YOUNGSTOWN STATE UNIVERSITY

BOARD OF TRUSTEES
INVESTMENT SUBCOMMITTEE

Wednesday, December 4, 2019
1:30 p.m. or immediately following previous meeting

Kilcawley Center
President's Suites

AGENDA

A. **Disposition of Minutes for Meeting Held September 4, 2019**

B. **Old Business**

C. **Committee Item**

1. **Discussion Item**

Tab C.1.a. a. **December 4, 2019 Quarterly Portfolio Asset Allocation and Investment Performance Review**
Sarah Parker and John Colla, will report.

2. **Action Item**

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

D. **New Business**

E. **Adjournment**

December 4, 2019

YOUNGSTOWN STATE UNIVERSITY

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CONTENTS

2019 OVERSIGHT DASHBOARD

		1Q	2Q	3Q	4Q	COMMENTS:
STRATEGIC / ADMINISTRATIVE	Investment Policy Review		✓			
	Strategic Asset Allocation Review		✓			
	Peer Review		✓			
	2020 Oversight Dashboard				✓	
	STAR Ohio/Plus Annual Review			✓		**Annual Review was completed in Q3**
	Financial Modeling					
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:	09/04/2019

MEETING SCHEDULE

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

DRAFT 2020 OVERSIGHT DASHBOARD

		1Q	2Q	3Q	4Q	COMMENTS:
STRATEGIC / ADMINISTRATIVE	Investment Policy Review		☐			
	Strategic Asset Allocation Review		☐			
	Peer Review		☐			
	2021 Oversight Dashboard				☐	
	STAR Ohio/Plus Annual Review			☐		
	Financial Modeling					
PORTFOLIO	Fixed Income Review	☐				
	Alternative Investments Review			☐		
	Domestic Equity Review				☐	
	International Equity Review				☐	
PERFORMANCE	Capital Markets Review	☐	☐	☐	☐	
	Quarterly Performance Review	☐	☐	☐	☐	
OTHER	Fee Review			☐		
	ORC Compliance Review			☐		
	ORC Guidelines Education		☐			
	Clearstead Firm Update	☐				

LAST REVIEWED

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

MEETING SCHEDULE

1Q:	TBD
2Q:	TBD
3Q:	TBD
4Q:	TBD

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CAPITAL MARKETS UPDATE

QUARTERLY THEMES

WHAT HAPPENED LAST QUARTER?

- The S&P 500 returned +1.7%, while the Russell 2000 (U.S. small cap) declined -2.1%
- Non-U.S. stocks trended lower despite a strong rally in September
- Central bank easing became widespread
- Low global economic growth maintained its course
- No progress on U.S. – China trade talks or a deal on Brexit

WHAT IS ON OUR MINDS?

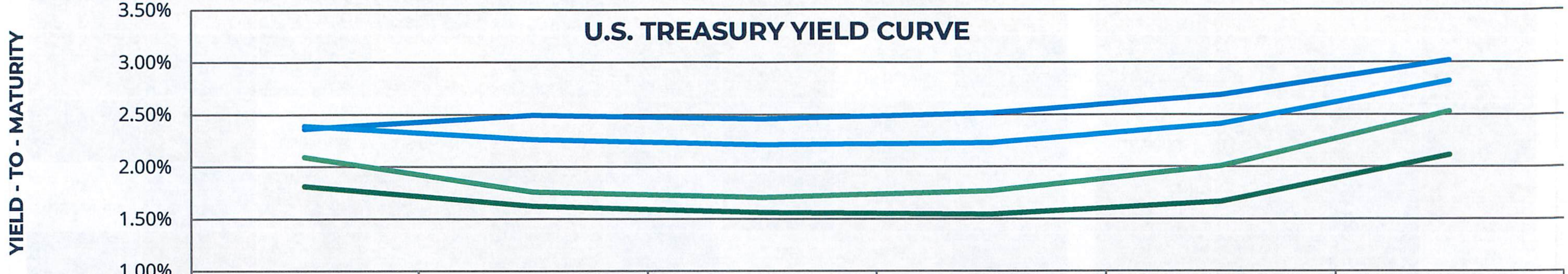
- "Global cross currents"
- Erratic investor sentiment
- The unknown consequences of negative interest rates
- Keeping portfolios defensively positioned
- Maintaining a disciplined rebalancing protocol

HISTORICAL ASSET CLASS RETURNS

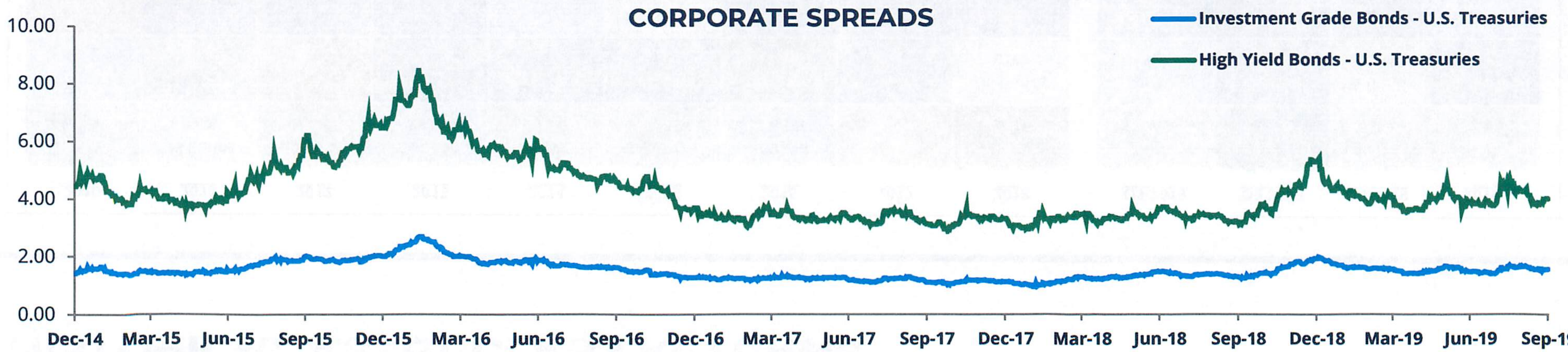
2010	2011	2012	2013	2014	2015	2016	2017	2018	Q1 2019	Q2 2019	Q3 2019	2019
REITs 27.6%	US Bonds 7.8%	REITs 20.1%	Sm/Mid 36.8%	REITs 27.2%	REITs 2.3%	Sm/Mid 17.6%	Em Mkt 37.3%	Cash 1.9%	REITs 16.7%	Large Cap 4.3%	REITs 7.2%	REITs 27.4%
Sm/Mid 26.7%	REITs 7.3%	Em Mkt 18.2%	Large Cap 32.4%	Large Cap 13.7%	Large Cap 1.4%	Hi Yld 17.5%	Dev Intl 25.0%	US Bonds 0.0%	Sm/Mid 15.8%	Dev Intl 3.7%	US Bonds 2.3%	Large Cap 20.6%
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%	Glb Bond 3.6%	Large Cap 1.7%	Sm/Mid 17.7%
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%	US Bonds 3.1%	Hi Yld 1.2%	Dev Intl 12.8%
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%	Sm/Mid 3.0%	Cash 0.6%	Hi Yld 11.5%
Dev Intl 7.8%	Cash 0.1%	Hi Yld 15.6%	REITs 3.2%	Hi Yld 2.5%	Dev Intl -0.8%	US Bonds 2.7%	REITs 9.3%	Large Cap -4.4%	Hi Yld 7.4%	Hi Yld 2.6%	Glb Bond 0.1%	US Bonds 8.5%
US Bonds 6.6%	Sm/Mid -2.5%	Hdg Fnds 4.8%	Cash 0.1%	Cash 0.0%	Sm/Mid -2.9%	Glb Bond 1.9%	Hdg Fnds 7.8%	REITs -4.4%	Hdg Fnds 5.0%	REITs 1.8%	Dev Intl -1.1%	Em Mkt 5.9%
Glb Bond 6.1%	Hdg Fnds -5.7%	US Bonds 4.2%	US Bonds -2.0%	Em Mkt -2.2%	Hi Yld -4.6%	Dev Intl 1.0%	Hi Yld 7.5%	Sm/Mid -10.0%	US Bonds 2.9%	Hdg Fnds 1.6%	Hdg Fnds -1.1%	Glb Bond 5.1%
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 0.6%	Sm/Mid -1.3%	Hdg Fnds 5.0%
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%	Em Mkt 0.6%	Em Mkt -4.3%	Cash 1.8%

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 9/30/2019.
Source: Zephyr Associates.

TREASURY YIELD CURVE & CORPORATE SPREADS



	3M	2Y	3Y	5Y	10Y	30Y
12/31/2018	2.36%	2.49%	2.46%	2.51%	2.69%	3.02%
3/31/2019	2.39%	2.26%	2.21%	2.23%	2.41%	2.82%
6/30/2019	2.09%	1.76%	1.71%	1.77%	2.01%	2.53%
9/30/2019	1.81%	1.62%	1.56%	1.55%	1.67%	2.11%



Source: Bloomberg.
Data as of 9/30/2019.
Past performance is no guarantee of future results.

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NON-ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION REVIEW

NON-ENDOWMENT PERFORMANCE REVIEW (AS OF 9/30/2019)

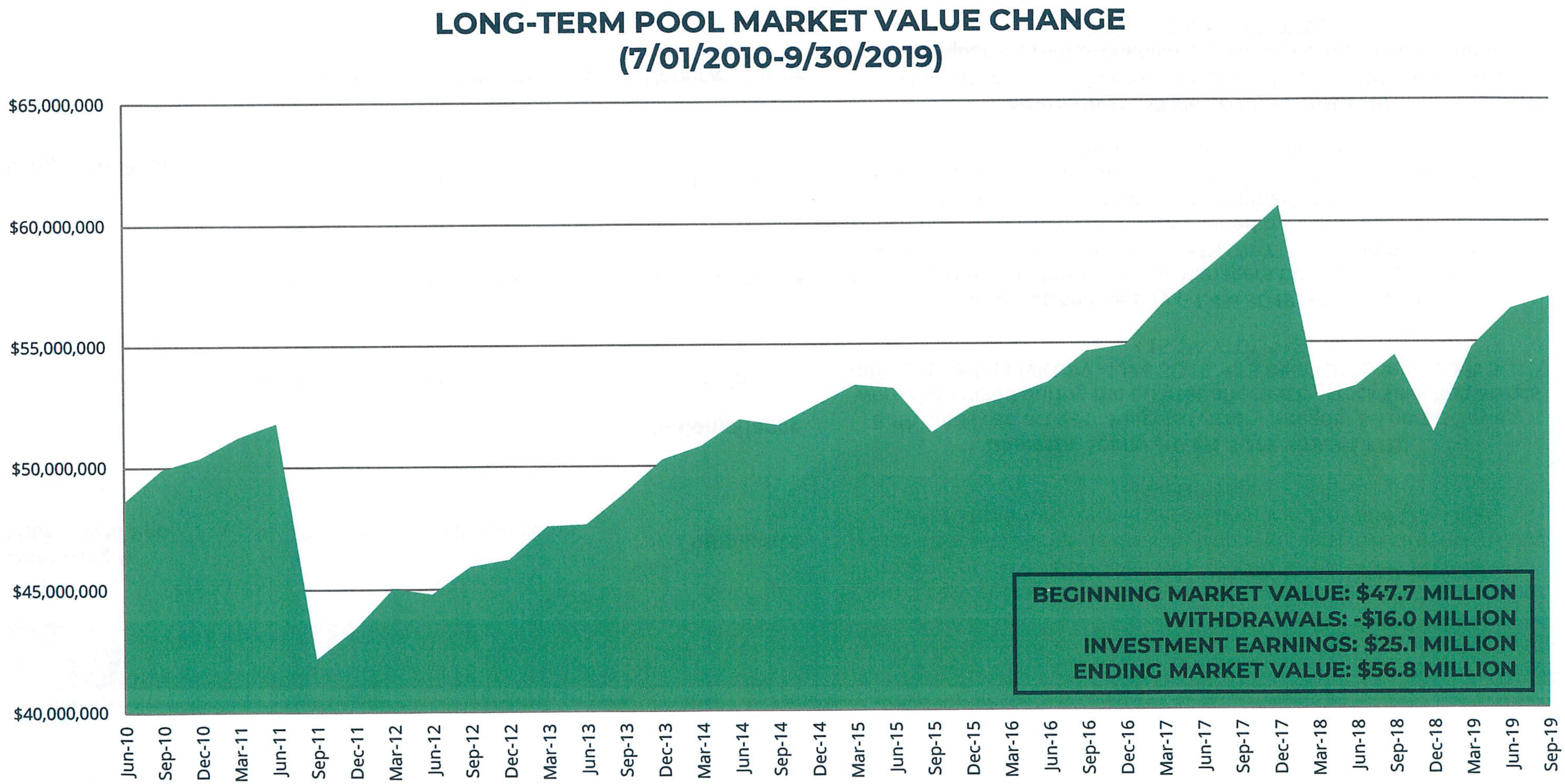
NON-ENDOWMENT ASSETS	MARKET VALUE ($MM)	QTD	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	2018	2017	2016	SINCE INCEPTION[4]
Total Non-Endowment Assets	$80.242	**0.8%**	**8.1%**	**3.9%**	**4.2%**	**4.9%**	**3.7%**	**3.8%**	**3.7%**	-1.5%	**7.8%**	**4.0%**	**3.9%**
Benchmark[1]		*0.7%*	*6.3%*	*3.7%*	*3.6%*	*3.8%*	*3.0%*	*2.9%*	*2.8%*	*-0.4%*	*5.4%*	*2.7%*	*3.1%*
Operating & Short-Term Pool	$23.402	**0.7%**	1.9%	2.5%	1.9%	1.5%	1.0%	0.7%	-	1.7%	0.7%	0.3%	0.6%
Benchmark[2]		*0.6%*	*1.9%*	*2.5%*	*2.0%*	*1.5%*	*1.0%*	*0.7%*	-	*1.9%*	*0.8%*	*0.4%*	*0.6%*
Long-Term Pool	$56.840	**0.9%**	**10.9%**	4.4%	4.8%	**5.9%**	**4.7%**	**5.1%**	-	-3.4%	**10.5%**	**4.9%**	**5.1%**
Benchmark[3]		*0.8%*	*10.1%*	*4.5%*	*4.9%*	*5.7%*	*4.6%*	*4.7%*	-	*-2.4%*	*9.3%*	*4.7%*	*4.6%*

OPERATING & SHORT-TERM POOL: INVESTMENT YIELDS

JPMorgan Money Market: 1.61% (last quarter: 2.03%)
STAR Ohio: 2.03% (last quarter: 2.40%)
STAR Plus[5]: 2.04% (last quarter: 2.45%)
Vanguard Short Term Federal Fund: 1.80% (last quarter: 1.90%)

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.
5) STAR Plus yield depicted above is for the first $2.5 million invested in the fund, with any assets over $2.5 million earning a reduced rate.

