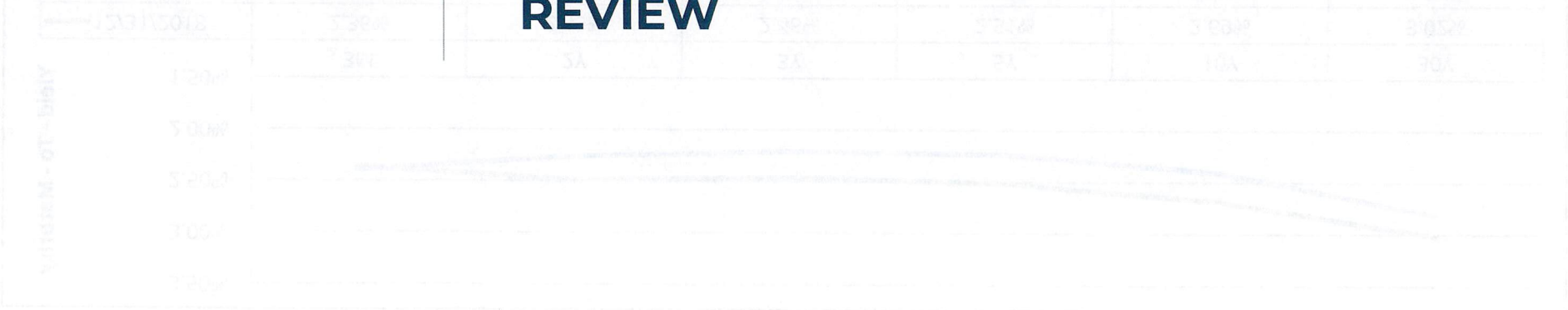


Source: Bloomberg as of 3/31/2019.
Past performance is no guarantee of future results.





NON-ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION REVIEW



NON-ENDOWMENT PERFORMANCE REVIEW (AS OF 3/31/2019)

NON-ENDOWMENT ASSETS	MARKET VALUE (\$MM)	QTD	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	2018	2017	2016	SINCE INCEPTION ⁴
Total Non-Endowment Assets	\$83.687	4.8%	4.8%	3.5%	4.4%	4.8%	3.3%	3.5%	3.9%	-1.5%	7.8%	4.0%	3.8%
<i>Benchmark¹</i>		3.8%	3.8%	3.6%	3.6%	3.7%	2.7%	2.7%	2.9%	-0.4%	5.4%	2.7%	3.0%
Operating & Short-Term Pool	\$28.922	0.6%	0.6%	2.1%	1.5%	1.1%	0.7%	0.5%	-	1.7%	0.7%	0.3%	0.4%
<i>Benchmark²</i>		0.6%	0.6%	2.1%	1.6%	1.2%	0.8%	0.6%	0.4%	1.9%	0.8%	0.4%	0.5%
Long-Term Pool	\$54.765	6.9%	6.9%	4.0%	5.2%	5.9%	4.3%	4.8%	-	-3.4%	10.5%	4.9%	5.0%
<i>Benchmark³</i>		6.5%	6.5%	4.6%	5.2%	5.7%	4.2%	4.5%	4.8%	-2.4%	9.3%	4.7%	4.5%

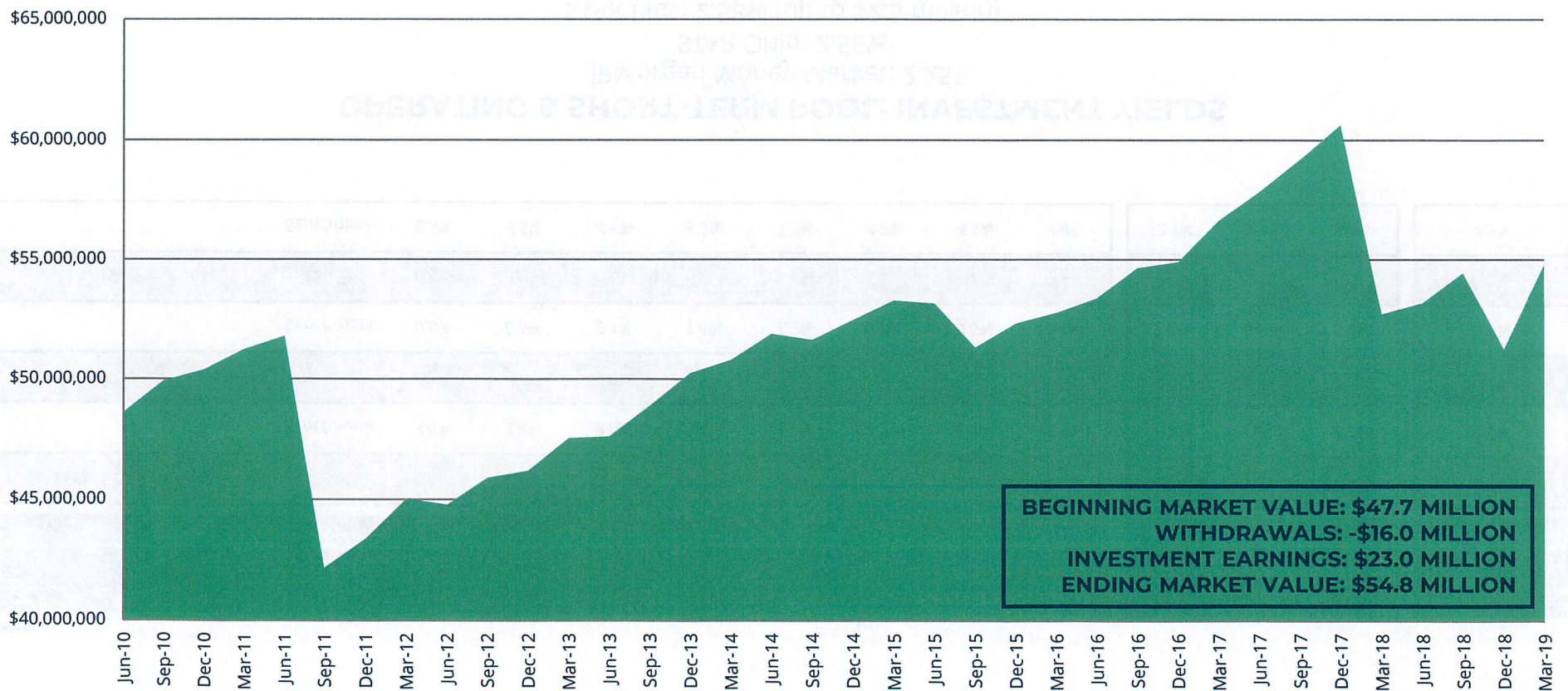
OPERATING & SHORT-TERM POOL: INVESTMENT YIELDS

JPMorgan Money Market: 2.25%
 STAR Ohio: 2.56%
 STAR Plus: 2.58% (up to \$2.5 million)
 Vanguard Short Term Federal Fund: 2.80%

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% MSCI EAFE 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.

ATTRIBUTION OF MARKET VALUE CHANGE: LONG-TERM POOL

LONG-TERM POOL MARKET VALUE CHANGE (6/30/2010-3/31/2019)



PERFORMANCE & ASSET ALLOCATION REVIEW

NON-ENDOWMENT ASSET POOL	CURRENT ASSET ALLOCATION	POLICY COMPLIANCE?	INVESTMENT MANAGER COMMENTARY
Short-Term Pool	<ul style="list-style-type: none"> 96% Cash 4% Short-Term Fixed Income 	<u>In Compliance</u>	Cash & cash equivalent investments with one short-term fixed income holding; modest return over time that has increased with recent Fed rate hikes (+0.6% 1Q19, +2.1% 1YR); 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 7% Alternatives 15% Short-Term Fixed Income 29% Int-Term Fixed Income 21% 	<p><u>In Compliance</u></p> <p>Overweight 1%</p> <p>Underweight 1%</p> <p>In-Line</p> <p>Underweight 1%</p> <p>Overweight 1%</p>	<p><i>Domestic Equity (+14.1% 1Q19)</i> Small cap manager Victory Integrity outpaced its respective benchmark benefitting from stock selection across six of the eleven sectors, most notably financials and real estate (+12.3% 1Q19); Loomis Sayles was affected by stock selection though provided strong absolute returns during the first quarter (+15.1% 1Q19).</p> <p><i>International Equity (+11.7% 1Q19)</i> William Blair International Growth returned +13.6% during the quarter which outpaced its respective benchmark (MSCI ACWI ex US +10.3%), benefitting from stock selection in financials, consumer discretionary, and industrials.</p> <p><i>Alternatives (+7.4% 1Q19)</i> Brookfield Global Real Estate and Diamond Hill led the way in alternatives, returning +15.2% and +8.9% respectively in the first quarter; Wells Fargo (GMO) benefitted from its exposure to emerging market equities (+5.4% 1Q19).</p> <p><i>Fixed Income (+2.4% 1Q19)</i> All fixed income managers were in-line or outperformed in the first quarter, benefitting from interest rates falling at most maturities across the yield curve; PGIM High Yield was the top performer in fixed income (+7.2% 1Q19).</p>

Manager details can be found in the Appendix.



ASSET ALLOCATION REVIEW

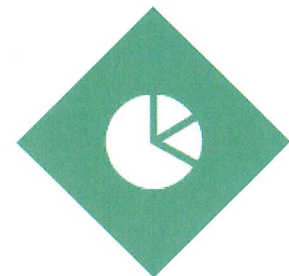
HOLISTIC REVIEW OF RISK



ORGANIZATION



**STRATEGIC INVESTMENT
APPROACH**



**INVESTMENT
PORTFOLIO**

LEVELS OF RISKS

ORGANIZATION	STRATEGIC INVESTMENT APPROACH	INVESTMENT PORTFOLIO
Leadership	Current and effective IPS	Standard deviation
Governance	Pool structure	Correlation
Investment Committee	Strategic asset allocation	Beta
Reliance on investment assets	Discipline to approach	Downside capture
Operational health	Liquidity	Maximum drawdown
Ohio Revised Code	Cash management	Tracking error, R ²
Key financial metrics	Rebalancing	Tactical positioning

ASSET ALLOCATION REVIEW: OBJECTIVES & RISK CONSIDERATIONS

PORTFOLIO OBJECTIVES

The YSU non-endowment assets have performed well over a full market cycle.

Asset allocation is the most important determinant of portfolio risk and return - looking forward, it is important to align the asset allocation, structure and risk/return objectives of the non-endowment assets with those of the strategic focus of YSU.

- Compliance with Ohio Revised Code 3345.05 (25% average rule*)
- Support YSU cash-flow and financial needs both currently and in the future
- Target a prudent level of investment return once risks have been mitigated

RISK CONSIDERATIONS

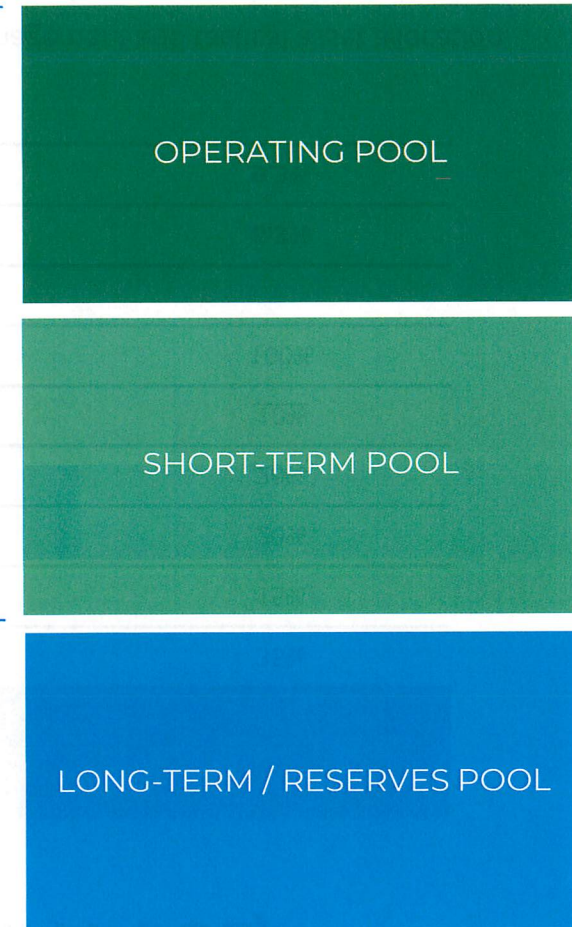
- Ohio Revised Code 3345.05
 - ❖ Short-Term pool provides compliance; additionally, approximately 10-15% of the Long-Term Pool assets provide additional support
- Liquidity
 - ❖ 100% of the Non-Endowment assets have daily liquidity
- Cash flow forecast
 - ❖ YSU does not anticipate needing to withdraw funds from the Long-Term Pool in the near-term
- Market value volatility
 - ❖ YSU staff and trustees have expressed a willingness to except modest increase in investment risk in pursuit of a higher investment return
- Cash flow cyclical
 - ❖ The University's cash flows fluctuate over the year due to operations
- Financial statement sensitivity
 - ❖ The University's balance sheet and key financial metrics are sensitive to the University's investment strategy

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

ASSET ALLOCATION REVIEW: LIQUIDITY MANAGEMENT & INVESTMENT POOL STRUCTURE

- Separate guidelines and asset allocation targets
- The University can allocate assets between investment pools with respect to cash needs
- Allowable asset ranges established between investment pools

COMBINED



ASSET POOL	PURPOSE
Operating Pool	Assets needed in the next 6 months
Short-Term Pool	Contingency to operating accounts
Long-Term / Reserves Pool	Non-Endowment investment assets for reserves & auxiliaries

ASSET ALLOCATION REVIEW: FORWARD LOOKING ANALYSIS (LONG-TERM POOL)

	YSU LONG-TERM POOL	ALTERNATE #1	ALTERNATE #2
U.S. Equity	27%	30%	35%
International Equity	8%	10%	15%
Alternative Investments	15%	20%	20%
Fixed Income: Short-Term	30%	25%	20%
Fixed Income: Intermediate-Term	<u>20%</u>	<u>15%</u>	<u>10%</u>
Total	100%	100%	100%
*Forecasted Return	5.4%	5.7%	6.3%
*Forecasted Volatility	6.8%	7.7%	9.3%

The model does not take into account the potential alpha added from active management and tactical asset allocation.

* Forecasted returns and volatility come from the methodology detailed on the slide titled "Strategic Asset Allocation Review: Forecasted Market Returns and Volatility".

STRATEGIC ASSET ALLOCATION REVIEW: LONG-TERM STATISTICS & CALENDAR YEAR RETURNS

Zephyr StyleADVISOR

Zephyr StyleADVISOR - Clearstead Advisors, LLC

April 2004 - March 2019: Summary Statistics

	Return	Standard Deviation	Sharpe Ratio	Up Capture vs. Market	Down Capture vs. Market	Alpha vs. Market	Beta vs. Market
YSU Long-Term Pool ('19)	5.29%	6.45%	0.62	45.91%	37.48%	1.47%	0.42
YSU LTP Alternate #1	5.60%	7.66%	0.56	52.18%	46.75%	1.09%	0.50
YSU LTP Alternate #2	6.08%	9.32%	0.51	61.12%	58.91%	0.65%	0.61
Barclays U.S. Aggregate	3.89%	3.36%	0.78	13.36%	-21.55%	4.38%	-0.05
MSCI EAFE Index	5.59%	17.72%	0.24	88.07%	110.92%	-2.81%	1.05
S&P 500	8.57%	14.75%	0.49	100.00%	100.00%	0.00%	1.00

Calendar Year Return

As of March 2019

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD
YSU Long-Term Pool ('19)	-5.92%	15.59%	8.04%	4.87%	10.67%	6.60%	-16.00%	15.52%	9.67%	1.82%	8.59%	10.85%	5.77%	0.69%	4.88%	9.78%	-2.44%	6.73%
YSU LTP Alternate #1	-7.13%	18.08%	9.18%	5.89%	12.10%	6.99%	-19.90%	18.07%	10.50%	0.76%	9.52%	12.33%	6.13%	0.34%	5.39%	11.30%	-3.16%	7.47%
YSU LTP Alternate #2	-9.31%	21.69%	10.66%	7.25%	13.96%	7.86%	-24.73%	21.75%	11.54%	-0.57%	10.94%	14.52%	6.23%	-0.17%	6.19%	13.70%	-4.21%	8.44%
Barclays U.S. Aggregate	10.25%	4.10%	4.34%	2.43%	4.33%	6.97%	5.24%	5.93%	6.54%	7.84%	4.21%	-2.02%	5.97%	0.55%	2.65%	3.54%	0.01%	2.94%
MSCI EAFE Index	-15.66%	39.17%	20.70%	14.02%	26.86%	11.63%	-43.06%	32.46%	8.21%	-11.73%	17.90%	23.29%	-4.48%	-0.39%	1.51%	25.62%	-13.36%	10.13%
S&P 500	-22.10%	28.68%	10.88%	4.91%	15.79%	5.49%	-37.00%	26.46%	15.06%	2.11%	16.00%	32.39%	13.69%	1.38%	11.96%	21.83%	-4.38%	13.65%

Past returns are not a guarantee of future returns.