ATTRIBUTION OF MARKET VALUE CHANGE: LONG-TERM POOL



PERFORMANCE & ASSET ALLOCATION REVIEW

NON-ENDOWMENT ASSET POOL	CURRENT ASSET ALLOCATION	POLICY COMPLIANCE?	INVESTMENT MANAGER COMMENTARY
Operating & Short-Term Pool	• 95% Cash • 5% Short-Term Fixed Income	**In Compliance**	Cash & cash equivalent investments with one short-term fixed income holding; modest return over time (+0.7% 3Q19, +1.9% YTD); lower return forecasts alongside declining interest rates; investments include Vanguard Short-Term Federal Fund, Star Plus and Star Ohio investments.
Long-Term Pool		**In Compliance**	
	• Domestic Equity 27%	In-Line	***Domestic Equity (+0.8% 3Q19, +19.9% YTD)*** Both small cap active managers (Victory Integrity & Loomis Sayles) were challenged during the quarter affected by stock selection across different sectors (Victory -1.6% 3Q19, +13.8% YTD; Loomis -5.3% 3Q19, +15.1% YTD).
	• International Equity 7%	Underweight 1%	***International Equity (-1.4% 3Q19, +14.4% YTD)*** Mixed results from international managers during the quarter; William Blair Int'l Growth returned -1.2% (+18.0% YTD), ahead of its respective benchmark as relative results were aided by sector positioning; Dodge & Cox Int'l was slightly behind its benchmark returning -1.7% for the quarter (+11.0% YTD), affected by its underweight to Japan and its exposure to emerging markets.
	• Alternatives 15%	In-Line	***Alternatives (+0.9% 3Q19, +11.0% YTD)*** The alternatives portfolio provided diversification and positive results for the quarter, with Brookfield Global Real Estate leading the way (+3.4% 3Q19, +19.0% YTD).
	• Short-Term Fixed Income 29%	Underweight 1%	
	• Int-Term Fixed Income 22%	Overweight 2%	***Fixed Income (+1.3% 3Q19, +5.9% YTD)*** All fixed income managers were in-line or outpaced respective benchmarks during the quarter, and all strategies are ahead of respective benchmarks year-to-date. Credit and greater interest rate sensitivity (duration) were additive to results in 2019.

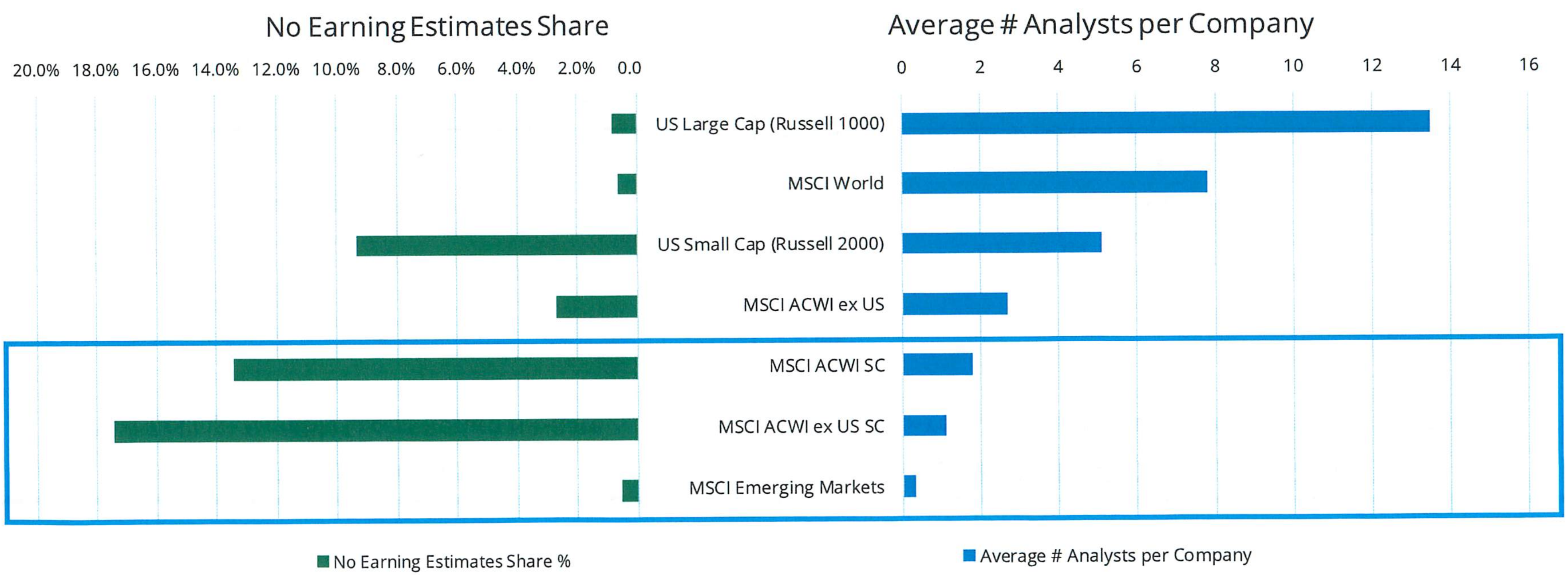
Manager details can be found in the Appendix.

ACTIVE MANAGEMENT – WHERE?

Some investment universes are better for generating sustained excess returns:

- Market efficiency is **<u>not constant</u>** across all global markets.

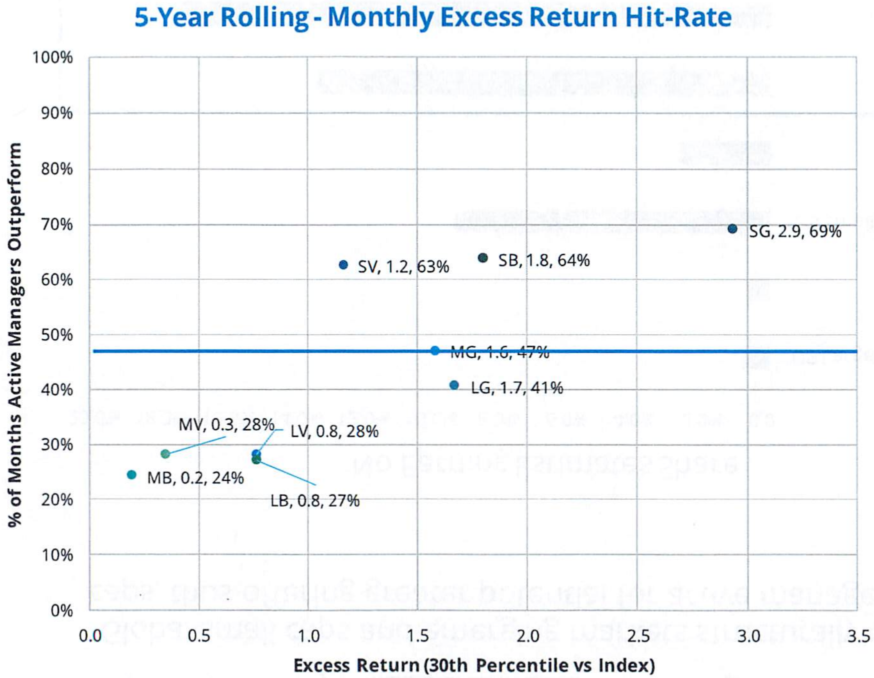
  "Global small caps and emerging markets structurally exhibited higher return dispersion than U.S. and international large caps, thus offering greater potential for active management." *Evaluating Opportunities in Active Management, MSCI Research*



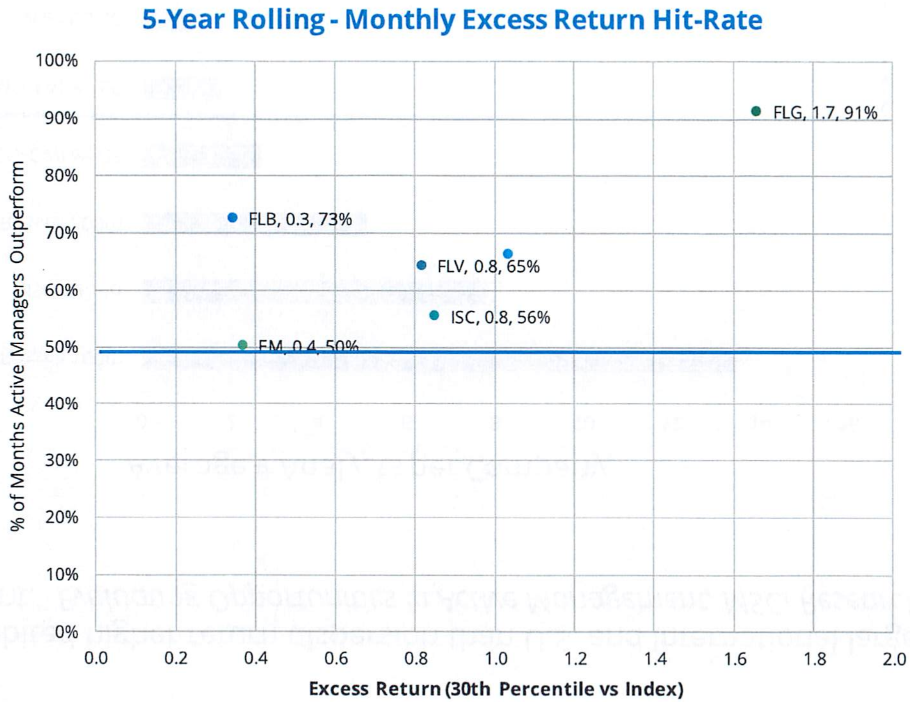
Source: Clearstead, Bloomberg 6/30/2019.

ACTIVE MANAGEMENT – PERFORMANCE

U.S. MARKETS



INTERNATIONAL MARKETS



The data shown on the X and Y axes show two things:

- **Y-Axis** = the percentage of time the median active managers rank better than the index. We are using the filtered universes of only active and institutional share class.
- **X-Axis** = the spread between the top 30th manager performance and the index. We want to understand by how much the top performers typically add excess returns.
- **Example:** The Large Growth(LG) median active manager outperformed the Russell 1000 Growth Index 41% of the time. A top tier (30th percentile) Large Growth active manager beat the index by an average of 1.7% annualized over the past 20 years.

Source: Morningstar, As of 12/31/2018

LB: Large Blend vs. S&P 500 11/01/1984-12/31/2018, LG: Large Growth vs. Russell 1000 Growth 11/01/1983-12/31/2018, LV: Large Value vs. Russell 1000 Value 01/01/1987-12/31/2018, MB: Mid Blend vs. Russell Mid Cap 10/01/1998-12/31/2012, MG: Mid Growth vs. Russell Mid Cap Growth 03/01/1992-12/31/2018, MV: Mid Value vs. Russell Mid Cap Value 04/01/2001-12/31/2018, SB: Small Blend vs. Russell 2000 02/01/1994-12/31/2018, SG: Small Growth vs. Russell 2000 Growth 05/01/1992-07/31/2016, SV: Small Value vs. Russell 2000 Value 07/01/1998-12/31/2018; excess returns of the top 30th percentile manager calculated over the period: 1/1/1999-12/31/2018
FLB: Foreign Large Blend vs MSCI World ex US 01/01/1990-12/31/2018, FLG: Foreign Large Growth vs. MSCI World Ex US Growth 01/01/1990-12/31/2018, FLV: Foreign Large Value vs. MSCI World ex US Value 01/01/1990-12/31/2018, ISC: International Small Cap vs. MSCI ACWI ex US Small Cap 01/01/1990-12/31/2012, EM: Emerging Markets vs. MSCI Emerging Markets 01/01/1990-12/31/2018, GE: Global Equity (World Large Stock) vs MSCI World Index 01/01/1990-12/31/2018; excess returns of the top 30th percentile calculated over the period: 1/1/2001-12/31/2018

ACTIVE/PASSIVE – CLEARSTEAD APPROACH

An equity portfolio should <u>use both active and passive management</u>. Active management works, but needs help:

- Clearstead's 6P Framework helps identify superior investment managers.
- Clearstead's experience helps you persevere during periods of manager underperformance.
  - "These findings show that standard performance-measurement periods, such as three, five, or even 10 years are far too short to evaluate a manager with confidence. Investors who believe they picked a good fund must show more patience than is commonly assumed." *When (and When Not) to Hire and Fire a Manager*

MORE PASSIVE APPROACH	MORE ACTIVE APPROACH
U.S. Large Cap	*U.S. Small Cap*
U.S. Mid Cap	*Non-U.S. Large Cap*
	Non-U.S. Small Cap
	Emerging Markets

CLEARSTEAD - 6P PROCESS

PARENT

The beliefs, values and behaviors that differentiate one organization from another that will produce the results that are best for our clients.

PEOPLE

The most successful firms create an environment where talented professionals can achieve results that are good for the client, the firm and themselves.

PROCESS

A disciplined, enduring investment process that can be repeated by successive generations of managers or investment teams and raises confidence in the expected returns.

PORTFOLIO

Portfolios need to be constructed, managed and reviewed in a manner that is consistent with the highest fiduciary standards.

PRINCIPLES

Incorporating the principles of responsible investing into portfolio decisions may better align the client with the broader objectives of society.

PERFORMANCE

Investment results are a reflection of a firm's ability to stated long-term objectives over long periods.

DOMESTIC & INTERNATIONAL EQUITY MANAGERS

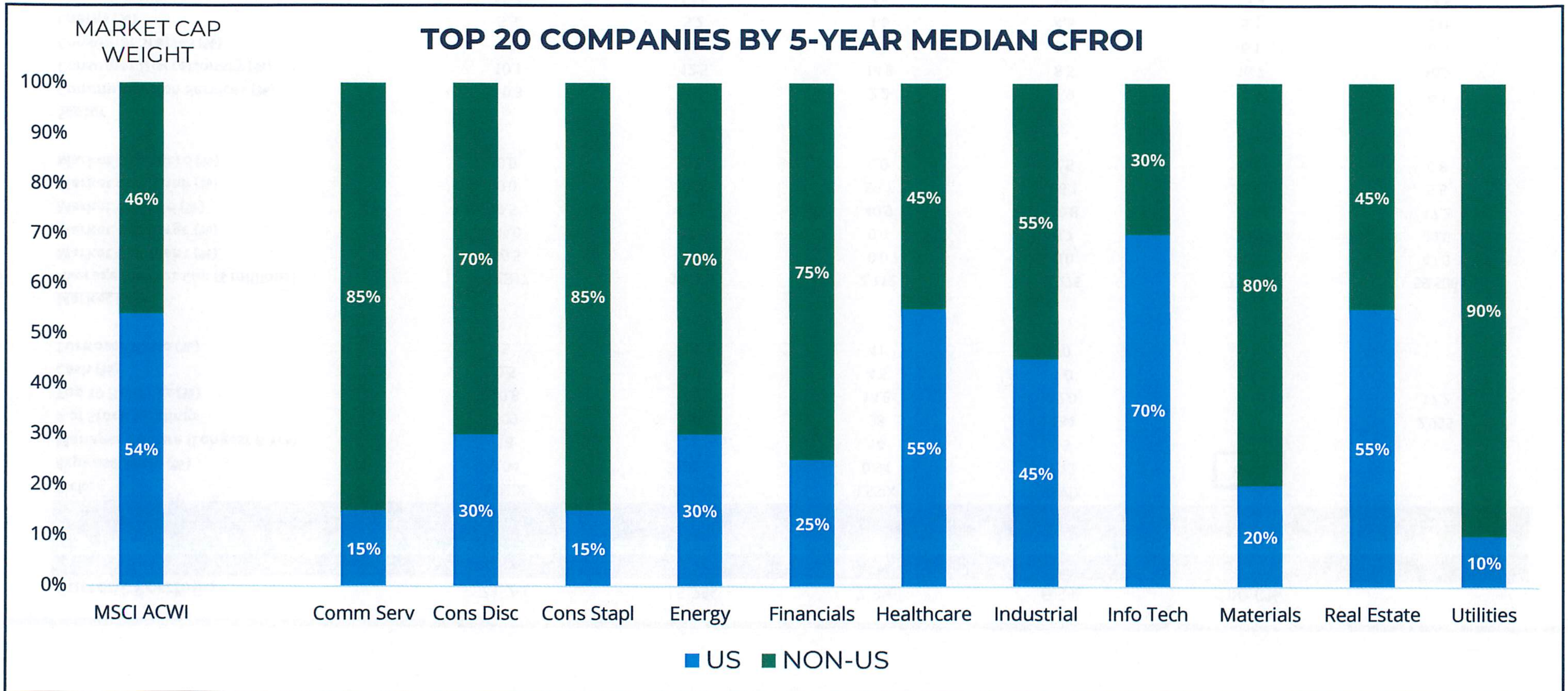
		% of Portfolio	2019 Q3 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2018 (%)	2017 (%)	2016 (%)	Inception (%)	Inception Date
			Ending September 30, 2019								Calendar Years				
	Total Domestic Equity	**19.2**	**0.8**	**19.9**	**2.3**	**9.6**	**12.7**	**10.4**	**13.0**	**--**	**-5.7**	**21.6**	**11.7**	**14.1**	**Jun-10**
	Russell 3000		*1.2*	*20.1*	*2.9*	*10.0*	*12.8*	*10.4*	*13.0*	*13.1*	*-5.2*	*21.1*	*12.7*	*14.3*	
Passive	Vanguard Institutional Index	13.6	1.7	20.5	4.2	10.8	13.4	10.8	13.2	13.2	-4.4	21.8	11.9	14.5	Jun-10
	S&P 500		*1.7*	*20.6*	*4.3*	*10.9*	*13.4*	*10.8*	*13.3*	*13.2*	*-4.4*	*21.8*	*12.0*	*14.5*	
Passive	Vanguard Mid Cap Index Inv	2.9	0.6	22.5	3.5	8.3	10.6	9.2	12.6	13.0	-9.3	19.3	11.2	12.5	Sep-10
	Vanguard Mid Cap Index Benchmark		*0.6*	*22.7*	*3.7*	*8.5*	*10.7*	*9.2*	*12.7*	*13.1*	*-9.2*	*19.3*	*11.2*	*12.6*	
Active	Loomis Sayles Sm Growth Instl	1.4	-5.3	15.1	-6.9	9.9	14.5	11.2	12.7	14.3	0.4	26.9	5.7	13.6	Sep-10
	Russell 2000 Growth		*-4.2*	*15.3*	*-9.6*	*4.6*	*9.8*	*9.1*	*11.4*	*12.2*	*-9.3*	*22.2*	*11.3*	*12.0*	
Active	Victory Integrity Small Value Y	1.2	-1.6	13.8	-9.3	-1.1	5.9	5.6	9.7	10.6	-18.6	12.4	24.4	10.1	Sep-10
	Russell 2000 Value		*-0.6*	*12.8*	*-8.2*	*0.2*	*6.5*	*7.2*	*9.4*	*10.1*	*-12.9*	*7.8*	*31.7*	*9.9*	
	Total International Equity	**5.1**	**-1.4**	**14.4**	**-2.0**	**-1.7**	**5.8**	**2.2**	**6.1**	**--**	**-17.8**	**26.6**	**2.7**	**4.3**	**Sep-10**
	MSCI EAFE		*-1.1*	*12.8*	*-1.3*	*0.7*	*6.5*	*3.3*	*6.1*	*4.9*	*-13.8*	*25.0*	*1.0*	*5.1*	
	MSCI ACWI ex USA		*-1.8*	*11.6*	*-1.2*	*0.3*	*6.3*	*2.9*	*5.0*	*4.5*	*-14.2*	*27.2*	*4.5*	*4.1*	
Active	William Blair International Growth I	2.6	-1.2	18.0	-1.3	0.8	6.4	3.8	6.1	6.6	-17.7	29.5	-2.5	6.9	Jun-12
	MSCI ACWI ex USA		*-1.8*	*11.6*	*-1.2*	*0.3*	*6.3*	*2.9*	*5.0*	*4.5*	*-14.2*	*27.2*	*4.5*	*5.9*	
Active	Dodge & Cox Internat'l Stock	2.5	-1.7	11.0	-2.7	-4.0	5.3	0.6	5.9	4.9	-18.0	23.9	8.3	4.6	Sep-10
	MSCI EAFE		*-1.1*	*12.8*	*-1.3*	*0.7*	*6.5*	*3.3*	*6.1*	*4.9*	*-13.8*	*25.0*	*1.0*	*5.1*	

DOMESTIC EQUITY: PORTFOLIO LOOK-THROUGH

Current Portfolio	71.2%	15.2%	7.3%	6.3%	100.0%	
	Vanguard Institutional Index I	Vanguard Mid Cap Index Admiral	Loomis Sayles Small Cap Growth Instl	Victory Integrity Small-Cap Value Y	Current Portfolio	Russell 3000 TR USD
Ticker	VINIX	VIMAX	LSSIX	VSVIX		
Expense Ratio (%)	0.04	0.05	0.94	1.12	0.17	
Manager Tenure (Longest # Yrs)	18	21	14	15		
# of Stock Holdings	509	368	98	134		2,985
Top 10 Holdings (%)	20.8	7.3	14.8	12.0		17.2
Cash (%)	0.5	0.8	4.5	1.0	0.9	
Turnover Ratio (%)	5	14	41	70		
<u>Market Cap</u>						
Average Market Cap ($ millions)	99,317	14,373	2,712	2,275	73,240	59,506
Market Cap Giant (%)	56.5	0.0	0.0	0.0	40.2	47.0
Market Cap Large (%)	34.0	37.4	0.0	0.7	29.9	29.6
Market Cap Mid (%)	9.5	62.6	40.9	30.8	21.2	17.2
Market Cap Small (%)	0.0	0.0	59.1	66.1	8.5	5.5
Market Cap Micro (%)	0.0	0.0	0.0	2.5	0.2	0.8
<u>Sector</u>						
Communication Services (%)	10.3	4.2	2.2	1.9	8.3	9.1
Consumer Discretionary (%)	10.1	12.5	14.8	8.5	10.7	10.2
Consumer Staples (%)	7.2	3.4	3.0	3.3	6.1	6.4
Energy (%)	5.5	5.2	1.6	4.3	5.1	5.0
Financials (%)	13.4	12.8	7.4	29.1	13.9	13.8
Healthcare (%)	15.1	10.9	26.6	5.0	14.7	14.4
Industrials (%)	9.5	12.8	17.4	13.7	10.8	10.5
Information Technology (%)	19.9	19.3	25.7	11.0	19.7	20.5
Materials (%)	2.7	5.4	1.4	4.2	3.1	3.0
Real Estate (%)	3.0	7.3	0.0	11.0	4.0	3.9
Utilities (%)	3.2	6.2	0.0	7.9	3.7	3.2

WHY INTERNATIONAL EQUITY?
ACCESS HIGHLY PROFITABLE FIRMS OUTSIDE THE U.S.

Examining the 20 most profitable companies in each sector globally reveals that the majority are located outside the U.S.



MSCI ACWI Index weight as of 12/31/2018. Top 20 Company data based on companies with market cap >$1bn as of 10/01/2017. Profitability is based on 5-year median CFROI.
Source: Holt, Harding Loevner; Clearstead

INTERNATIONAL EQUITY: PORTFOLIO LOOK-THROUGH

Current Portfolio	51.0%	49.0%	100.0%	
	William Blair International Growth I	Dodge & Cox International Stock	Current Portfolio	MSCI ACWI Ex USA NR USD
Ticker	BIGIX	DODFX		
Expense Ratio (%)	1.14	0.63	0.89	
Manager Tenure (Longest # Yrs)	6	18		
# of Stock Holdings	189	93		2,137
Top 10 Holdings (%)	16.1	28.2		9.8
Cash (%)	0.6	0.6	0.6	
Turnover Ratio (%)	82	17		
Market Cap				
Average Market Cap ($ millions)	27,692	42,244	34,823	33,588
Sector				
Communication Services (%)	5.5	11.6	8.5	7.0
Consumer Discretionary (%)	11.3	6.9	9.2	11.2
Consumer Staples (%)	8.5	0.7	4.7	9.6
Energy (%)	3.6	6.2	4.9	7.5
Financials (%)	19.9	29.1	24.4	22.1
Healthcare (%)	13.3	18.4	15.8	8.3
Industrials (%)	18.6	8.3	13.6	11.7
Information Technology (%)	12.0	10.1	11.1	8.2
Materials (%)	2.8	6.2	4.5	7.7
Real Estate (%)	2.6	0.6	1.6	3.3
Utilities (%)	1.9	1.8	1.8	3.3
Geography				
North America (%)	10.6	10.7	10.6	7.6
Latin America (%)	3.2	7.5	5.3	3.2
United Kingdom (%)	15.2	18.0	16.6	11.3
Developed Europe (%)	34.4	37.0	35.7	30.3
Emerging Europe (%)	0.4	0.8	0.6	1.6
Africa/Middle East (%)	1.6	4.1	2.8	2.3
Japan (%)	14.0	8.8	11.4	16.2
Australasia (%)	4.2	0.0	2.1	4.6
Developed Asia (%)	5.1	4.4	4.8	10.1
Emerging Asia (%)	11.4	8.6	10.0	12.9
Total Emerging Markets (%)	15.9	20.7	18.2	19.1

PORTFOLIO RECOMMENDATIONS (ACTION)

YOUNGSTOWN STATE UNIVERSITY AS OF OCTOBER 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		**$23,401,110**	**100.0%**	***$0***	**$23,401,110**	**100.0%**	**100.0%**		
Operating Assets		**$22,271,401**	**95.2%**		**$22,271,401**	**95.2%**		**60-100%**	
JPMorgan 100% U.S. Treas. MM Instl	JTSXX	$15,121,833	64.6%		$15,121,833	64.6%			
Star Plus*	-	$2,546,258	10.9%		$2,546,258	10.9%			
Star Ohio*	-	$4,603,310	19.7%		$4,603,310	19.7%			
Short-Term Assets		**$1,129,709**	**4.8%**		**$1,129,709**	**4.8%**		**0-40%**	
Vanguard Short-Term Federal Adm	VSGDX	$1,129,709	4.8%		$1,129,709	4.8%			
Total Long Term Reserves Pool		**$57,358,572**	**100.0%**	***$0***	**$57,358,572**	**100.0%**	**100.0%**		
Domestic Equity		**$15,775,597**	**27.5%**		**$15,525,597**	**27.1%**	**27.0%**	**20-35%**	**0.1%**
Vanguard Instl Index	VINIX	$11,222,110	19.6%	*-$500,000*	$10,722,110	18.7%			
Vanguard Mid Cap Index Adm	VIMAX	$2,399,049	4.2%		$2,399,049	4.2%			
Loomis Sayles Small Growth Instl	LSSIX	$1,153,875	2.0%	*$40,000*	$1,193,875	2.1%			
Victory Integrity Small Cap Value Y	VSVIX	$1,000,563	1.7%	*$210,000*	$1,210,563	2.1%			
International Equity		**$4,215,189**	**7.3%**		**$4,465,189**	**7.8%**	**8.0%**	**0-15%**	**-0.2%**
William Blair International Growth I	BIGIX	$2,147,129	3.7%	*$100,000*	$2,247,129	3.9%			
Dodge & Cox International Stock	DODFX	$2,068,060	3.6%	*$150,000*	$2,218,060	3.9%			
Total Equity		**$19,990,786**	**34.9%**		**$19,990,786**	**34.9%**	**35.0%**	**25-45%**	**-0.1%**
Alternatives		**$8,602,019**	**15.0%**		**$8,602,019**	**15.0%**	**15.0%**	**0-20%**	**0.0%**
JPMorgan Strategic Income Opps Fd	JSOSX	$2,146,817	3.7%		$2,146,817	3.7%			
Wells Fargo Adv Absolute Return I	WABIX	$2,182,256	3.8%		$2,182,256	3.8%			
Diamond Hill Long-Short Y	DIAYX	$2,386,873	4.2%		$2,386,873	4.2%			
Brookfield Global Real Estate	BLRIX	$1,886,073	3.3%		$1,886,073	3.3%			
Fixed Income		**$28,765,710**	**50.2%**		**$28,765,710**	**50.2%**	**50.0%**	**35-75%**	**0.2%**
YSU Short Term Bond		$11,700,783	20.4%		$11,700,783	20.4%			
Lord Abbett Short Duration	LLDYX	$2,689,225	4.7%		$2,689,225	4.7%			
DFA Five-Year Global	DFGBX	$1,933,586	3.4%		$1,933,586	3.4%			
JPMorgan Core Bond Fund Sel	WOBDX	$5,497,537	9.6%		$5,497,537	9.6%			
YSU Intermediate Term Fixed		$4,278,151	7.5%		$4,278,151	7.5%			
Prudential High Yield Bond R6	PHYQX	$2,666,428	4.6%		$2,666,428	4.6%			
Cash & Cash Equivalents		**$58**	**0.0%**		**$58**	**0.0%**	**0.0%**	**0-5%**	**0.0%**
Equity Account Cash	-	$58	0.0%		$58	0.0%			
Total University Assets		**$80,759,682**			**$80,759,682**				