ASSET ALLOCATION REVIEW: ATTRIBUTION/ALLOCATION (LONG-TERM POOL)

YEAR	INVESTMENT ASSETS CASH OUTFLOW	INVESTMENT ASSETS CASH INFLOW	YEAR END (12/31) EQUITY %	YEAR END (12/31) ALTERNATIVES %	YEAR END (12/31) FIXED INCOME %	CALENDAR YEAR RETURN	MARKET VALUE (12/31)
2010	\$0	+\$46,871,000 <i>(Creation of LT Pool)</i>	19.2%	0%	80.8%	+5.5%	\$50,383,000
2011	-\$8,000,000	\$0	24.9%	0%	75.1%	+1.9%	\$43,392,000
2012	\$0	\$0	27.1%	0%	72.9%	+6.4%	\$46,190,324
2013	\$0	\$0	33.8%	0%	66.2%	+8.7%	\$50,249,454
2014	\$0	\$0	37.7%	0%	62.3%	+4.5%	\$52,491,768
2015	\$0	\$0	35.0%	11.9%	53.2%	-0.5%	\$52,324,443
2016	\$0	\$0	36.5%	15.6%	47.9%	+4.0%	\$54,892,466
2017	\$0	\$0	37.0%	15.1%	47.8%	+10.5%	\$60,625,347
2018	-\$8,000,000	\$0	33.2%	15.0%	51.8%	-3.4%	\$51,238,803
YTD 2019*	\$0	\$0	35.4%	15.0%	49.6%	+6.9%*	\$54,765,726

*2019 figures as of 3/31/2019 and do not represent year-end or calendar year information.

STRATEGIC ASSET ALLOCATION REVIEW: ALLOCATION COMPARISONS VS. OHIO STATE UNIVERSITIES

	Current YSU Allocation (ST & LT Pool)	Small State University	Small State University	Mid-Sized State University	Mid-Sized State University	Mid-Sized State University	Mid-Sized State University	Large State University	Large State University	Large State University
Equity	27%	0%	30%	2%	12%	21%	46%	36%	34%	22%
Alternatives	11%	0%	0%	18%	0%	5%	20%	20%	23%	40%
Fixed Income & Cash	62%	100%	70%	80%	88%	74%	34%	44%	44%	37%

Source: State of Ohio Auditor; FY 2017; Asset size range: \$20MM-\$6.1B.

STRATEGIC ASSET ALLOCATION REVIEW: YSU ASSET ALLOCATION GUIDELINES

OPERATING & SHORT-TERM POOL		ALLOCATION	
Asset Class/Investment Strategy	Pool Target	Pool Range	Total Range
Total Cash/Operating Assets	n/a	60-100%	
Total Short-Term Fixed Income	n/a	0-40%	
			25-50%
LONG TERM / RESERVES POOL			
Total Domestic Equity	27%	20-35%	
Total International Equity	8%	0-15%	
Total Equity	35%	25-45%	
Total Alternatives	15%	0-20%	
Total Short-Term Fixed Income	30%	25-45%	
Total Intermediate-Term Fixed Income	20%	10-30%	
Cash	0%	0-5%	
	100%		50-75%

Clearstead has reviewed YSU's Asset Allocation Guidelines and recommends **no changes** to the current guidelines at this time, but to **revisit in the next 6-12 months** in conjunction with a financial modeling exercise that includes a review of sensitivities to debt covenants (if any), days cash on hand, and other key financial metrics (e.g. gain/loss).

- The current asset allocation strategy conservatively factors:
- Adherence with State of Ohio guidelines
 - Contingency for cash flow fluctuations in operating funds
 - Adequate liquidity
 - Growth opportunity through equity allocation
 - Diversification with the incorporation of alternative investments
- Mitigates impact of equity market volatility on YSU balance sheet & income statement



PORTFOLIO RECOMMENDATIONS

PORTFOLIO RECOMMENDATIONS (ACTION)

YOUNGSTOWN STATE UNIVERSITY

AS OF APRIL 30, 2019

	TICKER	MARKET VALUE (CURRENT)	PERCENTAGE OF PORTFOLIO	CHANGES	MARKET VALUE (POST REBALANCE)	PERCENTAGE OF PORTFOLIO	POLICY TARGET	POLICY RANGE	TACTICAL + / -
Total Operating & Short Term		\$22,916,656	100.0%	\$0	\$22,916,656	100.0%	100.0%		
Operating Assets		\$21,813,014	95.2%		\$21,813,014	95.2%		60-100%	
JPMorgan 100% U.S. Treas. MM Instl	JTSXX	\$13,743,485	60.0%		\$13,743,485	60.0%			
Star Plus*	-	\$2,515,587	11.0%		\$2,515,587	11.0%			
Star Ohio*	-	\$5,553,942	24.2%		\$5,553,942	24.2%			
Short-Term Assets		\$1,103,642	4.8%		\$1,103,642	4.8%		0-40%	
Vanguard Short-Term Federal Adm	VSGDX	\$1,103,642	4.8%		\$1,103,642	4.8%			
Total Long Term Reserves Pool		\$55,669,136	100.0%	\$0	\$55,669,136	100.0%	100.0%		
Domestic Equity		\$16,035,050	28.8%		\$15,285,050	27.5%	27.0%	20-35%	0.5%
Vanguard Instl Index	VINIX	\$11,518,755	20.7%	-\$750,000	\$10,768,755	19.3%			
Vanguard Mid Cap Index Inv	VIMSX	\$2,331,389	4.2%		\$2,331,389	4.2%			
Loomis Sayles Small Growth Instl	LSSIX	\$1,161,407	2.1%		\$1,161,407	2.1%			
Victory Integrity Small Cap Value Y	VSVIX	\$1,023,499	1.8%		\$1,023,499	1.8%			
International Equity		\$4,104,761	7.4%		\$4,104,761	7.4%	8.0%	0-15%	-0.6%
William Blair International Growth I	BIGIX	\$2,057,076	3.7%		\$2,057,076	3.7%			
Dodge & Cox International Stock	DODFX	\$2,047,685	3.7%		\$2,047,685	3.7%			
Alternatives		\$8,377,028	15.0%		\$8,377,028	15.0%	15.0%	0-20%	0.0%
JPMorgan Strategic Income Opps Fd	JSOSX	\$2,133,947	3.8%		\$2,133,947	3.8%			
Wells Fargo Adv Absolute Return I	WABIX	\$2,166,710	3.9%		\$2,166,710	3.9%			
Diamond Hill Long-Short Y	DIAYX	\$2,316,596	4.2%		\$2,316,596	4.2%			
Brookfield Global Real Estate	BLRIX	\$1,759,776	3.2%		\$1,759,776	3.2%			
Fixed Income		\$27,152,240	48.8%		\$27,902,240	50.1%	50.0%	35-75%	0.1%
YSU Short Term Bond	PCA SMA	\$11,455,922	20.6%		\$11,455,922	20.6%			
Lord Abbett Short Duration	LLDYX	\$2,377,787	4.3%	\$250,000	\$2,627,787	4.7%			
DFA Five-Year Global	DFGBX	\$1,896,537	3.4%		\$1,896,537	3.4%			
JPMorgan Core Bond Fund Sel	WOBDX	\$4,724,728	8.5%	\$500,000	\$5,224,728	9.4%			
YSU Intermediate Term Fixed	PCA SMA	\$4,120,249	7.4%		\$4,120,249	7.4%			
Prudential High Yield Bond R6	PHYQX	\$2,577,017	4.6%		\$2,577,017	4.6%			
Cash & Cash Equivalents		\$57	0.0%		\$57	0.0%	0.0%	0-5%	0.0%
Equity Account Cash	-	\$57	0.0%		\$57	0.0%			
Total University Assets		\$78,585,792			\$78,585,792				

*As of 3/31/2019





ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION REVIEW

ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION (AS OF 3/31/2019)

ENDOWMENT ASSETS	MARKET VALUE	ASSET ALLOCATION	COMPOSITION	QTD	YTD	1 YR	2 YR	3 YR	5 YR	2018	2017	2016
YSU Endowment Fund	\$10.9 MM	72% Equity / 28% Fixed Income & Cash	Stocks, Bonds, Mutual Funds	9.8%	9.8%	6.0%	7.2%	7.5%	7.0%	-4.8%	14.2%	8.5%
			<i>Benchmark¹</i>	9.3%	9.3%	7.8%	8.3%	8.9%	7.7%	-2.3%	14.2%	8.3%
Kilcawley Center	\$115,596	60% Equity / 40% Fixed Income	Mutual Fund	9.3%	9.3%	7.3%	8.0%	8.8%	4.9%	-2.7%	13.8%	4.9%
			<i>Benchmark¹</i>	9.3%	9.3%	7.8%	8.3%	8.9%	7.7%	-2.3%	14.2%	8.3%
Alumni License Plate Account	\$55,195	60% Equity / 40% Fixed Income	Mutual Fund	9.2%	9.2%	8.0%	7.8%	8.9%	6.9%	-2.0%	10.3%	13.8%
			<i>Benchmark¹</i>	9.3%	9.3%	7.8%	8.3%	8.9%	7.7%	-2.3%	14.2%	8.3%

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

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

See 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

U.S. ECONOMIC PROJECTIONS

FEDERAL RESERVE BOARD MEMBERS AND BANK PRESIDENTS

		2019	2020	2021	LONGER RUN*
GDP	March 2019	2.1%	1.9%	1.8%	1.9%
	December 2018	2.3%	2.0%	1.8%	1.9%
	September 2018	2.5%	2.0%	1.8%	1.8%
Unemployment Rate	March 2019	3.7%	3.8%	3.9%	4.3%
	December 2018	3.5%	3.6%	3.8%	4.4%
Core PCE Inflation	March 2019	2.0%	2.0%	2.0%	
	December 2018	2.0%	2.0%	2.0%	
Federal Funds Rate	March 2019	2.4%	2.6%	2.6%	2.8%
	December 2018	2.9%	3.1%	3.1%	2.8%
# of implied 25 bps rate hikes per year	March 2019	0	1	0	
	December 2018	2	1	0	
	September 2018	3	1	0	

*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 as of 3/20/2019.

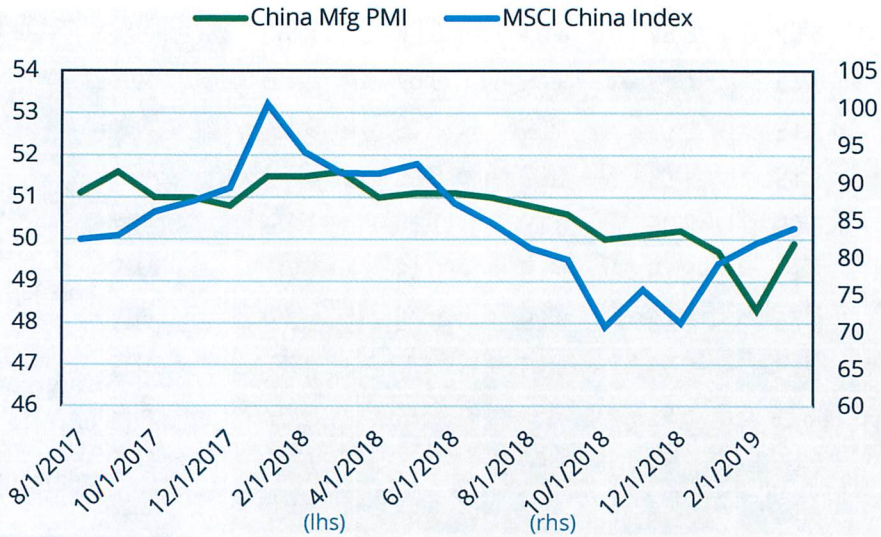
GLOBAL ECONOMIC ACTIVITY MIXED

		Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	12M Trend
Global	Mfg	53.4	53.0	52.9	52.7	52.5	52.1	52.0	51.9	51.4	50.8	50.6	50.6	
	Serv	53.8	54.3	54.6	54.0	53.5	52.9	53.4	53.7	53	52.6	53.3	53.7	
US	Mfg	56.5	56.4	55.4	55.3	54.7	55.6	55.7	55.3	53.8	54.9	53	52.4	
	Serv	54.6	56.8	56.5	56.0	54.8	53.5	54.8	54.7	54.4	54.2	56	55.3	
Eurozone	Mfg	56.2	55.5	54.9	55.1	54.6	53.2	52.0	51.8	51.4	50.5	49.3	47.5	
	Serv	54.7	53.8	55.2	54.2	54.4	54.7	53.7	53.4	51.2	51.2	52.8	53.3	
UK	Mfg	53.8	54.3	54	53.9	52.90	53.7	51.1	53.3	54.3	52.8	52.1	55.1	
	Serv	52.8	54	55.1	53.5	54.3	53.9	52.2	50.4	51.2	50.1	51.3	48.9	
Japan	Mfg	53.8	52.8	53.0	52.3	52.5	52.5	52.9	52.2	52.6	50.3	48.9	49.2	
	Serv	52.5	51.0	51.4	51.3	51.5	50.2	52.4	52.3	51.0	51.6	52.3	52.0	
China	Mfg	51.1	51.1	51.0	50.8	50.6	50.0	50.1	50.2	49.7	48.3	49.9	50.8	
	Serv	52.9	52.9	53.9	52.8	51.5	53.1	50.8	53.8	53.9	53.6	51.1	54.4	
India	Mfg	51.6	51.2	53.1	52.3	51.7	52.2	53.1	54	53.2	53.9	54.3	52.6	
	Serv	51.4	49.6	52.6	54.2	51.5	50.9	52.2	53.7	53.2	52.2	52.5	52.0	
S. Korea	Mfg	48.4	48.9	49.8	48.3	49.9	51.3	51	48.6	49.8	48.3	47.2	48.8	

Source: Bloomberg, JPMorgan/Markit Global PMI.

CHINA'S ECONOMY MAY HAVE TURNED THE CORNER

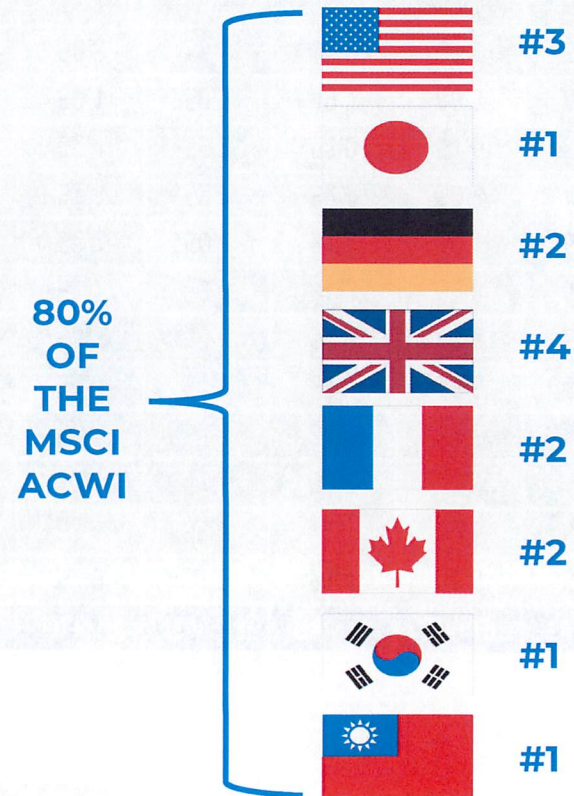
CHINA'S MARKETS & MFG. BOUNCE IN Q1



- Optimism around US-China trade talks...
- Along with Chinese fiscal and monetary stimulus...
- Have pushed China's markets and sentiment higher in Q1-2019...