*As of 9/30/2019

clearstead

ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION REVIEW

ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION (AS OF 9/30/2019)

ENDOWMENT ASSETS	MARKET VALUE	ASSET ALLOCATION	COMPOSITION	QTD	YTD	1 YR	2 YR	3 YR	5 YR	2018	2017	2016	SINCE INCEPTION[2]
YSU Endowment Fund	$11.1MM	76% Equity / 24% Fixed Income & Cash	Stocks, Bonds, Mutual Funds	**2.3%**	**17.0%**	7.0%	8.0%	9.2%	7.5%	-4.8%	14.2%	**8.5%**	8.3%
			Benchmark[1]	*1.9%*	*15.8%*	*7.1%*	*8.5%*	*9.3%*	*8.0%*	*-2.3%*	*14.2%*	*8.3%*	*9.1%*
Kilcawley Center	$121,768	60% Equity / 40% Fixed Income	Mutual Fund	1.7%	15.1%	6.1%	7.9%	8.8%	4.7%	-2.7%	13.8%	4.9%	7.1%
			Benchmark[1]	*1.9%*	*15.8%*	*7.1%*	*8.5%*	*9.3%*	*8.0%*	*-2.3%*	*14.2%*	*8.3%*	*9.1%*
Alumni License Plate Account	$7,611	60% Equity / 40% Fixed Income	Mutual Fund	0.9%	14.1%	6.5%	7.8%	8.4%	7.8%	**-2.0%**	10.3%	**13.8%**	7.6%
			Benchmark[1]	*1.9%*	*15.8%*	*7.1%*	*8.5%*	*9.3%*	*8.0%*	*-2.3%*	*14.2%*	*8.3%*	*9.1%*

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

EXECUTIVE SUMMARY

	Market Value 6/30/19 ($)	Ending September 30, 2019 Market Value 9/30/19 ($)	% of Portfolio	2019 Q3 (%)	YTD (%)
Total University Assets	**69,388,069**	**80,241,710**	**100.0**	**0.8**	**8.1**
Total Policy Benchmark				*0.7*	*6.3*
Total Operating & Short Term	**13,040,280**	**23,402,164**	**29.2**	**0.7**	**1.9**
Total Operating & Short Term Benchmark				*0.6*	*1.9*
Total Long Term/ Reserves Pool	**56,347,789**	**56,839,546**	**70.8**	**0.9**	**10.9**
Total Long Term/ Reserves Fund Benchmark				*0.8*	*10.1*
Total Domestic Equity	**15,297,271**	**15,415,315**	**19.2**	**0.8**	**19.9**
Russell 3000				*1.2*	*20.1*
Total International Equity	**4,115,291**	**4,055,770**	**5.1**	**-1.4**	**14.4**
MSCI EAFE				*-1.1*	*12.8*
Total Alternatives	**8,428,506**	**8,500,903**	**10.6**	**0.9**	**11.0**
Total Alternatives Benchmark				*0.5*	*8.8*
Total Fixed Income	**28,506,664**	**28,867,501**	**36.0**	**1.3**	**5.9**
Total Fixed Income Benchmark				*0.9*	*4.5*
Total Cash & Cash Equivalents	**57**	**58**	**0.0**	**0.5**	**1.7**
ICE BofAML 91 Days T-Bills TR				*0.6*	*1.8*

- Total Policy Benchmark = 45% ICE BofAML 91 Days T-Bills TR / 17% ICE BofAML 1-3 Yrs US Corp & Govt TR / 11% BBgBarc US Govt/Credit Int TR / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE
- Total Operating & Short Term Benchmark = 95% ICE BofAML 91 Days T-Bills TR / 5% BBgBarc US Govt 1-3 Yr TR
- Total Long Term/ Reserves Fund Benchmark = 27% Russell 3000 / 8% MSCI EAFE / 15% Total Alternatives Benchmark / 30% ICE BofAML 1-3 Yrs US Corp & Govt TR / 20% BBgBarc US Govt/Credit Int TR
- Total Alternatives Benchmark = 25% FTSE NAREIT Developed TR USD / 75% HFRI Fund of Funds Composite Index
- Total Fixed Income Benchmark = 64% ICE BofAML 1-3 Yrs US Corp & Govt TR / 36% BBgBarc US Govt/Credit Int TR

ASSET ALLOCATION GUIDELINES COMPLIANCE

As of September 30, 2019

Total Plan Asset Allocation Policy	Range	Current
Operating & Short-Term Pool	25% - 50%	28%
Long Term/ Reserves Pool	50% - 75%	72%

Operating & Short-Term Pool	Range	Current
Operating Assets	60% - 100%	95%
Short-Term Assets	0% - 40%	5%

Long Term/ Reserves Pool	Target	Range	Current
Domestic Equity	27%	20% - 35%	27%
International Equity	8%	0% - 15%	7%
Total Equity	35%	25% - 45%	34%
Alternatives	15%	0%-20%	15%
Short-Term Fixed Income	30%	25% - 45%	29%
Intermediate Fixed Income	20%	10% - 30%	22%
Cash & Cash Equivalents	0%	0% - 5%	0%

In Line   Within Tolerance   Review

SCHEDULE OF ASSETS

	Asset Class	Market Value 6/30/19 ($)	Market Value 9/30/19 ($)	% of Total Plan	% of Pool
Total University Assets		**69,388,069**	**80,241,710**	**100.0**	**100.0**
Total Operating & Short Term		**13,040,280**	**23,402,164**	**29.2**	**100.0**
JPMorgan 100% U.S. Tr Sec MM Inst	Cash	3,798,547	15,121,833	18.8	64.6
Star Plus	Cash	2,531,495	2,546,258	3.2	10.9
Vanguard Short-Term Federal Adm	US Fixed Income Short Term	1,121,446	1,130,762	1.4	4.8
STAR Ohio		5,588,791	4,603,310	5.7	19.7
Total Long Term/ Reserves Pool		**56,347,789**	**56,839,546**	**70.8**	**100.0**
Total Domestic Equity		**15,297,271**	**15,415,315**	**19.2**	**27.1**
Vanguard Institutional Index	US Stock Large Cap Core	10,769,987	10,952,129	13.6	19.3
Vanguard Mid Cap Index Inv	US Stock Mid Cap Core	2,344,826	2,358,940	2.9	4.2
Loomis Sayles Sm Growth Instl	US Stock Small Cap Growth	1,184,874	1,122,152	1.4	2.0
Victory Integrity Small Value Y	US Stock Small Cap Value	997,584	982,095	1.2	1.7
Total International Equity		**4,115,291**	**4,055,770**	**5.1**	**7.1**
William Blair International Growth I	International	2,094,288	2,068,239	2.6	3.6
Dodge & Cox Internat'l Stock	International	2,021,004	1,987,530	2.5	3.5
Total Alternatives		**8,428,506**	**8,500,903**	**10.6**	**15.0**
JPMorgan Strategic Income Opps Sel	Absolute Return	2,139,888	2,148,690	2.7	3.8
Wells Fargo Adv Absolute Return Instl	All Assets	2,168,654	2,141,448	2.7	3.8
Diamond Hill Long-Short Y	Long/Short Equity	2,337,165	2,368,018	3.0	4.2
Brookfield Global Listed Real Estate I	Global Real Estate	1,782,800	1,842,746	2.3	3.2
Total Fixed Income		**28,506,664**	**28,867,501**	**36.0**	**50.8**
JPMorgan Core Bond	US Fixed Income Core	5,389,999	5,520,539	6.9	9.7
YSU Intermediate Term Bond	US Fixed Income Core	4,245,431	4,304,775	5.4	7.6
PGIM High Yield R6	US Fixed Income High Yield	2,633,670	2,676,159	3.3	4.7
YSU Short Term Bond	US Fixed Income Short Term	11,654,760	11,743,217	14.6	20.7
Lord Abbett Short Duration Income I	US Fixed Income Short Term	2,663,333	2,689,225	3.4	4.7
DFA Five-Yr Global Fxd-Inc I	Global Fixed Income	1,919,472	1,933,586	2.4	3.4
Total Cash & Cash Equivalents		**57**	**58**	**0.0**	**0.0**
PNC Govt MMkt	Cash	57	58	0.0	0.0

ATTRIBUTION OF MARKET VALUE

TOTAL UNIVERSITY INVESTMENTS

	2018 Q4	2019 Q1	2019 Q2	Third Quarter	One Year
Beginning Market Value	$86,793,938	$60,511,374	$83,687,856	$69,388,069	$86,793,938
Contributions	$49,622	$24,509,030	$9,281	$18,008,937	$42,576,870
Withdrawals	-$23,274,386	-$5,009,030	-$16,009,281	-$7,708,919	-$52,001,616
Net Cash Flow	-$23,224,764	$19,500,000	-$16,000,000	$10,300,018	-$9,424,746
Net Investment Change	-$3,057,800	$3,676,483	$1,700,212	$553,622	$2,872,518
Ending Market Value	$60,511,374	$83,687,856	$69,388,069	$80,241,710	$80,241,710
Net Change	-$26,282,564	$23,176,483	-$14,299,788	$10,853,641	-$6,552,228

LONG-TERM POOL

	2018 Q4	2019 Q1	2019 Q2	Third Quarter	One Year
Beginning Market Value	$54,427,514	$51,238,803	$54,765,726	$56,347,789	$54,427,514
Contributions	$7,495	$8,053	$7,745	$8,562	$31,855
Withdrawals	-$7,495	-$8,053	-$7,745	-$8,544	-$31,837
Net Cash Flow	$0	$0	$0	$18	$18
Net Investment Change	-$3,188,712	$3,526,923	$1,582,063	$491,738	$2,412,013
Ending Market Value	$51,238,803	$54,765,726	$56,347,789	$56,839,546	$56,839,546
Net Change	-$3,188,712	$3,526,923	$1,582,063	$491,757	$2,412,031

PERFORMANCE REPORT CARD

		Ending September 30, 2019								Calendar Years				
	% of Portfolio	2019 Q3 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2018 (%)	2017 (%)	2016 (%)	Inception (%)	Inception Date
Total University Assets	**100.0**	0.8	8.1	3.9	4.2	4.9	3.7	3.8	3.7	**-1.5**	7.8	4.0	3.9	**Mar-04**
Total Policy Benchmark		*0.7*	*6.3*	*3.7*	*3.6*	*3.8*	*3.0*	*2.9*	*2.8*	*-0.4*	*5.4*	*2.7*	*3.1*	
Total Operating & Short Term	**29.2**	0.7	**1.9**	**2.5**	**1.9**	**1.5**	**1.0**	**0.7**	--	**1.7**	**0.7**	**0.3**	**0.6**	**Jun-10**
Total Operating & Short Term Benchmark		*0.6*	*1.9*	*2.5*	*2.0*	*1.5*	*1.0*	*0.7*	*0.6*	*1.9*	*0.8*	*0.4*	*0.6*	
JPMorgan 100% U.S. Tr Sec MM Inst	18.8	0.5	1.6	2.1	1.8	1.3	0.8	0.6	0.4	1.7	0.7	0.2	0.5	Sep-11
ICE BofAML 91 Days T-Bills TR		*0.6*	*1.8*	*2.4*	*2.0*	*1.5*	*1.0*	*0.7*	*0.5*	*1.9*	*0.9*	*0.3*	*0.6*	
Vanguard Short-Term Federal Adm	1.4	0.8	3.7	5.1	2.5	1.7	1.7	1.3	1.7	1.4	0.8	1.2	1.4	Sep-10
BBgBarc US Govt 1-5 Yr TR		*0.8*	*3.9*	*5.7*	*2.5*	*1.6*	*1.7*	*1.3*	*1.7*	*1.5*	*0.7*	*1.0*	*1.4*	
STAR Plus	3.2	0.6	1.8	2.4	1.9	1.5	1.0	--	--	1.8	0.7	0.4	0.9	Jan-14
ICE BofAML 91 Days T-Bills TR		*0.6*	*1.8*	*2.4*	*2.0*	*1.5*	*1.0*	*0.7*	*0.5*	*1.9*	*0.9*	*0.3*	*0.9*	
STAR Ohio	5.7	0.6	1.8	2.4	--	--	--	--	--	--	--	--	2.4	Jun-18
ICE BofAML 91 Days T-Bills TR		*0.6*	*1.8*	*2.4*	*2.0*	*1.5*	*1.0*	*0.7*	*0.5*	*1.9*	*0.9*	*0.3*	*2.3*	
Total Long Term/ Reserves Pool	**70.8**	0.9	10.9	**4.4**	**4.8**	5.9	4.7	5.1	--	**-3.4**	10.5	4.9	5.1	**Jun-10**
Total Long Term/ Reserves Fund Benchmark		*0.8*	*10.1*	*4.5*	*4.9*	*5.7*	*4.6*	*4.7*	*4.6*	*-2.4*	*9.3*	*4.7*	*4.6*	
Total Domestic Equity	**19.2**	**0.8**	**19.9**	**2.3**	**9.6**	**12.7**	**10.4**	**13.0**	--	**-5.7**	21.6	**11.7**	**14.1**	**Jun-10**
Russell 3000		*1.2*	*20.1*	*2.9*	*10.0*	*12.8*	*10.4*	*13.0*	*13.1*	*-5.2*	*21.1*	*12.7*	*14.3*	
Vanguard Institutional Index	13.6	1.7	20.5	4.2	10.8	13.4	10.8	13.2	13.2	-4.4	21.8	11.9	14.5	Jun-10
S&P 500		*1.7*	*20.6*	*4.3*	*10.9*	*13.4*	*10.8*	*13.3*	*13.2*	*-4.4*	*21.8*	*12.0*	*14.5*	
Vanguard Mid Cap Index Inv	2.9	0.6	22.5	3.5	8.3	10.6	9.2	12.6	13.0	-9.3	19.3	11.2	12.5	Sep-10
Vanguard Mid Cap Index Benchmark		*0.6*	*22.7*	*3.7*	*8.5*	*10.7*	*9.2*	*12.7*	*13.1*	*-9.2*	*19.3*	*11.2*	*12.6*	
Loomis Sayles Sm Growth Instl	1.4	-5.3	15.1	-6.9	9.9	14.5	11.2	12.7	14.3	0.4	26.9	5.7	13.6	Sep-10
Russell 2000 Growth		*-4.2*	*15.3*	*-9.6*	*4.6*	*9.8*	*9.1*	*11.4*	*12.2*	*-9.3*	*22.2*	*11.3*	*12.0*	
Victory Integrity Small Value Y	1.2	-1.6	13.8	-9.3	-1.1	5.9	5.6	9.7	10.6	-18.6	12.4	24.4	10.1	Sep-10
Russell 2000 Value		*-0.6*	*12.8*	*-8.2*	*0.2*	*6.5*	*7.2*	*9.4*	*10.1*	*-12.9*	*7.8*	*31.7*	*9.9*	
Total International Equity	**5.1**	**-1.4**	14.4	**-2.0**	**-1.7**	**5.8**	**2.2**	**6.1**	--	**-17.8**	26.6	2.7	**4.3**	**Sep-10**
MSCI EAFE		*-1.1*	*12.8*	*-1.3*	*0.7*	*6.5*	*3.3*	*6.1*	*4.9*	*-13.8*	*25.0*	*1.0*	*5.1*	
MSCI ACWI ex USA		*-1.8*	*11.6*	*-1.2*	*0.3*	*6.3*	*2.9*	*5.0*	*4.5*	*-14.2*	*27.2*	*4.5*	*4.1*	

PERFORMANCE REPORT CARD

	% of Portfolio	2019 Q3 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2018 (%)	2017 (%)	2016 (%)	Inception (%)	Inception Date
		Ending September 30, 2019								Calendar Years				
William Blair International Growth I	2.6	-1.2	18.0	-1.3	0.8	6.4	3.8	6.1	6.6	-17.7	29.5	-2.5	6.9	Jun-12
MSCI ACWI ex USA		-1.8	11.6	-1.2	0.3	6.3	2.9	5.0	4.5	-14.2	27.2	4.5	5.9	
Dodge & Cox Internat'l Stock	2.5	-1.7	11.0	-2.7	-4.0	5.3	0.6	5.9	4.9	-18.0	23.9	8.3	4.6	Sep-10
MSCI EAFE		-1.1	12.8	-1.3	0.7	6.5	3.3	6.1	4.9	-13.8	25.0	1.0	5.1	
Total Alternatives	**10.6**	**0.9**	**11.0**	**4.7**	**3.5**	**4.1**	**--**	**--**	**--**	**-6.0**	**7.9**	**3.5**	**2.2**	**Mar-15**
Total Alternatives Benchmark		0.5	8.8	3.2	3.2	3.8	--	--	--	-4.3	8.4	1.5	2.3	
JPMorgan Strategic Income Opps Sel	2.7	0.4	3.4	2.0	2.1	2.9	2.7	2.7	3.3	0.8	3.3	9.2	2.0	Sep-18
BBgBarc US Universal TR		2.1	8.8	10.1	4.4	3.2	3.6	3.1	4.1	-0.3	4.1	3.9	10.1	
Wells Fargo Adv Absolute Return Instl	2.7	-1.3	5.7	1.1	1.2	3.5	1.8	3.3	--	-5.6	12.6	3.0	1.3	Mar-15
HFRI Fund of Funds Composite Index		-0.9	5.2	0.0	1.5	3.2	1.9	3.2	2.7	-4.0	7.8	0.5	1.5	
Diamond Hill Long-Short Y	3.0	1.3	18.0	5.7	6.3	7.1	5.5	7.8	7.2	-6.9	6.0	10.5	5.5	Mar-15
HFRX Equity Hedge Index		1.8	7.9	-1.4	0.2	2.7	1.0	2.6	1.0	-9.4	10.0	0.1	0.6	
Brookfield Global Listed Real Estate I	2.3	3.4	19.0	11.5	6.6	4.5	6.4	8.1	--	-8.1	10.1	6.3	5.9	Jul-17
FTSE NAREIT Developed TR USD		4.6	19.8	13.0	8.2	5.6	6.8	7.2	8.6	-5.6	10.4	4.1	7.5	
Total Fixed Income	**36.0**	**1.3**	**5.9**	**6.7**	**3.4**	**2.6**	**2.4**	**2.0**	**--**	**0.9**	**2.4**	**1.6**	**2.4**	**Jun-10**
Total Fixed Income Benchmark		0.9	4.5	5.9	2.8	2.0	2.0	1.7	2.1	1.4	1.3	1.6	2.0	
JPMorgan Core Bond	6.9	2.5	8.6	10.4	4.6	3.1	3.4	2.7	3.9	0.2	3.8	2.3	4.1	Aug-17
BBgBarc US Aggregate TR		2.3	8.5	10.3	4.4	2.9	3.4	2.7	3.7	0.0	3.5	2.6	4.0	
YSU Intermediate Term Bond	5.4	1.4	6.7	8.2	3.6	2.5	2.6	2.2	3.1	0.8	2.4	2.0	3.8	Mar-04
BBgBarc US Govt/Credit Int TR		1.4	6.4	8.2	3.5	2.4	2.7	2.1	3.0	0.9	2.1	2.1	3.5	
PGIM High Yield R6	3.3	1.6	12.8	8.1	5.8	6.8	6.1	6.3	--	-1.2	7.8	15.3	6.9	Dec-16
BBgBarc US High Yield TR		1.3	11.4	6.4	4.7	6.1	5.4	5.9	7.9	-2.1	7.5	17.1	6.0	
YSU Short Term Bond	14.6	0.8	3.7	4.9	2.6	2.0	1.7	1.4	1.6	1.6	1.1	1.1	2.5	Mar-04
ICE BofAML 1-3 Yrs US Corp & Govt TR		0.7	3.5	4.7	2.5	1.8	1.6	1.4	1.6	1.6	0.9	1.3	2.4	
Lord Abbett Short Duration Income I	3.4	1.0	4.7	5.3	3.2	3.0	2.7	2.6	3.6	1.4	2.7	4.0	4.2	Mar-18
ICE BofAML 1-3 Yrs US Corp & Govt TR		0.7	3.5	4.7	2.5	1.8	1.6	1.4	1.6	1.6	0.9	1.3	3.5	

PERFORMANCE REPORT CARD

	% of Portfolio	2019 Q3 (%)	YTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	2018 (%)	2017 (%)	2016 (%)	Inception (%)	Inception Date
		Ending September 30, 2019								Calendar Years				
DFA Five-Yr Global Fxd-Inc I	2.4	0.7	3.9	5.2	2.7	1.9	2.3	1.9	2.8	1.7	2.0	1.8	2.3	Jun-13
FTSE WGBI 1-5 Yr Hdg USD		*1.0*	*3.7*	*5.3*	*2.9*	*2.1*	*2.0*	*1.8*	*1.9*	*2.1*	*1.1*	*1.5*	*1.9*	
Total Cash & Cash Equivalents	**0.0**	**0.5**	**1.7**	**2.2**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**2.0**	**Mar-18**
ICE BofAML 91 Days T-Bills TR		*0.6*	*1.8*	*2.4*	*2.0*	*1.5*	*1.0*	*0.7*	*0.5*	*1.9*	*0.9*	*0.3*	*2.2*	
PNC Govt MMkt	0.0	0.5	1.7	2.2	--	--	--	--	--	--	--	--	2.0	Mar-18
ICE BofAML 91 Days T-Bills TR		*0.6*	*1.8*	*2.4*	*2.0*	*1.5*	*1.0*	*0.7*	*0.5*	*1.9*	*0.9*	*0.3*	*2.2*	

- Total Policy Benchmark = 45% ICE BofAML 91 Days T-Bills TR / 17% ICE BofAML 1-3 Yrs US Corp & Govt TR / 11% BBgBarc US Govt/Credit Int TR / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE
- Total Operating & Short Term Benchmark = 95% ICE BofAML 91 Days T-Bills TR / 5% BBgBarc US Govt 1-3 Yr TR
- Total Long Term/ Reserves Fund Benchmark = 27% Russell 3000 / 8% MSCI EAFE / 15% Total Alternatives Benchmark / 30% ICE BofAML 1-3 Yrs US Corp & Govt TR / 20% BBgBarc US Govt/Credit Int TR
- Vanguard Mid Cap Index Benchmark = 100% CRSP US Mid Cap TR USD
- Total Alternatives Benchmark = 25% FTSE NAREIT Developed TR USD / 75% HFRI Fund of Funds Composite Index
- Total Fixed Income Benchmark = 64% ICE BofAML 1-3 Yrs US Corp & Govt TR / 36% BBgBarc US Govt/Credit Int TR

ENDOWMENT HOLDINGS

YSU ENDOWMENT (HUNTINGTON)

- Equity Mutual Funds – 11% (5-10 Mutual Funds & ETFs)
- Stocks – 65% (45-60 U.S. Large/Mid-Cap Stocks)
- Fixed Income Mutual Funds – 2% (Federated Total Return Bond)
- Bonds – 20% (10-20 Bonds, U.S. Corporate / Gov't / Asset Backed Debt)
- Cash – 2%

KILCAWLEY (PNC)

- Vanguard Balanced Index Fund (Adm) – 96%
- Cash – 4%

ALUMNI LICENSE PLATE (PNC)

- Vanguard Balanced Index Fund (Adm) – 100%

GLOBAL CROSS CURRENTS

GOOD FOR RISK ASSETS

NEGATIVE FOR RISK ASSETS

U.S. ECONOMIC PROJECTIONS

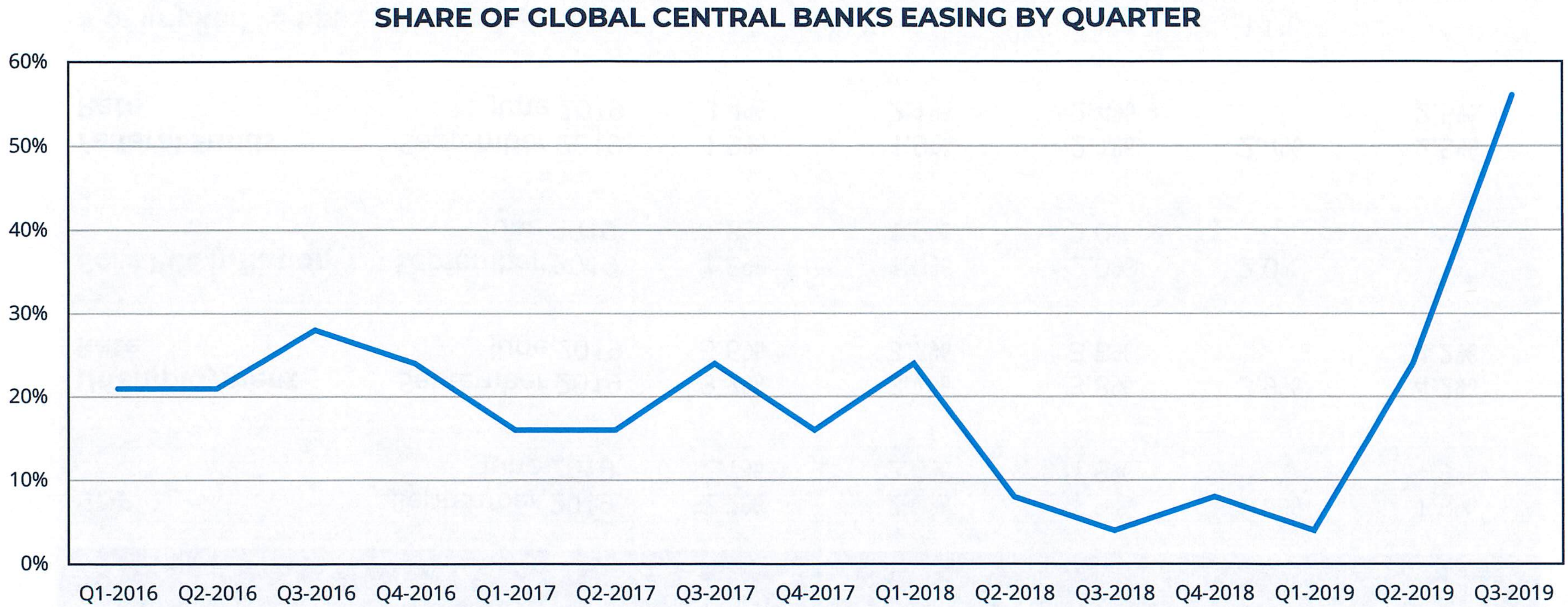
FEDERAL RESERVE BOARD MEMBERS & BANK PRESIDENTS

		2019	2020	2021	2022	LONGER RUN*
GDP	September 2019 June 2019	2.2% 2.1%	2.0% 2.0%	1.9% 1.8%	1.8%	1.9% 1.9%
Unemployment Rate	September 2019 June 2019	3.7% 3.6%	3.7% 3.7%	3.8% 3.8%	3.9%	4.2% 4.2%
Core PCE Inflation	September 2019 June 2019	1.8% 1.8%	1.9% 1.9%	2.0% 2.0%	2.0%	
Federal Funds Rate	September 2019 June 2019	1.9% 2.4%	1.9% 2.1%	2.1% 2.4%	2.4%	2.5% 2.5%
# of implied 25 bps rate changes year	September 2019 June 2019	2 0	0 1 Down	1 Up 1 Up	1 Up	

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

Source: Federal Reserve 9/18/2019.

CENTRAL BANK EASING BECAME WIDESPREAD



U.S. Fed, ECB, Peoples Bank of China, and Reserve Bank of India all cut rates in the third quarter.

- Represents about 60% of Global GDP

Additional cuts were made by EM/Frontier Central Banks such as Mexico, Brazil, Philippines, Thailand, Turkey, Russia, South Africa, South Korea, Chile, and Indonesia.

Source: UBS.