China's rebound from its 2018 "soft patch" is a key factor going forward for the global economy in 2019.

CHINA'S RANK AS A TRADE PARTNER 17/18



Source: IMF, OEC/MIT, BACI Intl Trade Database, Clearstead, Bloomberg.
Data as of 3/31/2019.
Past performance is no guarantee of future results.

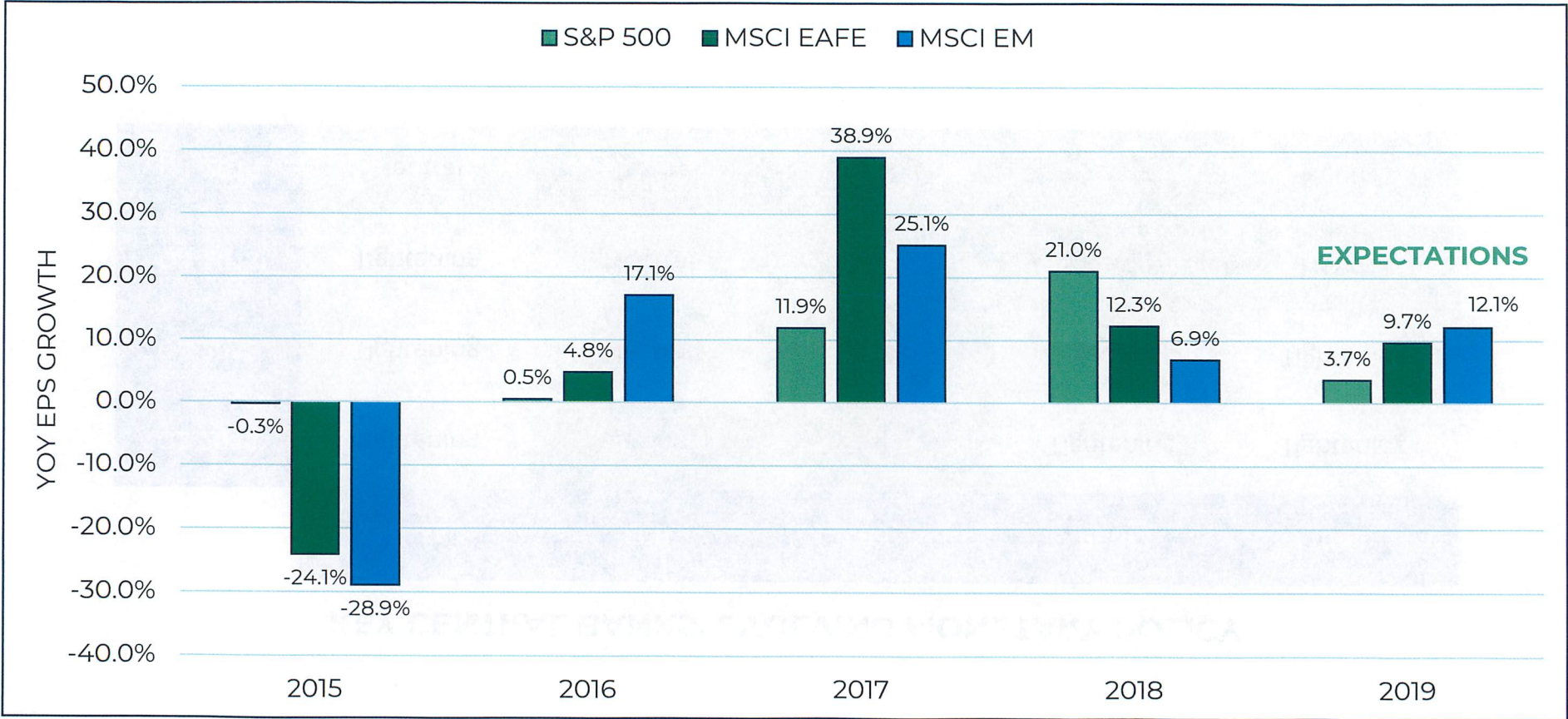
CENTRAL BANKS ARE ACCOMMODATING

KEY CENTRAL BANKS' EVOLVING MONETARY POLICY

	U.S. FED	ECB	BoJ	PBoC	BoE
Q2-2018	Tightening	Easing	Easing	Tightening	Tightening
Q3-2018	Tightening	Neutral	Easing	Neutral	Tightening
Q4-2018	Tightening	Neutral	Easing	Easing	Neutral
Q1-2019	Neutral	Easing	Easing	Easing	Neutral

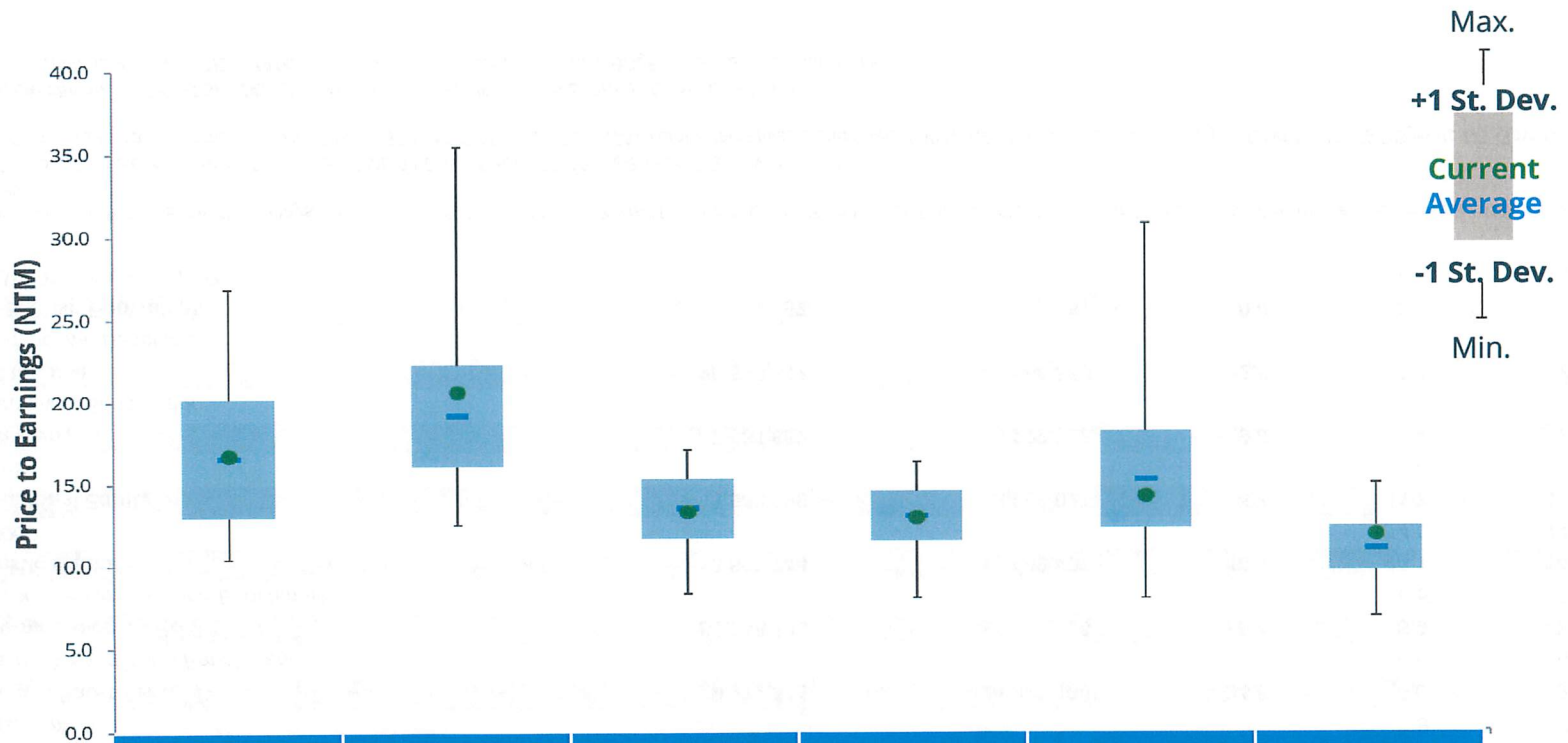
Source: Bloomberg, Clearstead as of 3/31/2019.
Past performance is no guarantee of future results.

GLOBAL EARNINGS GROWTH



Source: Bloomberg as of 3/31/2019 & FactSet as of 3/29/2019, Past performance is no guarantee of future results.

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	20.6	13.3	12.9	14.2	11.8
Average P/E (NTM)	16.5	19.1	13.4	13.0	15.2	11.0

Source: Bloomberg as of 3/31/2019,
Past performance is no guarantee of future results.

EXECUTIVE SUMMARY

	Ending March 31, 2019			2019	YTD
	Market Value 12/31/18 (\$)	Market Value 3/31/19 (\$)	% of Portfolio	Q1 (%)	(%)
Total University Assets	60,511,374	83,687,856	100.0	4.8	4.8
<i>Total Policy Benchmark</i>				3.8	3.8
Total Operating & Short Term	9,272,571	28,922,130	34.6	0.6	0.6
<i>Total Operating & Short Term Benchmark</i>				0.6	0.6
Total Long Term/ Reserves Pool	51,238,803	54,765,726	65.4	6.9	6.9
<i>Total Long Term/ Reserves Fund Benchmark</i>				6.5	6.5
Total Domestic Equity	13,503,744	15,409,477	18.4	14.1	14.1
<i>Russell 3000</i>				14.0	14.0
Total International Equity	3,543,999	3,958,027	4.7	11.7	11.7
<i>MSCI EAFE</i>				10.0	10.0
Total Alternatives	7,661,687	8,229,335	9.8	7.4	7.4
<i>Total Alternatives Benchmark</i>				7.4	7.4
Total Fixed Income	26,529,317	27,168,830	32.5	2.4	2.4
<i>Total Fixed Income Benchmark</i>				1.6	1.6
Total Cash & Cash Equivalents	57	57	0.0	0.6	0.6
<i>ICE BofAML 91 Days T-Bills TR</i>				0.6	0.6

- 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 / 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 March 31, 2019

Total Plan Asset Allocation Policy	Range	Current
Operating & Short-Term Pool	25% - 50%	36%
Long Term/ Reserves Pool	50% - 75%	65%

Operating & Short-Term Pool	Range	Current
Operating Assets	60% - 100%	96%
Short-Term Assets	0% - 40%	4%

Long Term/ Reserves Pool	Target	Range	Current
Domestic Equity	27%	20% - 35%	28%
International Equity	8%	0% - 15%	7%
Total Equity	35%	25% - 45%	35%
Alternatives	15%	0%-20%	15%
Short-Term Fixed Income	30%	25% - 45%	29%
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 12/31/18 (\$)	Market Value 3/31/19 (\$)	% of Total Plan	% of Pool	
Total University Assets	60,511,374	83,687,856	100.0	100.0	
Total Operating & Short Term	9,272,571	28,922,130	34.6	100.0	
JPMorgan 100% U.S. Tr Sec MM Inst	Cash	163,137	19,747,920	23.6	68.3
Star Plus	Cash	2,500,048	2,515,587	3.0	8.7
Vanguard Short-Term Federal Adm	US Fixed Income Short Term	1,090,005	1,104,681	1.3	3.8
STAR Ohio		5,519,381	5,553,942	6.6	19.2
Total Long Term/ Reserves Pool	51,238,803	54,765,726	65.4	100.0	
Total Domestic Equity	13,503,744	15,409,477	18.4	28.1	
Vanguard Institutional Index	US Stock Large Cap Core	9,740,867	11,070,942	13.2	20.2
Vanguard Mid Cap Index Inv	US Stock Mid Cap Core	1,925,409	2,247,393	2.7	4.1
Loomis Sayles Sm Growth Instl	US Stock Small Cap Growth	974,524	1,122,153	1.3	2.0
Victory Integrity Small Value Y	US Stock Small Cap Value	862,945	968,988	1.2	1.8
Total International Equity	3,543,999	3,958,027	4.7	7.2	
William Blair International Growth I	International	1,753,426	1,992,327	2.4	3.6
Dodge & Cox Internat'l Stock	International	1,790,572	1,965,700	2.3	3.6
Total Alternatives	7,661,687	8,229,335	9.8	15.0	
JPMorgan Strategic Income Opps Sel	Absolute Return	2,078,515	2,122,401	2.5	3.9
Wells Fargo Adv Absolute Return Instl	All Assets	2,026,797	2,135,619	2.6	3.9
Diamond Hill Long-Short Y	Long/Short Equity	2,007,202	2,186,325	2.6	4.0
Brookfield Global Listed Real Estate I	Global Real Estate	1,549,172	1,784,991	2.1	3.3
Total Fixed Income	26,529,317	27,168,830	32.5	49.6	
JPMorgan Core Bond	US Fixed Income Core	4,607,438	4,741,191	5.7	8.7
YSU Intermediate Term Bond	US Fixed Income Core	4,035,762	4,138,035	4.9	7.6
PGIM High Yield R6	US Fixed Income High Yield	2,373,008	2,544,074	3.0	4.6
YSU Short Term Bond	US Fixed Income Short Term	11,325,796	11,480,907	13.7	21.0
Lord Abbett Short Duration Income I	US Fixed Income Short Term	2,326,059	2,371,614	2.8	4.3
DFA Five-Yr Global Fxd-Inc I	US Fixed Income Short Term	1,861,253	1,893,009	2.3	3.5
Total Cash & Cash Equivalents	57	57	0.0	0.0	
PNC Govt MMkt	Global Fixed Income	57	57	0.0	0.0

ATTRIBUTION OF MARKET VALUE

TOTAL UNIVERSITY INVESTMENTS

	2018 Q2	2018 Q3	2018 Q4	First Quarter	One Year
Beginning Market Value	\$86,514,277	\$71,560,137	\$86,793,938	\$60,511,374	\$86,514,277
Contributions	\$7,123	\$20,008,592	\$49,622	\$24,509,030	\$44,574,366
Withdrawals	-\$15,507,123	-\$6,108,683	-\$23,274,386	-\$5,009,030	-\$49,899,222
Net Cash Flow	-\$15,500,000	\$13,899,908	-\$23,224,764	\$19,500,000	-\$5,324,856
Net Investment Change	\$545,860	\$1,333,893	-\$3,057,800	\$3,676,483	\$2,498,435
Ending Market Value	\$71,560,137	\$86,793,938	\$60,511,374	\$83,687,856	\$83,687,856
Net Change	-\$14,954,140	\$15,233,801	-\$26,282,564	\$23,176,483	-\$2,826,421

LONG-TERM POOL

	2018 Q2	2018 Q3	2018 Q4	First Quarter	One Year
Beginning Market Value	\$52,708,911	\$53,172,971	\$54,427,514	\$51,238,803	\$52,708,911
Contributions	\$6,025	\$8,175	\$7,495	\$8,053	\$29,748
Withdrawals	-\$6,025	-\$8,267	-\$7,495	-\$8,053	-\$29,840
Net Cash Flow	\$0	-\$92	\$0	\$0	-\$92
Net Investment Change	\$464,060	\$1,254,635	-\$3,188,712	\$3,526,923	\$2,056,907
Ending Market Value	\$53,172,971	\$54,427,514	\$51,238,803	\$54,765,726	\$54,765,726
Net Change	\$464,060	\$1,254,544	-\$3,188,712	\$3,526,923	\$2,056,815

PERFORMANCE REPORT CARD

	% of Portfolio	Ending March 31, 2019								Calendar Years			Inception (%)	Inception Date
		2019 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2018 (%)	2017 (%)	2016 (%)		
Total University Assets	100.0	4.8	4.8	3.5	4.4	4.8	3.3	3.5	3.9	-1.5	7.8	4.0	3.8	Mar-04
<i>Total Policy Benchmark</i>		3.8	3.8	3.6	3.6	3.7	2.7	2.7	2.9	-0.4	5.4	2.7	3.0	
Total Operating & Short Term	34.6	0.6	0.6	2.1	1.5	1.1	0.7	0.5	--	1.7	0.7	0.3	0.4	Jun-10
<i>Total Operating & Short Term Benchmark</i>		0.6	0.6	2.1	1.6	1.2	0.8	0.6	0.4	1.9	0.8	0.4	0.5	
JPMorgan 100% U.S. Tr Sec MM Inst	23.6	0.6	0.6	1.9	1.4	1.0	0.6	0.4	0.3	1.7	0.7	0.2	0.4	Sep-11
<i>ICE BofAML 91 Days T-Bills TR</i>		0.6	0.6	2.1	1.6	1.2	0.7	0.6	0.4	1.9	0.9	0.3	0.5	
Vanguard Short-Term Federal Adm	1.3	1.3	1.3	3.1	1.6	1.1	1.3	1.1	1.6	1.4	0.8	1.2	1.2	Sep-10
<i>BBgBarc US Govt 1-5 Yr TR</i>		1.2	1.2	3.2	1.5	1.0	1.3	1.1	1.5	1.5	0.7	1.0	1.2	
STAR Plus	3.0	0.6	0.6	2.1	1.5	1.1	0.8	--	--	1.8	0.7	0.4	0.8	Jan-14
<i>ICE BofAML 91 Days T-Bills TR</i>		0.6	0.6	2.1	1.6	1.2	0.7	0.6	0.4	1.9	0.9	0.3	0.7	
STAR Ohio	6.6	0.6	0.6	--	--	--	--	--	--	--	--	--	1.7	Jun-18
<i>ICE BofAML 91 Days T-Bills TR</i>		0.6	0.6	2.1	1.6	1.2	0.7	0.6	0.4	1.9	0.9	0.3	1.7	
Total Long Term/ Reserves Pool	65.4	6.9	6.9	4.0	5.2	5.9	4.3	4.8	--	-3.4	10.5	4.9	5.0	Jun-10
<i>Total Long Term/ Reserves Fund Benchmark</i>		6.5	6.5	4.6	5.2	5.7	4.2	4.5	4.8	-2.4	9.3	4.7	4.5	
Total Domestic Equity	18.4	14.1	14.1	7.9	11.1	13.4	10.1	12.5	--	-5.7	21.6	11.7	14.3	Jun-10
<i>Russell 3000</i>		14.0	14.0	8.8	11.3	13.5	10.4	12.6	16.0	-5.2	21.1	12.7	14.5	
Vanguard Institutional Index	13.2	13.7	13.7	9.5	11.7	13.5	10.9	12.8	15.9	-4.4	21.8	11.9	14.6	Jun-10
<i>S&P 500</i>		13.6	13.6	9.5	11.7	13.5	10.9	12.8	15.9	-4.4	21.8	12.0	14.6	
Vanguard Mid Cap Index Inv	2.7	16.7	16.7	5.8	9.0	11.5	8.8	11.8	16.7	-9.3	19.3	11.2	12.6	Sep-10
<i>Vanguard Mid Cap Index Benchmark</i>		16.8	16.8	6.0	9.1	11.6	8.9	11.8	16.7	-9.2	19.3	11.2	12.7	
Loomis Sayles Sm Growth Instl	1.3	15.1	15.1	10.4	16.5	17.7	9.3	12.7	17.6	0.4	26.9	5.7	14.4	Sep-10
<i>Russell 2000 Growth</i>		17.1	17.1	3.9	11.0	14.9	8.4	11.8	16.5	-9.3	22.2	11.3	12.9	
Victory Integrity Small Value Y	1.2	12.3	12.3	-5.1	0.8	8.2	4.7	9.5	15.2	-18.6	12.4	24.4	10.6	Sep-10
<i>Russell 2000 Value</i>		11.9	11.9	0.2	2.6	10.9	5.6	9.6	14.1	-12.9	7.8	31.7	10.4	
Total International Equity	4.7	11.7	11.7	-7.4	3.6	7.3	1.9	5.6	--	-17.8	26.6	2.7	4.3	Sep-10
<i>MSCI EAFE</i>		10.0	10.0	-3.7	5.1	7.3	2.3	5.6	9.0	-13.8	25.0	1.0	5.1	
<i>MSCI ACWI ex USA</i>		10.3	10.3	-4.2	5.6	8.1	2.6	4.7	8.8	-14.2	27.2	4.5	4.2	

PERFORMANCE REPORT CARD

	% of Portfolio	Ending March 31, 2019								Calendar Years			Inception (%)	Inception Date
		2019 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2018 (%)	2017 (%)	2016 (%)		
William Blair International Growth I	2.4	13.6	13.6	-6.8	6.3	6.8	2.9	5.7	10.6	-17.7	29.5	-2.5	6.9	Jun-12
MSCI ACWI ex USA		10.3	10.3	-4.2	5.6	8.1	2.6	4.7	8.8	-14.2	27.2	4.5	6.1	
Dodge & Cox Internat'l Stock	2.3	9.8	9.8	-8.0	1.0	7.9	0.8	5.5	10.2	-18.0	23.9	8.3	4.8	Sep-10
MSCI EAFE		10.0	10.0	-3.7	5.1	7.3	2.3	5.6	9.0	-13.8	25.0	1.0	5.1	
Total Alternatives	9.8	7.4	7.4	2.6	3.1	4.0	--	--	--	-6.0	7.9	3.5	1.6	Mar-15
Total Alternatives Benchmark		7.4	7.4	3.7	4.3	4.5	--	--	--	-4.4	8.4	1.5	2.3	
JPMorgan Strategic Income Opps Sel	2.5	2.1	2.1	2.6	2.4	4.7	2.4	3.0	4.8	0.8	3.3	9.2	0.7	Sep-18
BBgBarc US Universal TR		3.3	3.3	4.5	3.0	2.6	3.0	2.9	4.4	-0.3	4.1	3.9	4.5	
Wells Fargo Adv Absolute Return Instl	2.6	5.4	5.4	-1.2	3.5	4.8	1.9	3.5	--	-5.6	12.6	3.0	1.4	Mar-15
HFR1 Fund of Funds Composite Index		4.6	4.6	0.1	2.8	3.9	2.2	3.1	3.5	-4.0	7.8	0.5	1.6	
Diamond Hill Long-Short Y	2.6	8.9	8.9	3.5	2.2	5.8	4.4	6.7	8.5	-6.9	6.0	10.5	4.1	Mar-15
HFRX Equity Hedge Index		6.0	6.0	-5.1	1.4	2.9	0.7	2.3	1.9	-9.4	10.0	0.1	0.2	
Brookfield Global Listed Real Estate I	2.1	15.2	15.2	10.6	6.6	6.0	6.7	8.7	--	-8.1	10.1	6.3	5.7	Jul-17
FTSE NAREIT Developed		14.6	14.6	13.3	8.1	5.7	6.4	7.6	14.0	-5.6	10.4	4.1	6.9	
Total Fixed Income	32.5	2.4	2.4	4.0	2.5	1.9	1.9	1.8	--	0.9	2.4	1.6	2.1	Jun-10
Total Fixed Income Benchmark		1.6	1.6	3.5	1.9	1.5	1.6	1.5	2.2	1.4	1.3	1.6	1.7	
JPMorgan Core Bond	5.7	2.9	2.9	4.4	3.0	2.1	2.7	2.5	4.0	0.2	3.8	2.3	1.8	Aug-17
BBgBarc US Aggregate TR		2.9	2.9	4.5	2.8	2.0	2.7	2.5	3.8	0.0	3.5	2.6	1.8	
YSU Intermediate Term Bond	4.9	2.5	2.5	4.4	2.5	1.8	2.0	2.0	3.3	0.8	2.4	2.0	3.6	Mar-04
BBgBarc US Govt/Credit Int TR		2.3	2.3	4.2	2.3	1.7	2.1	2.0	3.1	0.9	2.1	2.1	3.3	
PGIM High Yield R6	3.0	7.2	7.2	6.4	5.3	8.4	5.1	6.4	--	-1.2	7.8	15.3	6.1	Dec-16
BBgBarc US High Yield TR		7.3	7.3	5.9	4.9	8.6	4.7	6.3	11.3	-2.1	7.5	17.1	5.5	
YSU Short Term Bond	13.7	1.4	1.4	3.4	1.8	1.4	1.3	1.2	1.8	1.6	1.1	1.1	2.5	Mar-04
ICE BofAML 1-3 Yrs US Corp & Govt TR		1.2	1.2	3.1	1.7	1.3	1.2	1.2	1.6	1.6	0.9	1.3	2.3	
Lord Abbett Short Duration Income I	2.8	2.0	2.0	3.7	2.6	2.9	2.3	2.7	4.3	1.4	2.7	4.0	3.7	Mar-18
ICE BofAML 1-3 Yrs US Corp & Govt TR		1.2	1.2	3.1	1.7	1.3	1.2	1.2	1.6	1.6	0.9	1.3	3.1	

PERFORMANCE REPORT CARD

	% of Portfolio	Ending March 31, 2019								Calendar Years			Inception (%)	Inception Date
		2019 Q1 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2018 (%)	2017 (%)	2016 (%)		
DFA Five-Yr Global Fxd-Inc I	2.3	1.7	1.7	3.8	2.3	1.6	2.1	2.0	3.0	1.7	2.0	1.8	2.1	Jun-13
FTSE WGBI 1-5 Yr Hdg USD		1.2	1.2	3.1	2.1	1.6	1.7	1.6	1.7	2.1	1.1	1.5	1.7	
Total Cash & Cash Equivalents	0.0	0.6	0.6	1.9	--	--	--	--	--	--	--	--	1.9	Mar-18
ICE BofAML 91 Days T-Bills TR		0.6	0.6	2.1	1.6	1.2	0.7	0.6	0.4	1.9	0.9	0.3	2.1	
PNC Govt MMkt	0.0	0.6	0.6	1.9	--	--	--	--	--	--	--	--	1.9	Mar-18
ICE BofAML 91 Days T-Bills TR		0.6	0.6	2.1	1.6	1.2	0.7	0.6	0.4	1.9	0.9	0.3	2.1	

- 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

ENDOWMENT HOLDINGS

YSU Endowment (Huntington)

- Equity Mutual Funds – 10% (5-10 Mutual Funds & ETFs)
- Stocks – 62% (45-60 U.S. Large/Mid-Cap Stocks)
- Fixed Income Mutual Funds – 2% (Federated Total Return Bond)
- Bonds – 21% (10-20 Bonds, U.S. Corporate / Gov't / Asset Backed Debt)
- Cash – 5%

Kilcawley (PNC)

- Vanguard Balanced Index Fund (Adm) – 100%

Alumni License Plate (PNC)

- Vanguard Balanced Index Fund (Adm) – 100%

MANAGING THROUGH VOLATILE MARKETS



MARKET VOLATILITY

- Likely to increase later in the business cycle
- Markets are often irrational
- Strongest days in the market often follow the weakest

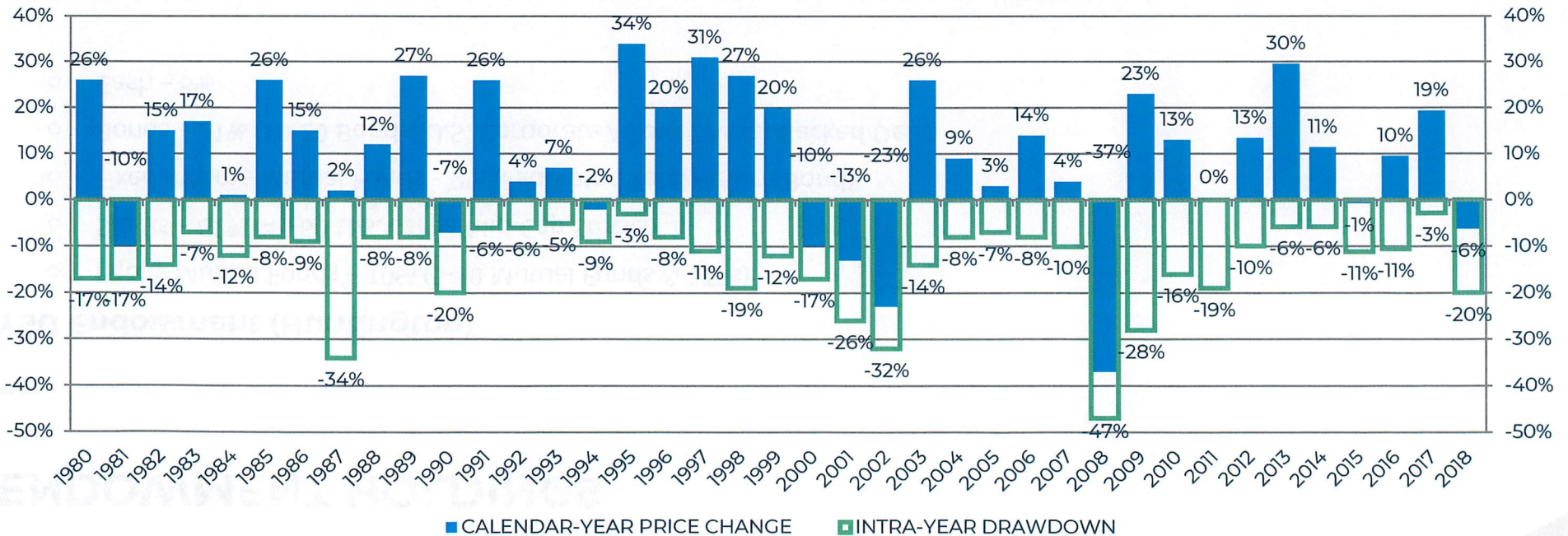
BEHAVIORAL MISSTEPS

- Market timing, losing patience
- Deviating from strategy; waiting for markets to settle down

WHERE TO BE FOCUSED?

- Stay disciplined: long-term investment strategy, spending
- Assess short and intermediate-term cash needs
- Opportunistically raise cash and rebalance
 - Trim recent winners or draw from conservative investments to give depressed assets time to recover

S&P 500 INDEX: PRICE RETURNS AND DRAWDOWNS



STRATEGIC ASSET ALLOCATION REVIEW: ASSET CLASS PURPOSE

	ASSET CLASS	PURPOSE	FORECASTED RETURN	FORECASTED VOLATILITY
EQUITY	DOMESTIC LARGE / MID CAP	GROWTH	7.6%	13.6%
	DOMESTIC SMALL CAP	GROWTH	8.7%	18.2%
	DEVELOPED INTERNATIONAL	GROWTH	7.9%	16.5%
	EMERGING MARKETS	GROWTH	10.4%	21.6%
	PRIVATE EQUITY	GROWTH / DIVERSIFICATION	11.6%	8.8%
	EVENT-DRIVEN	GROWTH / DIVERSIFICATION	7.6%	6.0%
ALTERNATIVES	EQUITY HEDGE	GROWTH / DIVERSIFICATION	7.6%	7.8%
	RELATIVE VALUE	GROWTH / DIVERSIFICATION	6.0%	4.4%
	GLOBAL MACRO	GROWTH / DIVERSIFICATION	6.0%	4.6%
	PRIVATE REAL ESTATE	GROWTH / DIVERSIFICATION	10.2%	6.4%
	PUBLIC REAL ESTATE (REITS)	GROWTH / DIVERSIFICATION	8.7%	18.6%
	MASTER LIMITED PARTNERSHIPS (MLPS)	GROWTH / DIVERSIFICATION	10.0%	17.5%
FIXED INCOME	CORE FIXED INCOME	INCOME / STABILITY	2.9%	3.1%
	GLOBAL BONDS (DEVELOPED)	INCOME / DIVERSIFICATION	2.9%	5.4%
	EMERGING MARKETS DEBT	INCOME / GROWTH	6.2%	8.0%
	HIGH YIELD	INCOME / GROWTH	5.8%	9.2%
	CASH	LIQUIDITY	2.0%	0.5%

* Forecasted returns and volatility come from the methodology detailed on the slide titled "Strategic Asset Allocation Review: Forecasted Market Returns and Volatility".