LOW GLOBAL GROWTH PERSISTS

		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	12M Trend
Global	Mfg	52.0	51.9	51.4	50.7	50.6	50.5	50.4	49.8	49.4	49.3	49.5	49.7	
	Serv	53.4	53.7	53.0	52.6	53.3	53.7	52.7	51.6	51.9	52.5	51.8	51.6	
US	Mfg	55.7	55.3	53.8	54.9	53.0	52.4	52.6	50.5	50.6	50.4	50.3	51.1	
	Serv	54.8	54.7	54.4	54.2	56.0	55.3	53.0	50.9	51.5	53.0	50.7	50.9	
Eurozone	Mfg	52.0	51.8	51.4	50.5	49.3	47.5	47.9	47.7	47.6	46.5	47.0	45.7	
	Serv	53.7	53.4	51.2	51.2	52.8	53.3	52.8	52.9	53.6	53.2	53.5	51.6	
UK	Mfg	51.1	53.3	54.3	52.8	52.1	55.1	53.1	49.4	48.0	48.0	47.4	48.3	
	Serv	52.2	50.4	51.2	50.1	51.3	48.9	50.4	51.0	50.2	51.4	50.6	49.5	
Japan	Mfg	52.9	52.2	52.6	50.3	48.9	49.2	50.2	49.8	49.3	49.4	49.3	48.9	
	Serv	52.4	52.3	51.0	51.6	52.3	52.0	51.8	51.7	51.9	51.8	53.3	52.8	
China	Mfg	50.1	50.2	49.7	48.3	49.9	50.8	50.2	50.2	49.4	49.9	50.4	51.4	
	Serv	50.8	53.8	53.9	53.6	51.1	54.4	54.5	52.7	52.0	51.6	52.1	52.1	
India	Mfg	53.1	54.0	53.2	53.9	54.3	52.6	51.8	52.7	52.1	52.5	51.4	51.4	
	Serv	52.2	53.7	53.2	52.2	52.5	52.0	51.0	50.2	49.6	53.8	52.4	48.7	
S. Korea	Mfg	51.0	48.6	49.8	48.3	47.2	48.8	50.2	48.4	47.5	47.3	49.0	48.0	

Global manufacturing continues to contract, and global trade growth has stalled.

- Recent Chinese and U.S. data on manufacturing has been noisy, but the overall trend suggests continued weakness

The services sector—previously an area of economic resiliency—has softened across several economies and could weaken further as the global economy continues to slow.

Source: Bloomberg, JPMorgan/Markit Global PMI.

U.S. - CHINA TRADE WAR: HARD TO HANDICAP

Despite a positive G20 Summit in late June, tit-for-tat tariff announcements dominated the majority of August.

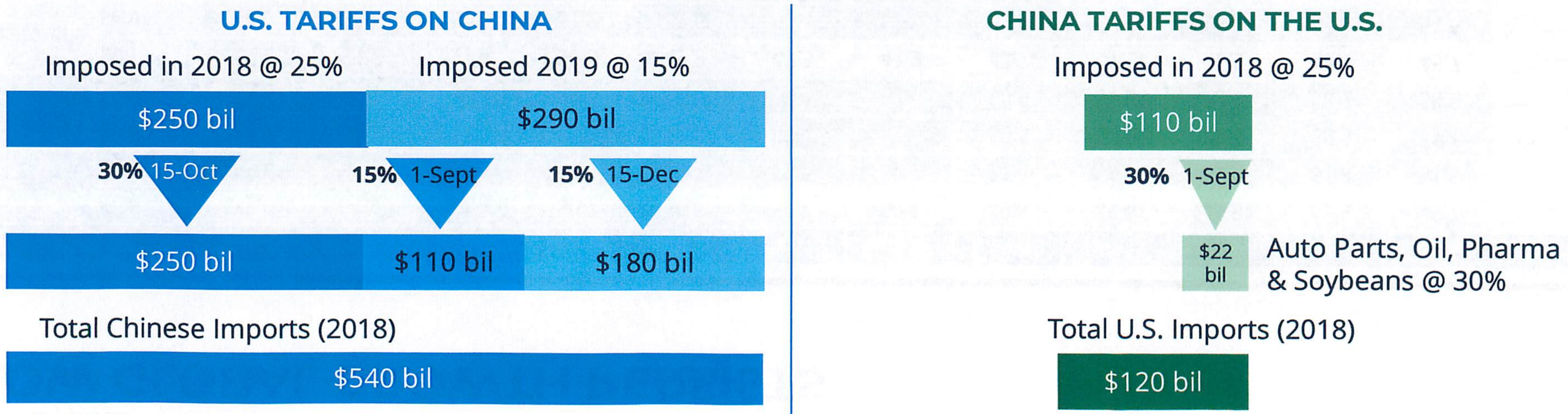
U.S. - China agreed in September to hold a new round of talks on 10/11-October.

- Some easing of rhetoric on both sides; a few good will gestures in mid-September
- Status quo could persist until 2020 U.S. elections; but much depends on Trumps political calculus/goals:
  - A win-win trade deal vs. railing against China

China does not seem incentivized to make significant near-term concessions.

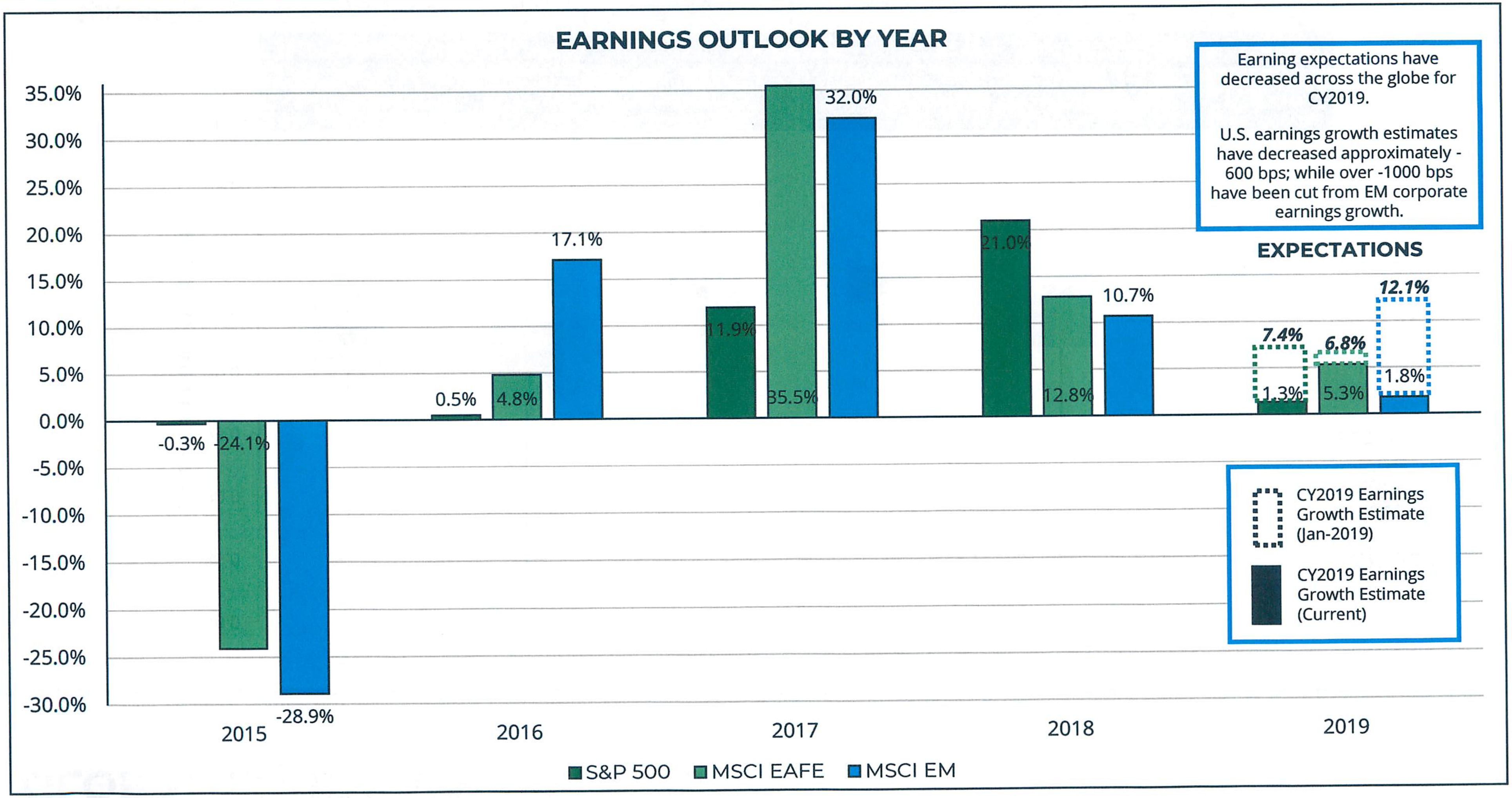
- China sees the imposition of additional tariffs as a serious impediment to positive trade relations

U.S. - CHINA TRADE WAR STATUS QUO



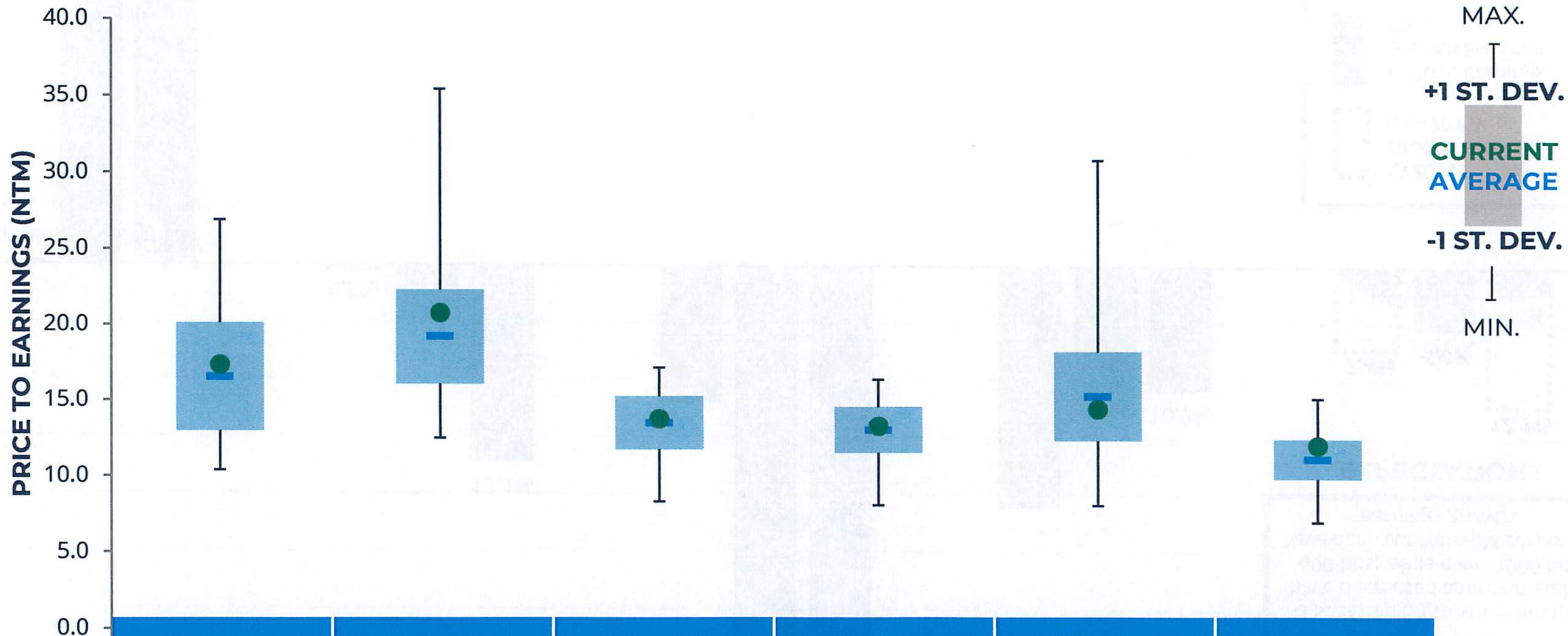
Source: Clearstead, BBC.

GLOBAL EARNINGS GROWTH



Source: Bloomberg, FactSet.
Data as of 10/1/2019,

GLOBAL EQUITY VALUATIONS



	MSCI USA	MSCI USA SMALL	MSCI EAFE	MSCI ACWI EX USA	MSCI ACWI EX USA SMALL	MSCI EM
Current P/E (NTM)	17.3	20.7	13.7	13.2	14.3	11.9
Average P/E (NTM)	16.5	19.2	13.4	13.0	15.2	11.0

Source: Bloomberg as of 9/30/2019.
Average taken over full index history. MSCI USA- 1994 - Current; MSCI USA Small- 1994 - Current; MSCI EAFE- 2003 - Current; MSCI ACWI ex USA- 2003 - Current; MSCI ACWI ex USA Small- 1994 - Current; MSCI EM- 2003 - Current.

ACTIVE MANAGEMENT – KEY SUCCESS FACTORS

Extensive academic literature finds **three factors** can improve the likelihood that active managers can systematically add value:

1) Operate in wide universes and/or in inefficient markets

- "Active/Passive Barometer" Morningstar Research, 2019
- "Opportunity: Actively Managed Investment Universes" W. Good, R. Hermansen, & T. Barneby, 1986

2) Identify managers with below average fee levels

- "Are Active Management Fees Too High" Richard M. Ennis, 2005
- "Active Management in Mostly Efficient Markets" R. Jones & R. Wermers, 2011
- "Top 20 Mutual Fund Companies by Assets", Morningstar Research, 2016

3) Utilize a low-turnover and high active-share approach with PM co-invested

- "Patient Capital Outperformance: The Investment Skill of High Active Share Managers Who Trade Infrequently" M. Cremers & A. Pareek, 2015
- "Portfolio Manager Ownership and Fund Performance " A. Khorana, H. Servaes, & L. Wedge, 2006

DOMESTIC EQUITY 101

Stock: An investment that signifies ownership in a company and represents a claim on part of a company's assets and earnings. Shares are the units that represent the size of a claim and shareholders are owners of a company.

Sector: An area of the economy in which companies share the same or related products or services. As an example, companies that produce microchips often fall into the Information Technology sector.

Market Cap: The size of a company as measured by the following formula: share price x shares outstanding. Size segments often include large cap (>≈$10B), mid cap (≈$2B - ≈$10B), and small cap (<≈$2B).

Dividend: A distribution of a portion of a company's earnings to its shareholders. Distributions often come in the form of cash or shares of stock on a periodic basis (quarterly, semiannually, etc.).

Valuation: A measure of a company's current or future worth (how "cheap" or "expensive" a company is), as determined by one or several metrics. As an example, the P/E ratio measures the price (worth) of a stock relative to its earnings.

Value (Stock): A company with a share price that seems low (less "expensive") relative to its sales and/or profits. A company that has generally proven the ability to generate consistent sales and profits on a proven business model.

Growth (Stock): A company with a share price that seems high (more "expensive") relative to its sales and/or profits. A company that generally has significant potential to increase sales and profits, but has not yet proven its ability to do so.

JPMorgan Chase & Co.

- Value Stock
- Lower Valuation
- Large Cap
- Dividend
- Financials Sector

amazon

- Growth Stock
- Higher Valuation
- Large Cap
- No Dividend
- Consumer Discretionary Sector

DOMESTIC EQUITY STRATEGY DESCRIPTIONS

INVESTMENT NAME	STRATEGY DESCRIPTION
Loomis Sayles Small Cap Growth:	Loomis Sayles is a subsidiary of Natixis Global Asset Management, a publicly traded financial services company based out of Paris, France. Loomis Sayles utilizes a fundamental, bottom-up approach to construct its portfolio. It focuses on companies with strong past earnings, as well as projected earnings, rapid growth, strong business models, and upward price momentum. The portfolio typically consists of roughly 100 stocks.
Victory Integrity Small-Cap Value:	Victory Capital Management is a publicly traded investment management company based out of Cleveland, OH. Integrity Asset Management is the Fund's subadvisor and utilizes an integrated quantitative and qualitative approach to construct its portfolio. It ranks the stocks its investable universe through quantitative screens focusing on small companies with adequate trading volume and low valuations. It then fundamentally analyzes the most attractive remaining opportunities. The portfolio typically consists of roughly 120 stocks.

INTERNATIONAL EQUITY 101

International Developed Markets: Non-U.S. countries that are developed in terms of its economy and capital markets. The country must be high GDP per capita, but this also includes openness to foreign ownership, ease of capital movement, and efficiency of market institutions.

Emerging Markets: Non-U.S. developing countries that have some characteristics of a developed market, but does not satisfy standards to be termed a developed market in terms of efficiency of market institutions, economic governance, and overall wealth levels.

Frontier Markets: A type of non-U.S. developing country which is more developed than the least developing countries, but too small or less advanced in their capital markets to be generally considered an emerging market.

Currency Risk: Commonly referred to as exchange-rate risk, arises from the change in price of one currency in relation to another. Investors or companies that have assets or business operations across national borders are exposed to currency risk that may create unpredictable profits and losses.

ADR Share: An American depositary receipt (ADR) is a negotiable certificate issued by a U.S. bank representing a specified number of shares (or one share) in a foreign stock traded on a U.S. exchange. ADRs are denominated in U.S. dollars, with the underlying security held by a U.S. financial institution overseas.

MSCI EAFE Index: One of two primary indexes for non-U.S. strategies; largely based upon the large and mid-cap companies located in continental Europe, the UK, and Japan.

MSCI ACWI ex USA Index: One of two primary indexes for non-U.S. strategies; and "all cap" world index that excludes companies based in the U.S.; the benchmark captures firms from all the major countries of the world, including some EM countries, approximately weighted by their economic size.

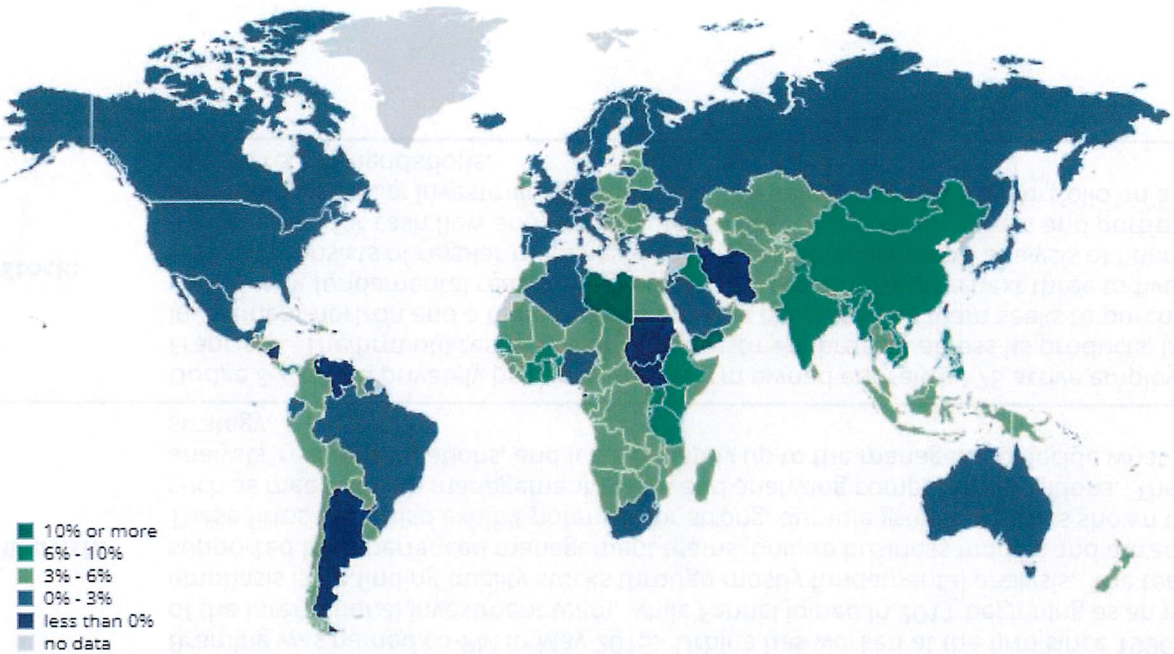
MSCI EM Index: The primary index for large and mid-cap firms located in developing/emerging countries across the globe.

INTERNATIONAL EQUITY STRATEGY DESCRIPTIONS

INVESTMENT NAME	STRATEGY DESCRIPTION
William Blair International Growth:	Co-Portfolio Managers Simon Fennel and Jeff Urbina took over managing the strategy in 2013, while Stephanie Braming was named co-PM in May 2015. Urbina has worked at the firm since 1996 and was an original member of the international investment team, while Fennel joined in 2011 beginning as an analyst. The strategy's emphasis is on finding quality stocks through mostly fundamental analysis. The team is seeking out stocks supported by experienced management teams, unique business models and attractive financial characteristics. These firms must also exhibit potential for strong, durable growth which is shown through fundamental research such as meeting with management teams and analyzing competitive positions. The entire team will debate the analysts' recommendations, and it is ultimately up to the managers to decide what stocks are the best fit for the strategy.
Dodge & Cox International Stock:	Dodge & Cox is a privately held investment firm owned entirely by 75 active employees and is based in San Francisco. The firm utilizes its bottom-up investment process across its products, implementing a long-term investment horizon and a team decision-making process. The team seeks to purchase attractively valued firms with strong fundamental reasons to justify stable growth over the next three to five years. The fundamental research consists of regular meetings with company management, analysis of financial reports with a focus on the potential for cash flow and regular interaction between the analysts and portfolio managers. The International Equity Investment Committee ultimately constructs the portfolio on a bottom-up basis based on analyst recommendations.

WHY INTERNATIONAL EQUITY? GAIN EXPOSURE TO GLOBAL GROWTH & VALUATIONS

REAL GDP GROWTH (ANNUAL PERCENT CHANGE, 2019)



	MSCI USA	MSCI USA SMALL	MSCI EAFE	MSCI ACWI EX USA	MSCI ACWI EX USA SMALL	MSCI EM
Current P/E (NTM)	17.1	21.3	13.6	12.9	14.8	11.1
Average P/E (NTM)	16.5	19.1	13.5	13.0	15.2	11.0

Source: IMF World Economic Outlook (October 2018); Bloomberg as of 12/31/2018.

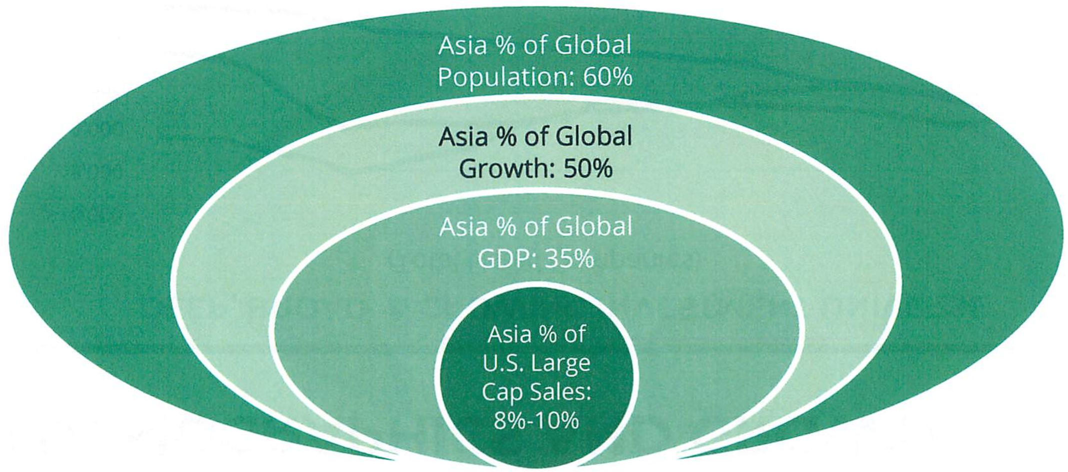
WHY INTERNATIONAL EQUITY?
U.S. FIRMS PROVIDE UNEVEN EXPOSURE NON-U.S. MARKETS

Overall, S&P 500 companies record about 45% of their sales in a non-U.S. country, but it varies considerably by industry:

SHARE OF SALES IN NON-U.S. MARKETS

NONE/LIMITED <20%	MODEST 20%-35%	SIGNIFICANT 36%-49%	MAJORITY >50%
• Real Estate • Telecom. Services	• Cons. Discretionary • Cons. Staples • Financials	• Industrials • Utilities • Healthcare	• Energy • Info Technology • Materials

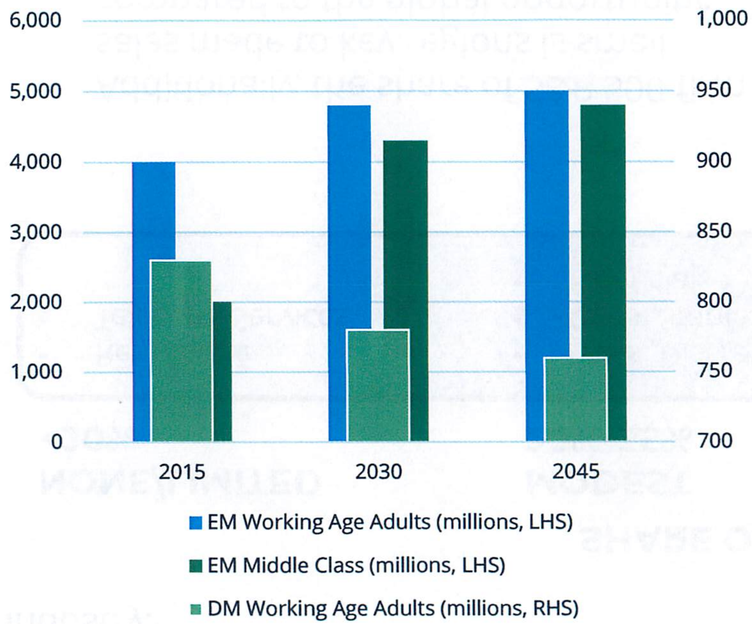
- Additionally, the share of S&P 500 firm sales made to key regions is small compared to the global opportunity:
- U.S. Large Caps have outsized sales exposure to Canada, Mexico, and Europe.



Sources: Clearstead, IMF, S&P Global Research.

WHY INTERNATIONAL EQUITY?
EMERGING MARKETS: BETTER DEMOGRAPHICS AND GROWTH

MORE WORKERS & LARGER MIDDLE-CLASS POINTS TO STRONGER GROWTH



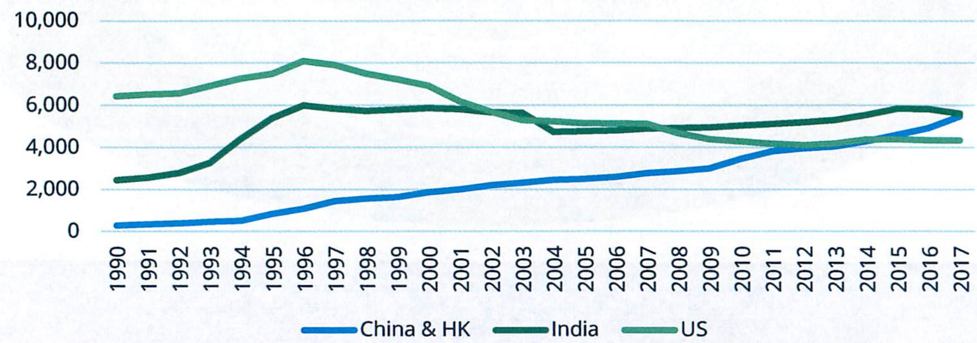
EM Urbanized Pop:	*45%*	*60%*	*70%*

EM Working Age Population CAGR (2015-2045): +0.7%
EM Middle Class Population CAGR (2015-2045): +3.0%

DM Working Age Population CAGR (2015-2045): -0.3%

DEEP, BROAD, & GROWING INVESTMENT UNIVERSE

(Total Listed Companies)