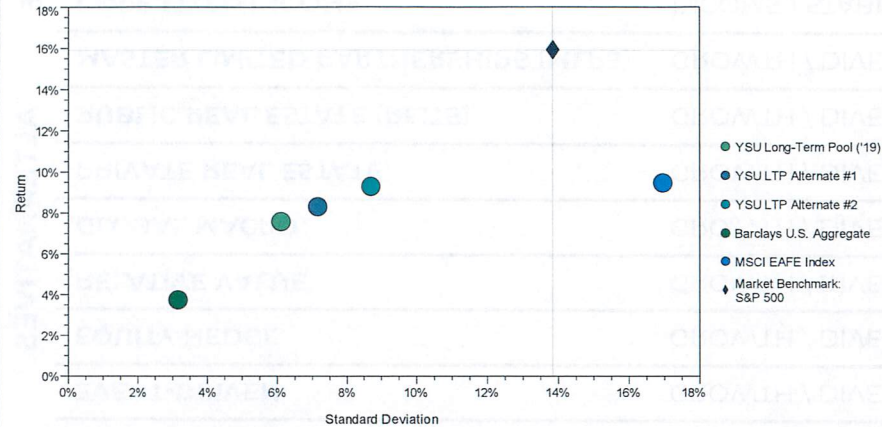
STRATEGIC ASSET ALLOCATION REVIEW: 10-YEAR STATISTICS (BACK TESTED)

Zephyr StyleADVISOR

Zephyr StyleADVISOR - Clearstead Advisors, LLC

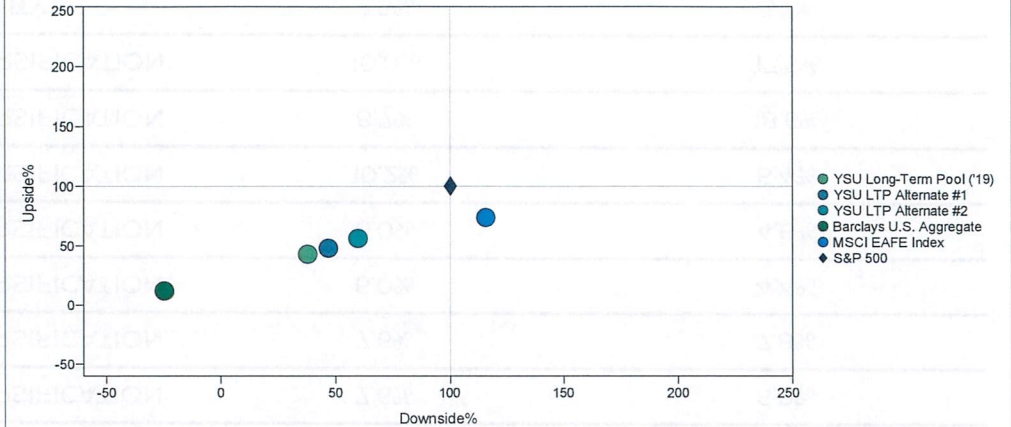
Risk / Return

April 2009 - March 2019 (Single Computation)



Upside / Downside

April 2009 - March 2019 (Single Computation)



April 2009 - March 2019: Summary Statistics

	Return	Standard Deviation	Sharpe Ratio	Up Capture vs. Market	Down Capture vs. Market	Alpha vs. Market	Beta vs. Market
YSU Long-Term Pool ('19)	7.60%	6.09%	1.18	42.63%	37.79%	0.84%	0.42
YSU LTP Alternate #1	8.30%	7.16%	1.10	48.18%	46.98%	0.34%	0.50
YSU LTP Alternate #2	9.29%	8.69%	1.02	56.13%	59.76%	-0.36%	0.61
Barclays U.S. Aggregate	3.77%	3.16%	1.06	11.75%	-24.71%	4.41%	-0.04
MSCI EAFE Index	9.47%	16.96%	0.53	74.05%	115.76%	-6.26%	1.06
S&P 500	15.92%	13.84%	1.12	100.00%	100.00%	0.00%	1.00

Past returns are not a guarantee of future returns.

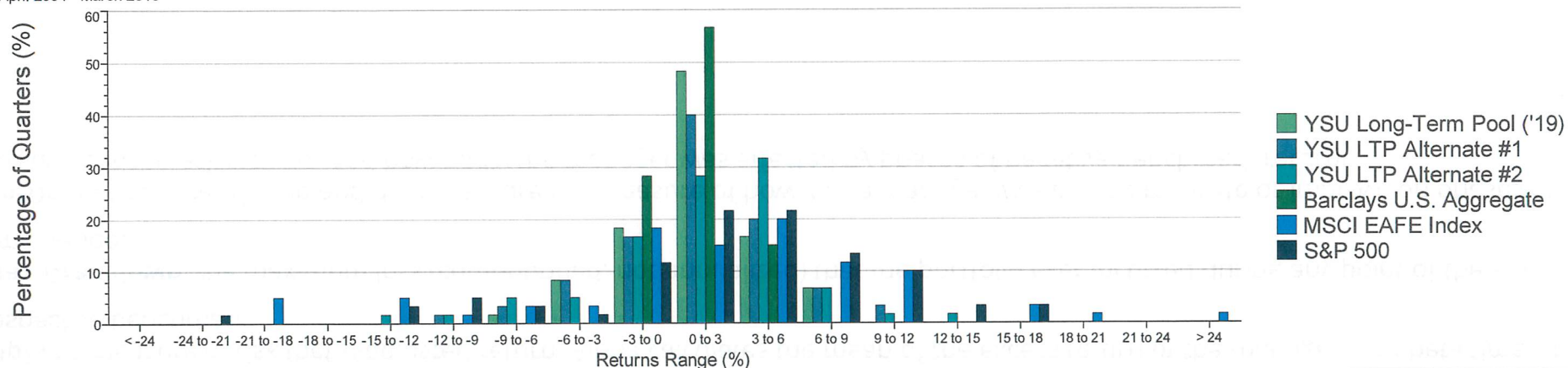


STRATEGIC ASSET ALLOCATION REVIEW: RISK CHARACTERISTICS

Zephyr StyleADVISOR

Zephyr StyleADVISOR - Clearstead Advisors, LLC

Histogram of Returns
April 2004 - March 2019



April 2004 - March 2019: Summary Statistics

	Standard Deviation	Maximum Drawdown	Maximum Drawdown End Date	Maximum Drawdown Length	Maximum Drawdown Recovery Date	Down Capture vs. Market	Beta vs. Market
YSU Long-Term Pool ('19)	6.45%	-19.94%	Mar 2009	5	Sep 2010	37.48%	0.42
YSU LTP Alternate #1	7.66%	-24.27%	Mar 2009	6	Dec 2010	46.75%	0.50
YSU LTP Alternate #2	9.32%	-29.71%	Mar 2009	6	Dec 2010	58.91%	0.61
Barclays U.S. Aggregate	3.36%	-2.98%	Dec 2016	1	Sep 2017	-21.55%	-0.05
MSCI EAFE Index	17.72%	-51.78%	Mar 2009	6	Dec 2013	110.92%	1.05
S&P 500	14.75%	-45.80%	Mar 2009	6	Mar 2012	100.00%	1.00

Past returns are not a guarantee of future returns.



INVESTMENT PORTFOLIO DEFINITIONS

Standard Deviation: measures the average deviations of a return series from its mean, and is often used as a measure of risk. A large standard deviation implies that there have been large swings in the return series of the manager.

Sharpe Ratio: used to help investors understand the return of an investment compared to its risk. The ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk.

Beta: a measure of systematic risk, or the sensitivity of a manager to movements in the benchmark. A beta of 1 implies that you can expect the movement of a manager's return series to match that of the benchmark used to measure beta.

Alpha: a measure of risk (beta)-adjusted return. Alpha calculates the mean of the excess return of the manager over beta times its respective benchmark.

Max Drawdown: the maximum loss (compounded, not annualized) that the portfolio ever incurred during any point of the entire time period.

Up/Down Capture: The up and down capture is a measure of how well a manager was able to replicate or improve on phases of positive benchmark returns, and how badly the manager was affected by phases of negative benchmark returns.

STRATEGIC ASSET ALLOCATION REVIEW: FORECASTED MARKET RETURNS AND VOLATILITY

ASSET CLASS	FORECASTED RETURN METHODOLOGY	NOTES
Traditional Asset Classes (i.e. public equity, MLPs, REITs, and fixed income)	Black-Litterman Model Expected Returns	Risk-free rate = 2.0% Risk-premium = 3.8% Views added for US Large Cap Equity, REITs, and MLPs. US IG Bonds based on current yield and growth assumption
Hedge Funds	L/S Equity & Event Driven = BL Large Cap Equity Expected Return Relative Value = Cash + 4%	Historical volatility and correlations
Private Equity	BL Large Cap Equity Expected Returns + 4%	Historical volatility and correlations
Private Real Estate	Public Real Estate + 1.5%	Historical volatility and correlations

ASSET	FORECASTS		CORRELATIONS																			
	RETURN	STD. DEV.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. US Large/Mid Cap Equity	7.61	13.63	1.0																			
2. U.S. Small Cap Equity	8.71	18.15	0.9	1.0																		
3. Developed Int'l Equity	7.89	16.49	0.9	0.8	1.0																	
4. Emerging Markets Equity	10.40	21.56	0.8	0.7	0.9	1.0																
5. Equity Hedge	7.61	7.85	0.9	0.8	0.9	0.9	1.0															
6. Event-Driven	7.61	5.99	0.8	0.8	0.8	0.8	0.9	1.0														
7. Private Equity	11.61	8.84	0.8	0.7	0.8	0.7	0.8	0.8	1.0													
8. Relative Value	6.00	4.39	0.7	0.6	0.8	0.8	0.9	0.9	0.7	1.0												
9. Global Macro	6.00	4.60	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3	1.0											
10. Private Real Estate	10.19	6.38	-0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.0										
11. Global REITs	8.69	18.64	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.3	0.0	1.0									
12. Master Limited Partnerships	9.96	17.49	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.2	0.0	0.4	1.0								
13. U.S. TIPS	3.29	5.61	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.3	0.2	-0.3	0.3	0.1	1.0							
14. U.S. Core Bonds	2.85	3.13	0.0	-0.1	0.1	0.1	-0.1	-0.1	-0.3	0.1	0.1	-0.3	0.3	-0.1	0.8	1.0						
15. Global Bonds	2.87	5.43	0.3	0.2	0.5	0.5	0.3	0.2	0.0	0.2	0.3	-0.2	0.5	0.1	0.7	0.7	1.0					
16. Emerging Market Bonds	6.18	8.01	0.5	0.4	0.6	0.7	0.5	0.5	0.4	0.6	0.2	-0.2	0.7	0.3	0.6	0.6	0.6	1.0				
17. U.S. Corp. High Yield Bonds	5.77	9.17	0.7	0.7	0.7	0.7	0.7	0.8	0.6	0.8	0.1	-0.2	0.8	0.6	0.4	0.2	0.4	0.7	1.0			
18. Cash	2.00	0.51	-0.1	-0.1	0.0	0.0	0.0	0.0	0.2	-0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	1.0		
19. Bank Loans	7.77	3.42	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.0	0.4	0.6	0.6	0.1	-0.3	-0.2	0.4	0.7	0.0	1.0	



DEFINITIONS & DISCLOSURES

DEFINITIONS & 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. Clearstead 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, 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 growth 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 mid-capitalization value stocks, mid-capitalization growth 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 "small" 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 Japan Index** is an unmanaged index considered representative of developed European countries. The **MSCI Japan Index** is an unmanaged index considered representative of developed European countries. The **MSCI Pacific ex Japan Index** is an unmanaged index considered representative of stocks of Japan.

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

The **U.S. Treasury T-bill Index** includes U.S. Treasury bills with a remaining maturity of 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 Ax 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 (CMBS-eligible) and fixed rate mortgage-backed securities. The **BC Quality Distribution AAA, B, and CC-D Index** measures 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.

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 **Down 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 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.

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: Short-Biased** strategies employ analytical techniques in which the investment thesis is predicated on assessment of the valuation characteristics of the underlying companies with the goal of identifying overvalued companies. **HFRI EH: Technology/Healthcare** strategies employ investment processes designed to identify opportunities 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 liquid (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 reliance 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: Multi-Strategy** employ an investment thesis is predicated on realization of a spread between related fixed 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 **Down 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.

The **S&P 500 Value Index**, **Index S&P 500 Index** and **S&P 500 Growth Index** are a broad-based market indices that measure the performance of large-capitalization value stocks, large-capitalization growth companies and large-capitalization growth companies, respectively. The **S&P 400 MidCap Value Index**, **Index S&P MidCap 400 Index** and **S&P 400 MidCap Growth Index** are indices that measure the performance of mid-sized value companies, mid-sized companies and mid-sized growth companies, respectively. The **S&P 600 SmallCap Value 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 **S&P 900 Index** combines the large-cap S&P 500 and the S&P MidCap 400. **S&P Completion Index TR** is a sub-index of the S&P Total Market Index (TMI), including all stocks eligible for the S&P TMI and excluding all current constituents of the S&P 500. **S&P Global Ex US Property Index** defines and measures the investable universe of publicly traded property companies domiciled in developed and emerging markets excluding the U.S.

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 growth 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 mid-capitalization value stocks, mid-capitalization growth 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 "small" 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 **Russell Microcap Index** measures the performance of the microcap segment of the U.S. equity market. The **Russell Top 200 Value Index** measures the performance of the especially large cap segment of the U.S. equity universe represented by stocks in the largest 200 by market cap that exhibit value characteristics. The **Russell Developed ex-US Large Cap Index** measures the performance of the largest investable securities in developed countries globally, excluding companies referred to the United States.



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 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 AC (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 Asia, 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 ex USA 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 Mid Cap Value Index** represents the value companies of the MSCI US Mid Cap 450 Index. 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 **Barclays Capital (BC) U.S. Treasury** 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 MBX 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-funded 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 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 (RMBS-eligible) and fixed rate mortgage-backed securities. The **BC Quality Distribution AAA, B, and C-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-REMIC 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 and agency bond indices that have maturities of one to three years. The **BC U.S. 1-5 Year Government Bond Index** is composed of treasury bond and agency bond and agency bond indices 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 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 sales, zero-step 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/Credits 5-10 Year Index** includes all medium and larger 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 Indices** 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 Convertibles 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 Yrs Index** tracks the performance of U.S. dollar-denominated investment grade 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 Treasuries 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 partnerships in the Energy Sector. The **Citigroup World Government Bond 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 **Citigroup WGBI Index** is a market capitalization weighted bond index consisting of the government bond markets of the multiple countries. The **Citigroup 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 **Citigroup 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 are 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 **JP Morgan Emerging Markets Bond Index Plus (EMBI+)** Index tracks total returns for traded external debt instruments (external managed foreign currency denominated fixed income) in the emerging markets. The **JP Morgan GBI Global ex-US Index** represents the total return performance of major non-U.S. bond markets.

The **HFRF Funds of Funds Index (HFRF 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. **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. **HFRF 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. **HFRF 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.

The **FTSE All-World ex US Index** comprises large and midcap stocks providing coverage of developed and emerging markets, excluding the US. 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 net asset 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) 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. 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 components 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 indexes (Income, 2000, 2005, 2010, 2015, 2020, 2025, 2030, 2035, 2040, 2045, 2050, 2055) available in three risk profiles: aggressive, moderate, and conservative. The indexes are built on asset allocation methodologies developed by Ibbotson Associates, a leader in asset allocation research and a Morningstar company since 2006. The indexes 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 this evaluation report has been prepared 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.

Evaluation of investment managers covers both quantitative and qualitative aspects. In addition to the investment performance evaluation, we monitor ownership structure, track key employee performance, 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.

**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 3356-03-10; 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 22 of the June 5, 2019, Investment Subcommittee Agenda item C.1.a.

PORTFOLIO RECOMMENDATIONS (ACTION)

YOUNGSTOWN STATE UNIVERSITY

AS OF APRIL 30, 2019

	TICKER	MARKET VALUE (CURRENT)	PERCENTAGE OF PORTFOLIO	CHANGES	MARKET VALUE (POST REBALANCE)	PERCENTAGE OF PORTFOLIO	POLICY TARGET	POLICY RANGE	TACTICAL + / -
Total Operating & Short Term		\$22,916,656	100.0%	\$0	\$22,916,656	100.0%	100.0%		
Operating Assets		\$21,813,014	95.2%		\$21,813,014	95.2%		60-100%	
JPMorgan 100% U.S. Treas. MM Instl	JTSXX	\$13,743,485	60.0%		\$13,743,485	60.0%			
Star Plus*	-	\$2,515,587	11.0%		\$2,515,587	11.0%			
Star Ohio*	-	\$5,553,942	24.2%		\$5,553,942	24.2%			
Short-Term Assets		\$1,103,642	4.8%		\$1,103,642	4.8%		0-40%	
Vanguard Short-Term Federal Adm	VSGDX	\$1,103,642	4.8%		\$1,103,642	4.8%			
Total Long Term Reserves Pool		\$55,669,136	100.0%	\$0	\$55,669,136	100.0%	100.0%		
Domestic Equity		\$16,035,050	28.8%		\$15,285,050	27.5%	27.0%	20-35%	0.5%
Vanguard Instl Index	VINIX	\$11,518,755	20.7%	-\$750,000	\$10,768,755	19.3%			
Vanguard Mid Cap Index Inv	VIMSX	\$2,331,389	4.2%		\$2,331,389	4.2%			
Loomis Sayles Small Growth Instl	LSSIX	\$1,161,407	2.1%		\$1,161,407	2.1%			
Victory Integrity Small Cap Value Y	VSVIX	\$1,023,499	1.8%		\$1,023,499	1.8%			
International Equity		\$4,104,761	7.4%		\$4,104,761	7.4%	8.0%	0-15%	-0.6%
William Blair International Growth I	BIGIX	\$2,057,076	3.7%		\$2,057,076	3.7%			
Dodge & Cox International Stock	DODFX	\$2,047,685	3.7%		\$2,047,685	3.7%			
Alternatives		\$8,377,028	15.0%		\$8,377,028	15.0%	15.0%	0-20%	0.0%
JPMorgan Strategic Income Opps Fd	JSOSX	\$2,133,947	3.8%		\$2,133,947	3.8%			
Wells Fargo Adv Absolute Return I	WABIX	\$2,166,710	3.9%		\$2,166,710	3.9%			
Diamond Hill Long-Short Y	DIAYX	\$2,316,596	4.2%		\$2,316,596	4.2%			
Brookfield Global Real Estate	BLRIX	\$1,759,776	3.2%		\$1,759,776	3.2%			
Fixed Income		\$27,152,240	48.8%		\$27,902,240	50.1%	50.0%	35-75%	0.1%
YSU Short Term Bond	PCA SMA	\$11,455,922	20.6%		\$11,455,922	20.6%			
Lord Abbett Short Duration	LLDYX	\$2,377,787	4.3%	\$250,000	\$2,627,787	4.7%			
DFA Five-Year Global	DFGBX	\$1,896,537	3.4%		\$1,896,537	3.4%			
JPMorgan Core Bond Fund Sel	WOBDX	\$4,724,728	8.5%	\$500,000	\$5,224,728	9.4%			
YSU Intermediate Term Fixed	PCA SMA	\$4,120,249	7.4%		\$4,120,249	7.4%			
Prudential High Yield Bond R6	PHYQX	\$2,577,017	4.6%		\$2,577,017	4.6%			
Cash & Cash Equivalents		\$57	0.0%		\$57	0.0%	0.0%	0-5%	0.0%
Equity Account Cash	-	\$57	0.0%		\$57	0.0%			
Total University Assets		\$78,585,792			\$78,585,792				

*As of 3/31/2019





**RESOLUTION TO MODIFY
INVESTMENT OF THE UNIVERSITY'S NON-ENDOWMENT POLICY,
3356-3-10**

WHEREAS, University Policies are reviewed and reconceptualized on an ongoing basis; and

WHEREAS, this process can result in the modification of existing policies, the creation of new policies, or the deletion of policies no longer needed; and

WHEREAS, action is required by the Board of Trustees prior to replacing and/or implementing modified or newly created policies, or to rescind existing policies; and

WHEREAS, the Investment of the University's Non-Endowment policy has been reviewed pursuant to the five-year review cycle, and formatted in accordance with Policy 3356-1-09, Development and Issuance of University Policies.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees of Youngstown State University does hereby approve the modification of the University Policy Investment of the University's Non-Endowment, policy number 3356-3-10, shown as Exhibit __ attached hereto. A copy of the policy indicating changes to be made is also attached.

3356-3-10 Investment of the university's non-endowment and endowment funds.

~~Previous Policy Number: 3007.01~~
Responsible Division/Office: Finance and ~~Administration~~Business Operations
Responsible Officer: President
Revision History: September 1998; December 2004; June 2006;
December 2008; June 2010; June 2012;
December 2014; June 2019
Board Committee: Finance and Facilities
Effective Date: ~~December 16, 2014~~June 6, 2019
Next Review: ~~2019~~2024

- (A) Policy statement. This policy ensures sufficient liquidity to meet the university's cash flow needs, and further ensures compliance with the Ohio revised code and all other applicable laws and regulations, while optimizing opportunities for growth in invested assets in a responsible and prudent manner. The president and the vice president for finance and ~~administration~~business operations, or designee, is authorized to invest university funds in compliance with this policy, provisions of section 3345.05 of the ~~Revised-revised Code-code~~ and all other applicable laws and regulations, ~~including Amended Substitute House Bill 524, 124th General Assembly amending section 3345.05 of the Revised Code.~~
- (1) For the purpose of this policy on the investment of the university's non-endowment and endowment funds (the "policy"), the non-endowment and endowment portfolios shall include:
- (a) All tuition and mandatory fees, registration, non-resident tuition fees, academic fees for the support of on- and off-campus instruction, laboratory and course fees when so assessed and collected, all other fees, deposits, charges, receipts, and income from all or part of the students, all subsidy or other payments from state appropriations, and all other fees, deposits, charges, receipts, and income received. These funds shall be held and administered by the board of trustees.
- (b) Notwithstanding any provision of the revised code to the

contrary, the title to investments made by the board of trustees with funds derived from revenues described above shall not be vested in the state but shall be held in trust by the board. Such investments shall be made pursuant to this investment policy adopted by the board in public session. Such investments shall be made with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

- (c) It is the intention of the board of trustees that actions taken pursuant to this policy shall be in compliance with all applicable laws as they may be amended from time to time. No university representative, employee, or agent shall take any action prohibited by or fail to take any action required by all applicable laws in carrying out this policy.
- (d) Members of the board of trustees will annually provide to the chair of the board of trustees a statement disclosing the nature, if at all, of any relationship with the financial institutions involved with the university's non-endowment and endowment funds. Any member having a relationship that creates a conflict prohibited by the ethics laws with any investment entity will withdraw from participating in the selection of, or authorizing the contracts of, those investment managers and/or consultants.
- (e) External investment managers, consultants and advisors retained by the university shall immediately notify the chair of the investment subcommittee and the vice president for finance and ~~administration~~business operations, or designee, of any potential conflicts of interest which may develop from time to time. In any such situation, the external investment manager, consultant and/or advisor shall identify the nature of the conflict of interest and its potential impact, if any, on the university.
- (f) The university's non-endowment portfolio will remain sufficiently liquid to enable the university to meet all operating requirements. Portfolio liquidity is defined as the

maturity or ability to sell a security on short notice near the purchase price of the security. To help retain the desired liquidity, no security shall be purchased that is likely to have few market makers or poor market bids. Additionally, liquidity shall be assured by keeping an adequate amount of short-term investments to accommodate the cash needs of the university.

- (g) The university's non-endowment and endowment portfolios shall be structured with the objective of attaining the highest possible total return for the investment portfolio while adhering to a prudent level of risk.
- (2) Specific responsibilities of the investment subcommittee of the finance and facilities committee of the board of trustees (hereafter referred to as the "subcommittee") in the investment process include:
- (a) The application of a total return philosophy of asset management;
 - (b) Developing sound and consistent investment policy guidelines;
 - (c) Setting forth an investment structure for managing the university's assets. This structure includes identification of asset classes, strategic asset allocation, and acceptable asset ranges above and below the strategic asset allocation;
 - (d) Providing guidelines that control the level of overall risk and liquidity assumed for the investment portfolio so that all assets are managed in accordance with stated objectives;
 - (e) Complying with all applicable fiduciary, prudence, due diligence requirements, and with all applicable laws, rules and regulations from various local, state, federal, and international political entities that may impact fund assets;
 - (f) Selecting and monitoring investment managers;
 - (g) Selecting an investment consulting organization;

- (h) Communicating clearly the major duties and responsibilities of those accountable for achieving investment results;
 - (i) Monitoring and evaluating results to assure that the guidelines are being adhered to and the objectives are being met;
 - (j) To control costs of administering and managing the funds;
 - (k) Taking appropriate action to discharge an investment manager for failure to perform as mutually expected at the time of selecting; and
 - (l) Undertaking such work and studies as may be necessary to keep the board of trustees of the university adequately informed as to the status of the investment of the balance sheet assets (the “assets”).
- (3) This policy shall be reviewed every five years by the subcommittee or upon the advisement of investment advisors or management. All material changes to the policy will be approved by the subcommittee and submitted to the university’s board of trustees for final approval.
- (B) UPMIFA considerations. In accordance with the state of Ohio’s adoption of the Uniform Prudent Management of Institutional Funds Act (“UPMIFA”), effective June 1, 2009, the subcommittee will take the following into consideration when making investment decisions:
- (1) General economic conditions.
 - (2) The possible effect of inflation or deflation.
 - (3) Expected tax consequences.
 - (4) The role that each investment plays within the overall portfolio.
 - (5) Expected total return from income and appreciation.
 - (6) Other resources of the institution.

- (7) Need of the institution to make distributions and preserve capital.
 - (8) Assets special relationship or special value to the charitable purpose.
- (C) Purpose. Investments shall be managed for the use and benefit of the university in a diversified portfolio that focuses, over time, on the preservation of capital, minimization of cost and risk, maintenance of required levels of liquidity in the overall portfolio to meet cash flow requirements, and compliance with state statute. The non-endowment and endowment portfolios are intended to achieve a reasonable yield balanced with a component invested for longer-term appreciation.
- (1) The purpose of this policy is to assist the university in more effectively supervising and monitoring the investment activities of its assets. This policy is designed to assist university staff and the investment subcommittee with regard to its fiduciary responsibility by:
 - (a) Defining the responsibilities of university staff, its investment managers, and its investment consultant;
 - (b) Stating in writing the university's attitudes, expectations, and goals for the investment of the assets;
 - (c) Providing a basis for reviewing investment management organizations in the selection process;
 - (d) Encouraging effective communication between the investment managers, investment consultant, the subcommittee, and Youngstown state university; and
 - (e) Setting objectives against which the performance results of the investment managers, operating within the constraints imposed by the university's policy guidelines, can be measured.
 - (2) A primary expectation for university assets is to support the university by providing current income to the university from both non-endowed and endowed funds, managed on behalf of the

university by outside investment professionals, while concurrently growing principal. The asset base is dedicated to providing a reliable source of funds for current and future enhancements at the university.

(D) Parameters.

- (1) Investment assets are to be held by a reputable custodian/trust company. Investment assets are to be held in safe-keeping in the name of the university. Evaluation, selection, and monitoring of the university's custodian will include, but not be limited to, the following factors:
 - (a) Size and scalability of the underlying financial institution;
 - (b) Delivery of competitive safe-keeping and trust services as measured by attributes such as systems functionality, statement delivery, client service, audit controls and reporting capabilities; and
 - (c) Safe-keeping and trust service pricing and fees.
- (2) The management of the non-endowment and endowment funds involves a tradeoff between two competing goals. On the one hand, the funds must preserve capital and maintain liquidity sufficient to distribute cash to fund immediate operating needs and prior spending commitments. To accommodate these objectives, the university will establish the operating and short-term pool. On the other hand, the funds must accumulate capital sufficient to support nominal growth in expenses for existing programs and to establish new quasi-endowment funds. To accommodate these objectives, the university will establish the long-term/reserve pool. The goal of the funds is to accommodate these competing needs by providing adequate short-term liquidity along with long-term capital appreciation.
- (3) The subcommittee recognizes that risk and volatility are present to some degree with all types of investments. However, high levels of risk are to be avoided at the total asset level. This is to be accomplished through diversification by asset class, style of investment manager, and sector and industry limits.

- (4) The following statements and guidelines are set forth in an effort to provide direction to each of the investment managers that manage separate accounts for the university. Managers are retained to manage separate pools of assets, and funds are allocated to such managers in order to achieve an appropriate, diversified, and balanced asset mix. The subcommittee, from time to time, may shift assets from one manager to another to maintain the appropriate mix. Additionally, the subcommittee recognizes that mutual or commingled funds used by the university may not adhere to these guidelines. However, when selecting mutual or commingled fund products, the subcommittee will refer to these guidelines as a basis to select new funds.
- (5) Evaluation, selection, and monitoring of the university's individual investment managers will include, but not be limited to, the following factors:
 - (a) Each investment manager should have clearly stated investment objectives.
 - (b) The performance (return) and volatility (risk) of each investment manager should be evaluated over time, evaluating performance in light of how closely the investment manager has adhered to its stated investment objectives.
 - (c) The depth and experience of the portfolio manager(s) should be evaluated (both with respect to the current investment portfolio he or she manages and any funds previously managed).
 - (d) The depth and financial stability of the relevant investment fund company should be considered.
 - (e) The fees and expenses charged with respect to such investment management services should be considered.
- (6) A written "Investment Guideline Statement" or prospectus clearly outlining objectives and responsibilities will be in place with each investment manager. For the non-endowment funds, the managers

shall have discretion to invest assets in cash reserves as they deem appropriate but will be expected under normal circumstances to be fully invested in their assigned asset class. A manager's performance will be evaluated against their fully invested passive benchmark and against similar portfolio results. Passive benchmarks will be used for comparative purposes which most closely approximate the investment mandate's duration, credit quality, security composition, capitalization, style, asset class, etc.

- (7) To the extent bequests are made to the university via shares of marketable equity securities, the following provisions apply:
- (a) The policy on bequests as defined by rule 3356-5-07 of the Administrative Code will supersede all provisions within this policy.
 - (b) If the bequest is a non-endowed gift, the securities will be sold as soon as prudently possible.
 - (c) If the bequest is an endowed gift, the securities will be invested as specified by the donor and agreed to by the board of trustees.

(E) Procedures.

- (1) The vice president for finance and ~~administration~~business operations, or designee, shall be accountable to the board of trustees for implementing this policy.
- (2) The vice president for finance and ~~administration~~business operations, or designee, will report to the investment subcommittee at least quarterly on the status of the non-endowment and endowment portfolios.
- (3) It shall be permissible for the vice president for finance and ~~administration~~business operations, or designee, to realize gains and losses if such an action ~~would be~~is consistent with the university's investment goals. Losses and gains realized on the non-endowment portfolio shall be charged against current income unless otherwise approved by the investment subcommittee.

- (4) Between meetings of the board of trustees, if deemed advisable, other investments not specifically authorized by this policy may be made if approved by the investment subcommittee. Any such actions shall be taken to the board of trustees for review at its next meeting.
- (F) Spending policy. The board has established a spending policy for certain funds. This policy reflects the tradeoffs between short-term liquidity and long-term capital appreciation needs, as described in paragraphs C and D of this ~~rule~~ policy.
- (1) Non-endowment assets. Non-endowment assets are comprised of operating and non-operating funds and include cash, cash equivalents, and investment assets.
 - (2) Operating funds comprised of cash, cash equivalents, and certain investment assets make up the university's general funds. The use of cash, cash equivalents, and investment assets in these general funds is not subject to any board-approved spending policy as the university's annual operating budget establishes parameters for the use of these funds.
 - (3) The university's remaining non-endowed investment assets are primarily in reserve for project-related funds. Spending within these funds is subject to rule 3356-3-11.1 of the Administrative Code, project-specific spending plans, and various other university operating and financial policies and procedures. If deemed necessary for university operations, university management, working with the investment consultant, has authority to raise an appropriate level of cash from non-operating investments.
 - (4) Income earned on non-endowed investment assets is primarily used to support university operations; thus, it is the policy of the board not to limit annual distributions of realized investment income. The annual operating budget establishes parameters for the use of this income, and the disposition of total annual net operating inflows over outflows requires board approval. Unrealized investment income from non-endowment assets shall always be non-spendable.
 - (5) Endowment assets. It is the policy of the board to set annual

distributions each fiscal year to five per cent of the twelve-quarter average of the market value for the preceding twelve calendar quarters. In calculating the twelve-quarter average, census dates of March thirty-first, June thirtieth, September thirtieth, and December thirty-first for the previous three years shall be used. Any distribution greater than this would require written justification and approval by the board of trustees. For all other managed funds, distributions are project-specific and, thus, are limited only to the extent needed to sustain appropriate cash flow for the expenditure cycle of the corresponding project.

3356-3-10 Investment of the university's non-endowment and endowment funds.

Responsible Division/Office: Finance and Business Operations
Responsible Officer: President
Revision History: September 1998; December 2004; June 2006;
December 2008; June 2010; June 2012;
December 2014; June 2019
Board Committee: Finance and Facilities
Effective Date: June 6, 2019
Next Review: 2024

- (A) Policy statement. This policy ensures sufficient liquidity to meet the university's cash flow needs, and further ensures compliance with the Ohio revised code and all other applicable laws and regulations, while optimizing opportunities for growth in invested assets in a responsible and prudent manner. The president and the vice president for finance and business operations, or designee, is authorized to invest university funds in compliance with this policy, provisions of section 3345.05 of the revised code and all other applicable laws and regulations.
- (1) For the purpose of this policy on the investment of the university's non-endowment and endowment funds (the "policy"), the non-endowment and endowment portfolios shall include:
- (a) All tuition and mandatory fees, registration, non-resident tuition fees, academic fees for the support of on- and off-campus instruction, laboratory and course fees when so assessed and collected, all other fees, deposits, charges, receipts, and income from all or part of the students, all subsidy or other payments from state appropriations, and all other fees, deposits, charges, receipts, and income received. These funds shall be held and administered by the board of trustees.
- (b) Notwithstanding any provision of the revised code to the contrary, the title to investments made by the board of trustees with funds derived from revenues described above shall not be vested in the state but shall be held in trust by

the board. Such investments shall be made pursuant to this investment policy adopted by the board in public session. Such investments shall be made with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

- (c) It is the intention of the board of trustees that actions taken pursuant to this policy shall be in compliance with all applicable laws as they may be amended from time to time. No university representative, employee, or agent shall take any action prohibited by or fail to take any action required by all applicable laws in carrying out this policy.
- (d) Members of the board of trustees will annually provide to the chair of the board of trustees a statement disclosing the nature, if at all, of any relationship with the financial institutions involved with the university's non-endowment and endowment funds. Any member having a relationship that creates a conflict prohibited by the ethics laws with any investment entity will withdraw from participating in the selection of, or authorizing the contracts of, those investment managers and/or consultants.
- (e) External investment managers, consultants and advisors retained by the university shall immediately notify the chair of the investment subcommittee and the vice president for finance and business operations, or designee, of any potential conflicts of interest which may develop from time to time. In any such situation, the external investment manager, consultant and/or advisor shall identify the nature of the conflict of interest and its potential impact, if any, on the university.
- (f) The university's non-endowment portfolio will remain sufficiently liquid to enable the university to meet all operating requirements. Portfolio liquidity is defined as the maturity or ability to sell a security on short notice near the purchase price of the security. To help retain the desired liquidity, no security shall be purchased that is likely to

have few market makers or poor market bids. Additionally, liquidity shall be assured by keeping an adequate amount of short-term investments to accommodate the cash needs of the university.

- (g) The university's non-endowment and endowment portfolios shall be structured with the objective of attaining the highest possible total return for the investment portfolio while adhering to a prudent level of risk.
- (2) Specific responsibilities of the investment subcommittee of the finance and facilities committee of the board of trustees (hereafter referred to as the "subcommittee") in the investment process include:
- (a) The application of a total return philosophy of asset management;
 - (b) Developing sound and consistent investment policy guidelines;
 - (c) Setting forth an investment structure for managing the university's assets. This structure includes identification of asset classes, strategic asset allocation, and acceptable asset ranges above and below the strategic asset allocation;
 - (d) Providing guidelines that control the level of overall risk and liquidity assumed for the investment portfolio so that all assets are managed in accordance with stated objectives;
 - (e) Complying with all applicable fiduciary, prudence, due diligence requirements, and with all applicable laws, rules and regulations from various local, state, federal, and international political entities that may impact fund assets;
 - (f) Selecting and monitoring investment managers;
 - (g) Selecting an investment consulting organization;

- (h) Communicating clearly the major duties and responsibilities of those accountable for achieving investment results;
 - (i) Monitoring and evaluating results to assure that the guidelines are being adhered to and the objectives are being met;
 - (j) To control costs of administering and managing the funds;
 - (k) Taking appropriate action to discharge an investment manager for failure to perform as mutually expected at the time of selecting; and
 - (l) Undertaking such work and studies as may be necessary to keep the board of trustees of the university adequately informed as to the status of the investment of the balance sheet assets (the “assets”).
- (3) This policy shall be reviewed every five years by the subcommittee or upon the advisement of investment advisors or management. All material changes to the policy will be approved by the subcommittee and submitted to the university’s board of trustees for final approval.
- (B) UPMIFA considerations. In accordance with the state of Ohio’s adoption of the Uniform Prudent Management of Institutional Funds Act (“UPMIFA”), effective June 1, 2009, the subcommittee will take the following into consideration when making investment decisions:
- (1) General economic conditions.
 - (2) The possible effect of inflation or deflation.
 - (3) Expected tax consequences.
 - (4) The role that each investment plays within the overall portfolio.
 - (5) Expected total return from income and appreciation.
 - (6) Other resources of the institution.

- (7) Need of the institution to make distributions and preserve capital.
 - (8) Assets special relationship or special value to the charitable purpose.
- (C) Purpose. Investments shall be managed for the use and benefit of the university in a diversified portfolio that focuses, over time, on the preservation of capital, minimization of cost and risk, maintenance of required levels of liquidity in the overall portfolio to meet cash flow requirements, and compliance with state statute. The non-endowment and endowment portfolios are intended to achieve a reasonable yield balanced with a component invested for longer-term appreciation.
- (1) The purpose of this policy is to assist the university in more effectively supervising and monitoring the investment activities of its assets. This policy is designed to assist university staff and the investment subcommittee with regard to its fiduciary responsibility by:
 - (a) Defining the responsibilities of university staff, its investment managers, and its investment consultant;
 - (b) Stating in writing the university's attitudes, expectations, and goals for the investment of the assets;
 - (c) Providing a basis for reviewing investment management organizations in the selection process;
 - (d) Encouraging effective communication between the investment managers, investment consultant, the subcommittee, and Youngstown state university; and
 - (e) Setting objectives against which the performance results of the investment managers, operating within the constraints imposed by the university's policy guidelines, can be measured.
 - (2) A primary expectation for university assets is to support the university by providing current income to the university from both non-endowed and endowed funds, managed on behalf of the university by outside investment professionals, while concurrently

growing principal. The asset base is dedicated to providing a reliable source of funds for current and future enhancements at the university.

(D) Parameters.

- (1) Investment assets are to be held by a reputable custodian/trust company. Investment assets are to be held in safe-keeping in the name of the university. Evaluation, selection, and monitoring of the university's custodian will include, but not be limited to, the following factors:
 - (a) Size and scalability of the underlying financial institution;
 - (b) Delivery of competitive safe-keeping and trust services as measured by attributes such as systems functionality, statement delivery, client service, audit controls and reporting capabilities; and
 - (c) Safe-keeping and trust service pricing and fees.
- (2) The management of the non-endowment and endowment funds involves a tradeoff between two competing goals. On the one hand, the funds must preserve capital and maintain liquidity sufficient to distribute cash to fund immediate operating needs and prior spending commitments. To accommodate these objectives, the university will establish the operating and short-term pool. On the other hand, the funds must accumulate capital sufficient to support nominal growth in expenses for existing programs and to establish new quasi-endowment funds. To accommodate these objectives, the university will establish the long-term/reserve pool. The goal of the funds is to accommodate these competing needs by providing adequate short-term liquidity along with long-term capital appreciation.
- (3) The subcommittee recognizes that risk and volatility are present to some degree with all types of investments. However, high levels of risk are to be avoided at the total asset level. This is to be accomplished through diversification by asset class, style of investment manager, and sector and industry limits.

- (4) The following statements and guidelines are set forth in an effort to provide direction to each of the investment managers that manage separate accounts for the university. Managers are retained to manage separate pools of assets, and funds are allocated to such managers in order to achieve an appropriate, diversified, and balanced asset mix. The subcommittee, from time to time, may shift assets from one manager to another to maintain the appropriate mix. Additionally, the subcommittee recognizes that mutual or commingled funds used by the university may not adhere to these guidelines. However, when selecting mutual or commingled fund products, the subcommittee will refer to these guidelines as a basis to select new funds.
- (5) Evaluation, selection, and monitoring of the university's individual investment managers will include, but not be limited to, the following factors:
 - (a) Each investment manager should have clearly stated investment objectives.
 - (b) The performance (return) and volatility (risk) of each investment manager should be evaluated over time, evaluating performance in light of how closely the investment manager has adhered to its stated investment objectives.
 - (c) The depth and experience of the portfolio manager(s) should be evaluated (both with respect to the current investment portfolio he or she manages and any funds previously managed).
 - (d) The depth and financial stability of the relevant investment fund company should be considered.
 - (e) The fees and expenses charged with respect to such investment management services should be considered.
- (6) A written "Investment Guideline Statement" or prospectus clearly outlining objectives and responsibilities will be in place with each investment manager. For the non-endowment funds, the managers shall have discretion to invest assets in cash reserves as they deem

appropriate but will be expected under normal circumstances to be fully invested in their assigned asset class. A manager's performance will be evaluated against their fully invested passive benchmark and against similar portfolio results. Passive benchmarks will be used for comparative purposes which most closely approximate the investment mandate's duration, credit quality, security composition, capitalization, style, asset class, etc.

- (7) To the extent bequests are made to the university via shares of marketable equity securities, the following provisions apply:
 - (a) The policy on bequests as defined by rule 3356-5-07 of the Administrative Code will supersede all provisions within this policy.
 - (b) If the bequest is a non-endowed gift, the securities will be sold as soon as prudently possible.
 - (c) If the bequest is an endowed gift, the securities will be invested as specified by the donor and agreed to by the board of trustees.

(E) Procedures.

- (1) The vice president for finance and business operations, or designee, shall be accountable to the board of trustees for implementing this policy.
- (2) The vice president for finance and business operations, or designee, will report to the investment subcommittee at least quarterly on the status of the non-endowment and endowment portfolios.
- (3) It shall be permissible for the vice president for finance and business operations, or designee, to realize gains and losses if such an action is consistent with the university's investment goals. Losses and gains realized on the non-endowment portfolio shall be charged against current income unless otherwise approved by the investment subcommittee.
- (4) Between meetings of the board of trustees, if deemed advisable,

other investments not specifically authorized by this policy may be made if approved by the investment subcommittee. Any such actions shall be taken to the board of trustees for review at its next meeting.

- (F) Spending policy. The board has established a spending policy for certain funds. This policy reflects the tradeoffs between short-term liquidity and long-term capital appreciation needs, as described in paragraphs C and D of this policy.
- (1) Non-endowment assets. Non-endowment assets are comprised of operating and non-operating funds and include cash, cash equivalents, and investment assets.
 - (2) Operating funds comprised of cash, cash equivalents, and certain investment assets make up the university's general funds. The use of cash, cash equivalents, and investment assets in these general funds is not subject to any board-approved spending policy as the university's annual operating budget establishes parameters for the use of these funds.
 - (3) The university's remaining non-endowed investment assets are primarily in reserve for project-related funds. Spending within these funds is subject to rule 3356-3-11.1 of the Administrative Code, project-specific spending plans, and various other university operating and financial policies and procedures. If deemed necessary for university operations, university management, working with the investment consultant, has authority to raise an appropriate level of cash from non-operating investments.
 - (4) Income earned on non-endowed investment assets is primarily used to support university operations; thus, it is the policy of the board not to limit annual distributions of realized investment income. The annual operating budget establishes parameters for the use of this income, and the disposition of total annual net operating inflows over outflows requires board approval. Unrealized investment income from non-endowment assets shall always be non-spendable.
 - (5) Endowment assets. It is the policy of the board to set annual distributions each fiscal year to five per cent of the twelve-quarter

average of the market value for the preceding twelve calendar quarters. In calculating the twelve-quarter average, census dates of March thirty-first, June thirtieth, September thirtieth, and December thirty-first for the previous three years shall be used. Any distribution greater than this would require written justification and approval by the board of trustees. For all other managed funds, distributions are project-specific and, thus, are limited only to the extent needed to sustain appropriate cash flow for the expenditure cycle of the corresponding project.

YOUNGSTOWN STATE UNIVERSITY
Asset Allocation and Other Investment Guidelines
Investment of Non-Endowment University Funds
(Last Revised: November 30, 2016)

ASSET ALLOCATION GUIDELINES

The Assets of the University are to be allocated between short-term assets and long-term assets. The Asset Allocation section of the Policy is specifically intended to address short-term assets and long-term assets as two distinct asset pools of the University's balance sheet assets.

The objectives that the University has established in conjunction with a comprehensive review of the current and projected financial requirements are as follows:

1. The strict adherence to the Ohio Revised Code and the authority granted under Ohio Revised Code §3345.05. Specifically:
 - a. ORC 3345.05 (C)(1): A minimum of 25% of the average amount of the University's investment portfolio over the course of the previous fiscal year must be invested in securities of the United States government or of its agencies or instrumentalities, the treasurer of state's pooled investment program, obligations of this state or any political subdivision of this state, certificates of deposit of any national bank located in this state, written repurchase agreements with any eligible Ohio financial institution that is a member of the federal reserve system or federal home loan bank, money market funds, or bankers acceptances maturing in two hundred seventy days or less which are eligible for purchase by the federal reserve system, as a reserve.
 - b. ORC 3345.05 (C)(2): Eligible funds above those that meet the conditions described in ORC 3345.05 (C)(1) may be pooled with other institutional funds and invested in accordance with section 1715.52 of the Revised Code.

The Operating and Short-Term Pool will be comprised of cash and short-term assets required for working capital, liquidity purposes, and other short-term needs. It is understood that assets classified as short-term are to be maintained primarily in cash and cash equivalents, and may also invest partially in short term fixed income (guidelines defined within), in order to meet the daily liquidity needs of the University. The asset allocation guidelines of the Operating and Short-Term Pool are outlined in the table below.

The Long-Term / Reserves Pool are investments with a time horizon in excess of one year. It is assumed that financial needs of the University ranging from one to five years will be maintained in fixed income investments. It is further assumed that any equity or alternative investments will have a time horizon greater than five years. As shown in the

table below, short-term and intermediate-term fixed income, alternative investments, and equity are classified as long-term assets.

Based on the investment objectives and risk tolerances stated in these guidelines, the following asset allocation strategy is considered appropriate for the University's investment Assets:

Operating & Short Term Pool		Allocation	
Asset Class/Investment Strategy	Pool Target	Pool Range	Total Range
Total Cash/Operating Assets	n/a	60-100%	
Total Short-Term Fixed Income	n.a	0-40%	
			25-50%
Long Term/Reserves Pool			
Total Domestic Equity	27%	20-35%	
Total International Equity	8%	0-15%	
Total Equity	35%	25-45%	
Total Alternatives	15%	0-20%	
Total Short-Term Fixed Income	30%	25-45%	
Total Intermediate-Term Fixed Income	20%	10-30%	
Cash	0%	0-5%	
	100%		50-75%

According to the University's Policy, the operating and short term funds of the non-endowment funds are allocated to the Operating and Short-Term Pool of the asset allocation guidelines. Adequate balance of 60 to 100% of the pool will be invested in cash and cash equivalents in order to provide the University with liquidity to meet its operational needs. The Pool may also invest 0-40% in 1-3 year average maturity U.S. Government fixed income investments. The Operating and Short Term Pool should represent no less than 25% of the total market value of the Investments. Although the actual percentage will fluctuate with market conditions, levels in excess of 50% or below 25% will result in rebalancing the Investments to target levels. The Subcommittee will review the pool level allocations on a quarterly basis.

According to the University's Policy, funds with a longer time horizon are allocated to the Long-Term / Reserves Pool. This Pool will be comprised of short-term fixed income, intermediate-term fixed income, alternative investments, and equity.

Short-term fixed income should normally represent 30% of the total market value of the Pool. Although the actual percentage will fluctuate with market conditions, short-term fixed income levels in excess of 45% or below 25% will result in rebalancing the short-term fixed income component of the pool to its target level. The Subcommittee will review the short-term fixed income allocation on a quarterly basis.

Intermediate-term fixed income should normally represent 20% of the total market value of the pool. Although the actual percentage will fluctuate with market conditions, short-term fixed income levels in excess of 30% or below 10% will result in rebalancing the intermediate-term fixed income component of the pool to its fixed income target level.

The Subcommittee will review the intermediate-term fixed income allocation on a quarterly basis. Up to 10% of the fixed income investments in the Long Term Pool may be made in below investment grade debt (high yield).

The equity component should normally represent 35% of the total market value of the long-term pool. Although the actual percentage of equities will vary with market conditions, equity levels in excess of 45% or below 25% will result in rebalancing the equity component of the fund to its equity target level. The Subcommittee will review the equity allocation on a quarterly basis.

The alternative investments component should normally represent 15% of the total market value of the long-term pool. Although the actual percentage will vary with market conditions, levels in excess of 20% will result in rebalancing the alternatives component of the fund to its target level. The Subcommittee will review the alternative allocation on a quarterly basis.

Depending upon market conditions, the percentage allocation to each asset class may fluctuate within the above policy ranges. Such strategic allocations should be reviewed and approved by the Investment Subcommittee on an ongoing basis. In the event that the allocation to a certain investment Pool and asset class falls above or below the above established ranges, the Consultant should make a recommendation to the Investment Subcommittee to rebalance the portfolio.

Investment objectives and guidelines will be established for each separate account investment manager. Mutual funds are not subject to the Guidelines set forth below. As it relates to the selection and retention decisions regarding mutual funds, the stated Guidelines should be used as references.

CASH AND CASH EQUIVALENTS GUIDELINES

Such investments should be prudently diversified and would include:

- any instrument issued by, guaranteed by, or insured by the U.S. Government, agencies, or other full faith instruments;
- commercial paper issued by domestic corporations which is rated both "P-1" and "A-1" by Moody's and Standard & Poor's, respectively;
- certificates of deposit, bankers acceptances, or other such irrevocable primary obligations from a list of approved banks provided by the managers; and
- commingled, short-term cash reserve funds managed generally in accordance with the principles set forth above.

FIXED INCOME GUIDELINES

The objective of the fixed-income portion of the Assets shall be both to provide a secure, above-average stream of income (i.e., income in excess of U.S. Treasury Bill rates) and to provide a relatively stable market value base. The following directions are intended to apply to all fixed-income investment managers:

- Within the Operating and Short Term Pool, non-cash investments are limited to U.S. government only fixed income securities with a 1 to 3 year average maturity and duration +/- 20% of the stated benchmark.
- Fixed-income investments may include U.S. and Non-U.S. issues of Government and Agency obligations, marketable corporate bonds, mortgage or asset-backed bonds, and preferred stocks with sinking funds as deemed prudent by the investment managers.
- Fixed-income investments are to be prudently diversified by security type, with an emphasis toward avoiding concentrated positions in any one fixed income sector or security type.

Fixed-income portfolio maturity, as measured by portfolio duration, should be in the range of 80% to 120% of the applicable benchmark.

- Below investment grade fixed income investments are permissible up to 10% of the total fixed income allocation; however, the total portfolio will seek an average weighted credit quality of "AA" or better by Standard & Poor's.
- No more than 5% of the fixed income investments, at market, shall be invested in securities of any one issuer, except Government and Agency obligations, without the Subcommittee's prior approval.
- Cash equivalent investments (maturities less than one year) are permitted, up to 10% of the total market value of the account, when the managers' investment policies discourage longer-term commitments. However, the Subcommittee must be consulted in the event that the manager chooses to increase its cash equivalent position beyond 10% of the assets under its supervision.
- Investment assets allocated to fixed income investment management firms and institutions shall be properly diversified so as to avoid over concentration with any one investment manager or institution.

EQUITY GUIDELINES

The objective of the equity portion of the Assets shall be to provide for potential growth of principal with a long term time horizon. The use of both passively managed equity index strategies and actively managed separate accounts and comingle funds is permitted. The following acceptable sub asset classes will serve as a guideline for equity investments:

- A. Large Cap Domestic - common stocks or equivalents listed on an established stock market (e.g., NYSE, AMEX, NASDAQ) and readily marketable with market capitalization generally exceeding \$5 billion. Non-marketable securities may not be purchased or held without prior approval from the Subcommittee. As used herein, “generally exceeding \$5 billion” means that greater than 67% of the value of the portfolio is invested in securities when the market capitalization of which exceeds \$5 billion.
- B. Small/Mid Cap Domestic - common stocks or equivalents listed on an established stock market (e.g., NYSE, AMEX, NASDAQ) and readily marketable with market capitalization generally exceeding \$500 million. Non-marketable securities may not be purchased or held without prior approval from the Subcommittee. As used herein, “generally exceeding \$500 million” means that greater than 67% of the value of the portfolio is invested in securities when the market capitalization of which exceeds \$500 million.
- C. International - common stocks or equivalents listed on an established stock market (e.g., NYSE, AMEX, NASDAQ, FTSE, NIKKEI, DAX) and readily marketable with market capitalization generally exceeding \$1 billion. Non-marketable securities may not be purchased or held without prior approval from the Subcommittee. As used herein, “generally exceeding \$1 billion” means that greater than 50% of the value of the portfolio is invested in securities when the market capitalization of which exceeds \$1 billion.

Equity Diversification

Each investment manager should diversify the portfolio in an attempt to minimize the impact of substantial losses in any specific industry or issue. Therefore, each equity account:

- May not invest more than approximately 5% of the account valued at cost in a given issuer
- May not invest more than approximately 10% of the account valued at market in a given issuer

- Large Cap, Mid Cap and Small Cap Domestic - Shall be broadly diversified by industry or sector groups and not represent over concentration relative to the mandate's relevant benchmark. Additionally, domestic equity managers shall limit international-domiciled securities to 10% of their portfolio value, absent Subcommittee approval.
- International – Shall be broadly diversified by county, industry or sector groups and not represent over concentration relative to the mandate's relevant benchmark; and limit emerging market exposure to 25% of total international exposure.

ALTERNATIVE INVESTMENT GUIDELINES

Alternative investments are investments that are not included in the traditional assets of cash, equities, and fixed income. Alternative investments include categories such as hedge funds, private equity, real estate, commodities, tactical asset allocation strategies, etc.

The objective of the alternative investments shall be to promote diversification and provide risk-limiting characteristics with the goal of long-term return potential and lower overall portfolio volatility.

With the assistance of its investment consultant, it is the responsibility of the Subcommittee to conduct acceptable levels of due diligence on any investment categorized as an alternative investment. The due diligence process will include obtaining proper education on the risks and rewards of the alternative asset class, as well as the underlying risks and characteristics of the alternative investment vehicle. This due diligence process must be properly documented and retained.

Investments in real estate, real assets, commodities, tactical asset allocation, equity long/shorts, and absolute return strategies are permissible to the extent that they are established within the asset allocation guidelines and are investments as part of the underlying investment strategy of a well-diversified, highly liquid mutual fund, whose shares are publicly traded on major U.S. exchanges.

Other alternative investment asset classes including but not limited to hedge funds and private strategies, such as private equity, venture capital and levered buyouts, are not permitted at this time.

PROHIBITED INVESTMENTS

The following categories of securities and strategies are not considered appropriate at the present time:

- Private Placements
- Unregistered or Restricted Stock
- Margin Trading/Short Sales

- Commodities, Commodity Contracts, Precious Metals, or Gems (excluding liquid mutual funds)
- Real Estate Property (excluding REITs)
- Guaranteed Insurance Contracts
- Securities Lending; pledging or hypothecating securities

VOTING OF PROXIES AND TRADE EXECUTION

The investment manager shall vote proxies for separately managed accounts on behalf of the University. The Investment Subcommittee will vote all mutual fund proxies.

The Subcommittee expects the purchase and sale of its securities to be made in a manner designed to receive the combination of best price and execution.

RESPONSIBILITIES OF THE INVESTMENT MANAGERS FOR SEPARATELY MANAGED ACCOUNTS

The guidelines below are applicable to all investment managers that manage money for the University on a separate account basis. However, any mutual or commingled fund retained by the University will not be expected to adhere to these responsibilities.

Adherence to Policy Guidelines

The Assets are to be managed in accordance with the Policy guidelines herein or expressed by separate written instructions when deviation is deemed prudent and desirable. Written instructions amending this Policy document must be authorized by the Subcommittee and will be communicated through the University's Vice President for Finance and Administration or the investment consultant.

Discretionary Authority

The investment managers are expected to exercise complete investment discretion within the boundaries of the restrictions outlined in these guidelines. Such discretion includes decisions to buy, hold, or sell equity or fixed-income securities (including cash equivalents) in amounts and proportions reflective of each manager's current investment strategy.

Communication

The Subcommittee encourages, and the investment managers are responsible for, frequent and open communication with the Subcommittee and the investment consultant on all significant matters pertaining to the investment of the Assets. These communications would generally be addressed to the University's Vice President for Finance and Administration or investment consultant. In this manner, the Subcommittee expects to be advised of any major changes in investment outlook, investment strategy, asset allocation, portfolio structure, market value of the Assets, and other substantive matters affecting the Assets. The Subcommittee also expects to be informed of any significant changes in ownership, organizational structure, financial condition, and/or senior personnel staffing of the investment management organizations.

All investment managers will be required to meet with the University's Investment Subcommittee at the discretion of the Subcommittee.

The Subcommittee recognizes that the Policy requires periodic re-examination and, perhaps, revision if it is to continue to serve as a working document to encourage effective investment management. Whenever an investment manager believes that the Policy should be altered, it is the responsibility of the manager to initiate written communication with the Subcommittee.

Reporting

The Subcommittee expects each investment manager to forward, on a timely basis, quarterly reports containing portfolio activity, valuations at market, and quarterly strategy updates.

Compliance with Prudence and Diversification Measures

As fiduciaries, the investment managers are expected to diversify the portfolio to minimize the risk of large losses. The managers are expected to invest the Assets with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with such aims. Furthermore, the investment managers are expected to acknowledge in writing their intentions to comply with the Policy as it currently exists or as modified by the Subcommittee from time to time.

RESPONSIBILITIES OF THE INVESTMENT CONSULTANT

The investment consultant is responsible for providing information and analysis to assist the University with the following:

- reviewing asset allocation and investment strategy on an annual basis to determine if the current strategy meets the cash flow needs of the University and is maximizing the long-term total return of the Assets;
- reviewing all separately managed accounts to ensure that each investment manager is adhering to the issued Policy guidelines;
- communicating with all investment management organizations on a quarterly basis to determine portfolio composition and to ascertain information concerning organizational change. (Each portfolio is to be reviewed for style drift through portfolio holdings and returns-based style analysis. Additionally, each portfolio is to be reviewed for prohibited investments on an ongoing basis);
- providing a quarterly performance evaluation report and assessment of the University's Assets;
- monitoring the equity holdings of the total portfolio to determine if any one holding represents a percentage weighting that exceeds 10% of the total portfolio and alerting the Subcommittee when the portfolio violates this Policy;

- reviewing asset allocation on a quarterly basis to determine if the current levels are consistent with the asset allocation guidelines stated in this document;
- monitoring the performance of each investment manager retained by the University to determine if the investment product is out-performing the appropriate benchmark over rolling 3 and 5-year time periods; and

monitoring the performance of the total portfolio to determine if the collective investment strategy is outperforming the appropriate benchmarks over rolling 3 and 5-year time periods.

EVALUATION AND REVIEW

The objective of the evaluation and review process is to monitor the progress of the Assets in achieving the overall investment objectives. Performance will be measured and reviewed periodically by the Subcommittee and their consultants. Particular attention will be directed toward:

- determining whether the total funds are achieving their stated objectives;
- determining whether the investment managers are performing satisfactorily in relation to both the objectives set forth in this Policy, as a primary consideration, and to other investment organizations managing similar pools of capital and the recognized market indices;
- determining whether the investment managers are adhering to the guidelines set forth herein;
- the relative total portfolio return and volatility versus established benchmarks and peers;
- any issue involving the management of the investment assets;
- asset allocation structure in light of evolving markets, strategies, and fund requirements;
- reviewing benchmarks at least annually to determine appropriateness;
- determining whether the investment managers are adhering to their stated philosophy and style; and
- determining whether the overall policies and objectives continue to be appropriate, reasonable, and achievable.

REVIEW OF INVESTMENT RESULTS

On a regular basis, but not less than once annually, the Subcommittee will review actual progress of the funds versus the investment environment. The regular review will include:

- absolute market and total portfolio returns;
- relative total portfolio return and volatility versus established benchmarks and peers;
- asset allocation structure in light of evolving markets, strategies, and fund requirements;
- adherence to guidelines;
- individual manager performance versus established benchmarks and peers;
- the continuing appropriateness of this Policy; and
- any issue involving the management of the funds' assets.

The performance of each individual investment manager will be reviewed on a quarterly basis with appropriate benchmarks as agreed upon from time to time by the Investment Subcommittee.

Total Fund, Pool level, and asset class returns will be measured as follows:

Total Fund: Weighted average benchmark based on the asset allocation targets identified with these guidelines using the below referenced market indices.

Pool level: Weighted average benchmark based on the asset allocation targets identified with these guidelines using the below referenced market indices.

<u>Asset Class</u>	<u>Benchmark</u>
Operating / Short Term Pool	
Cash	91 Day T-Bill
Short Term Fixed Income	Barclay's Capital 1-3 Year Government Index
Long Term / Reserves Pool	
Domestic Equity	Russell 3000 Index
International Equity	MSCI EAFE Index
Intermediate Fixed Income	Barclay's Capital Intermediate Govt. / Credit Index
Short Term Fixed Income	Barclay's Capital 1-5 Year Govt. / Credit Index and Merrill Lynch 1-3 Year Govt./ Credit Index
Alternative Investments	CPI + 3% HFRI Fund-of-Funds Index HFRI Equity Hedge Index FTSE NAREIT Developed Index