IT'S THE FUTURE:
MORE PEOPLE LIVING INSIDE THE CIRCLE THAN OUTSIDE IT

Sources: Clearstead, World Bank, UN, Wellington, Brookings

clearstead

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 stocks and large-capitalization growth stocks, respectively. The **Russell 2000 Value Index, Russell 2000 Index** and **Russell 2000 Growth Index** are indices that measure the performance of small-capitalization value stocks, small-capitalization stocks and small-capitalization growth stocks, respectively. The **Russell Midcap Value Index, Russell Midcap Index** and **Russell Midcap Growth Index** are indices that measure the performance of mid-capitalization value stocks, mid-capitalization stocks and mid-capitalization growth stocks, respectively. The **Russell 2500 Value Index, Russell 2500 Index** and **Russell 2500 Growth Index** measure the performance of small to mid-cap value stocks, small to mid-cap stocks and small to mid-cap growth stocks, respectively, commonly referred to as "smid" cap. The **Russell 3000 Value Index, Russell 3000 Index** and **Russell 3000 Growth Index** measure the performance of the 3,000 largest U.S. value stocks, 3,000 largest U.S. stocks and 3,000 largest U.S. growth stocks, respectively, based on total market capitalization.
The Wilshire 5000 Index represents the broadest index for the U.S. equity market, measuring the performance of all U.S. equity securities with readily available price data. The Wilshire Micro Cap Index is a market capitalization-weighted index comprised of all stocks in the Wilshire 5000 Index below the 2,501st rank.
The **MSCI EAFE (Europe, Australasia, Far East) Index** is designed to measure developed market equity performance, excluding the U.S. and Canada. The **MSCI Emerging Markets (EM) Index** is designed to measure global emerging market equity performance. The **MSCI World Index** is designed to measure global developed market equity performance. The **MSCI World Index Ex-U.S. Index** is designed to measure the equity market performance of developed markets and excludes the U.S. The **MSCI Europe Index** is an unmanaged index considered representative of developed European countries. The **MSCI Japan Index** is an unmanaged index considered representative of stocks of Japan. The **MSCI Pacific ex. Japan Index** is an unmanaged index considered representative of stocks of Asia Pacific countries excluding Japan.
The **U.S. 10-Year treasury Yield** is generally considered to be a barometer for long-term interest rates.
Merrill Lynch 91-day T-bill Index includes U.S. Treasury bills with a remaining maturity from 1 up to 3 months.
The Barclays Capital® (BC) U.S. Treasury Index is designed to cover public obligations of the U.S. Treasury with a remaining maturity of one year or more. The **BC Aggregate Bond Index** is an unmanaged, market value-weighted performance benchmark for investment-grade fixed-rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities with maturities of at least one year. The **BC U.S. Credit Bond Index** is designed to cover publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements; bonds must be SEC-registered to qualify. The **BC U.S. Agency Index** is designed to cover publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government. The **BC CMBS Index** is designed to mirror commercial mortgage-backed securities of investment-grade quality (Baa3/BBB-/BBB- or above) using Moody's, S&P, and Fitch respectively, with maturity of at least one year. The **BC MBS Index** covers agency mortgage-backed pass-through securities (both fixed-rate and hybrid ARMs) issued by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The **BC U.S. Municipal Bond Index** covers the U.S. dollar-denominated, long-term tax-exempt bond market with four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds. The **BC TIPS Index** is an unmanaged market index made up of U.S. Treasury Inflation Linked Index securities. The **BC U.S. Government Bond Index** is a market value-weighted index of U.S. Government fixed-rate debt issues with maturities of one year or more. The **BC ABS Index** is a market value-weighted index that covers fixed-rate asset-backed securities with average lives greater than or equal to one year and that are part of a public deal; the index covers the following collateral types: credit cards, autos, home equity loans, stranded-cost utility (rate-reduction bonds), and manufactured housing. The **BC Global Aggregate Index** is composed of three sub-indices; the U.S. Aggregate Index, Pan-European Aggregate Index, and the Asian-Pacific Aggregate Index. In aggregate the index is created to be a broad-based measure of the performance of investment grade fixed rate debt on a global scale. The **BC US Corporate Long Aa Index** is an unmanaged index representing public obligations of U.S. corporate and specified foreign debentures and secured notes with a remaining maturity of 10 years or more. **The BC U.S. Corporate High-Yield Index** measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. **The BC Intermediate Corporate Index** includes dollar-denominated debt from U.S. and non-U.S. industrial, utility, and financial institutions issuers with a duration of 1-10 years. The **BC U.S. Treasury Long Index** is an unmanaged index representing public obligations of the U.S. Treasury with a remaining maturity of one year or more. The **BC U.S. Government 10 Year Treasury Index** measures the performance of U.S. Treasury securities that have a remaining maturity of less than 10 years. The **BC BAA Corporate Index** measures the performance of the taxable Baa rated fixed-rate U.S. dollar-denominated corporate bond market. The **BC Global Treasury ex US Index** includes government bonds issued by investment-grade countries outside the United States, in local currencies, that have a remaining maturity of one year or more and are rated investment grade or higher. The **BC Emerging Market Bond Index** is an unmanaged index that total returns for external-currency-denominated debt instruments of the emerging markets. The **BC U.S. Securitized Bond Index** is a composite of asset-backed securities, collateralized mortgage-backed securities (ERISA-eligible) and fixed rate mortgage-backed securities. The **BC Quality Distribution AAA, B, and CC-D Indices** measure the respective credit qualities of U.S. corporate and specified foreign debentures and secured notes. The **BC Universal Index** represents the union of the U.S. Aggregate Index, the U.S. High Yield Corporate Index, the 144A Index, the Eurodollar Index, the Emerging Markets Index, and the non-ERISA portion of the CMBS Index. The **BC 1-3 Year Government Credit Index** is an unmanaged index considered representative of performance of short-term U.S. corporate bonds and U.S. government bonds with maturities from one to three years. The **BC Long-term Government Index** is an unmanaged index reflecting performance of the long-term government bond market. **The BC Intermediate Aggregate Index** measures the performance of intermediate-term investment grade bonds. **The BC Intermediate 1-3 Year Government/Credit Index** measures the performance of U.S. Dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one year and less than ten years.
The **Bank of America ML U.S. High Yield Index** tracks the performance of below investment grade US Dollar Denominated corporate bonds publicly issued in the US market. Qualifying bonds have at least one year remaining term to maturity, are fixed coupon schedule and minimum outstanding of $100 million.
The **HFRI Funds of Funds Index (HFRI FOF)** is an equal weighted index designed to measure the performance of hedge fund of fund managers. The more than 800 multi-strategy constituents are required to have at least $50 million in assets under management and a trading track record spanning at least 12 months. The index includes both on and offshore funds and all returns are reported in USD
The **NCREIF Property Index (NPI)** represents quarterly time series composite total rate of return measure of a very large pool of individual commercial real estate properties acquired in the private market. The index represents apartments, hotels, industrial properties, office buildings and retail properties which are at least 60% occupied and owned or controlled, at least in part by tax-exempt institutional investors or its designated agent. In addition these properties that are included must be investment grade, non-agricultural and income producing and all development projects are excluded. Constituents included in the NPI be valued at least quarterly, either internally or externally, using standard commercial real estate appraisal methodology. Each property must be independently appraised a minimum of once every three years.
The **FTSE NAREIT All REITs Index** is a market capitalization–weighted index that is designed to measure the performance of all tax–qualified Real Estate Investment Trusts (REITs) that are listed on the New York Stock Exchange, the American Stock Exchange, or the NASDAQ National Market List.
The **Dow Jones U.S. Select Real Estate Securities Index** is a float-adjusted market capitalization–weighted index of publicly traded real estate securities such as real estate investment trusts (REITs) and real estate operating companies (REOCs).
The **Cambridge PE Index** Is a representation of returns for over 70% of the total dollars raised by U.S. leveraged buyout, subordinated debt and special situation managers from 1986 to December 2007. Returns are calculated based on the pooled time weighted return and are net of all fees. These pooled means represent the end to end rate of return calculated on the aggregate of all cash flows and market values reported by the general partners of the underlying constituents in the quarterly and annual reports.
The **University of Michigan Consumer Sentiment Index** is a consumer confidence index published monthly by the University of Michigan and Thomson Reuters. The index is normalized to have a value of 100 in December 1964.
VIX - The CBOE Volatility Index (VIX) is based on the prices of eight S&P 500 index put and call options.
Gold – represented by the dollar spot price of one troy ounce
WTI Crude – West Texas Intermediate is a grade of crude oil used as a benchmark in oil pricing.
The **Affordability Index** measures of a population's ability to afford to purchase a particular item, such as a house, indexed to the population's income
The **Homeownership %** is computed by dividing the number of owner-occupied housing units by the number of occupied housing units or households.
HFRI Emerging Markets: Asia ex-Japan, Global Index, Latin America Index, Russia/Eastern Europe Index: The constituents of the HFRI Emerging Markets Indices are selected according to their Regional Investment Focus only. There is no Investment Strategy criteria for inclusion in these indices. Funds classified as Emerging Markets have a regional investment focus in one of the following geographic areas: Asia ex-Japan, Russia/Eastern Europe, Latin America, Africa or the Middle East. **HFRI EH: Energy/Basic Materials** strategies which employ investment processes designed to identify opportunities in securities in specific niche areas of the market in which the Manager maintains a level of expertise which exceeds that of a market generalist. **HFRI EH: Equity Market Neutral** strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. **HFRI EH: Quantitative Directional** strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. **HFRI EH: Short-Biased** strategies employ analytical techniques in which the investment thesis is predicated on assessment of the valuation characteristics on the underlying companies with the goal of identifying overvalued companies. **HFRI EH: Technology/Healthcare** strategies employ investment processes designed to identify opportunities in securities in specific niche areas of the market in which the Manager maintain a level of expertise which exceeds that of a market generalist in identifying opportunities in companies engaged in all development, production and application of technology, biotechnology and as related to production of pharmaceuticals and healthcare industry. **HFRI ED: Distressed Restructuring** strategies which employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. **HFRI ED: Merger Arbitrage** strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction. **HFRI ED: Private Issue/Regulation D** strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are primarily private and illiquid in nature. **HFRI Macro: Systematic Diversified** strategies have investment processes typically as function of mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. **HFRI RV: Fixed Income - Asset Backed** includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed income instrument backed physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. **HFRI RV: Fixed Income - Convertible Arbitrage** includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument. **HFRI RV: Fixed Income - Corporate** includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed income instrument. **HFRI RV: Multi-Strategies** employ an investment thesis is predicated on realization of a spread between related yield instruments in which one or multiple components of the spread contains a fixed income, derivative, equity, real estate, MLP or combination of these or other instruments. **HFRI RV: Yield Alternatives Index** strategies employ an investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread contains a derivative, equity, real estate, MLP or combination of these or other instruments. Strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager.
The **Consumer Price Index (CPI)** is an inflationary indicator that measures the change in the cost of a fixed basket of products and services, including housing, electricity, food, and transportation. The CPI is published monthly. Unless otherwise noted, the CPI figure is as of the date this report is created.
The **Credit Suisse Leveraged Loan Index** is a market value–weighted index designed to represent the investable universe of the U.S. dollar–denominated leveraged loan market.
The **Dow Jones-UBS Commodity Index** measures the performance of the commodities market. It consists of exchange-traded futures contracts on physical commodities that are weighted to account for the economic significance and market liquidity of each commodity.
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 companies, large-capitalization companies and large-capitalization growth companies, respectively. The **S&P 400 MidCap Value, 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 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 stocks and large capitalization growth stocks, respectively. The **Russell 2000 Value Index, Russell 2000 Index** and **Russell 2000 Growth Index** are indices that measure the performance of small-capitalization value stocks, small-capitalization stocks and small-capitalization growth stocks, respectively. The **Russell Midcap Value Index, Russell Midcap Index** and **Russell Midcap Growth Index** are indices that measure the performance of mid-capitalization value stocks, mid-capitalization stocks and mid-capitalization growth stocks, respectively. The **Russell 2500 Value Index, Russell 2500 Index** and **Russell 2500 Growth Index** measure the performance of small to mid-cap value stocks, small to mid-cap stocks and small to mid-cap growth stocks, respectively, commonly referred to as "SMID" cap. The **Russell 3000 Value Index, Russell 3000 Index** and **Russell 3000 Growth Index** measure the performance of the 3,000 largest U.S. value stocks, 3,000 largest U.S. stocks and 3,000 largest U.S. growth stocks, respectively, based on total market capitalization. The **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 In**dex measures the performance of the largest investable securities in developed countries globally, excluding companies assigned 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 minus the stocks in the S&P 500. The **Wilshire Real Estate Securities Index (RESI)** is comprised of publically traded real estate equity securities.

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

The Barclays Capital® (BC) U.S. Treasury Index is designed to cover public obligations of the U.S. Treasury with a remaining maturity of one year or more. The **BC Aggregate Bond Index** is an unmanaged, market value-weighted performance benchmark for investment-grade fixed-rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities with maturities of at least one year. The **BC U.S. Credit Bond Index** is designed to cover publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements; bonds must be SEC-registered to qualify. The **BC U.S. Agency Index** is designed to cover publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government. The **BC CMBS Index** is designed to mirror commercial mortgage-backed securities of investment-grade quality (Baa3/BBB-/BBB- or above) using Moody's, S&P, and Fitch respectively, with maturity of at least one year. The **BC 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 US TIPS Index** is an unmanaged market index made up of U.S. Treasury Inflation Linked Index securities. The **BC U.S. Government Bond Index** is a market value-weighted index of U.S. Government fixed-rate debt issues with maturities of one year or more. The **BC ABS Index** is a market value-weighted index that covers fixed-rate asset backed securities with average lives greater than or equal to one year and that are part of a public deal; the index covers the following collateral types: credit cards, autos, home equity loans, stranded-cost utility (rate-reduction bonds), and manufactured housing. The **BC Global Aggregate Index** is composed of three sub-indices; the U.S. Aggregate Index, Pan-European Aggregate Index, and the Asian-Pacific Aggregate Index. In aggregate the index is created to be a broad-based measure of the performance of investment grade fixed rate debt on a global scale. The **BC US Corporate Long Aa Index** is an unmanaged index representing public obligations of U.S. corporate and specified foreign debentures and secured notes with a remaining maturity of 10 years or more. **The BC U.S. Corporate High-Yield Index** measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. The **BC Intermediate Corporate Index** includes dollar-denominated debt from U.S. and non-U.S. industrial, utility, and financial institutions issuers with a duration of 1-10 years. The **BC U.S. Treasury Long Index** is an unmanaged index representing public obligations of the U.S. Treasury with a remaining maturity of one year or more. The **BC U.S. Government 10 Year Treasury Index** measures the performance of U.S. Treasury securities that have a remaining maturity of less than 10 years. The **BC BAA Corporate Index** measures the performance of the taxable Baa rated fixed-rate U.S. dollar-denominated corporate bond market. The **BC Global Treasury ex US Index** includes government bonds issued by investment-grade countries outside the United States, in local currencies, that have a remaining maturity of one year or more and are rated investment grade or higher. The **BC Emerging Market Bond Index** is an unmanaged index that total returns for external-currency-denominated debt instruments of the emerging markets. The **BC U.S. Securitized Bond Index** is a composite of asset-backed securities, collateralized mortgage-backed securities (ERISA-eligible) and fixed rate mortgage-backed securities. The **BC Quality Distribution AAA, B, and CC-D Indices** measure the respective credit qualities of U.S. corporate and specified foreign debentures and secured notes. The **BC Universal Index** represents the union of the U.S. Aggregate Index, the U.S. High Yield Corporate Index, the 144A Index, the Eurodollar Index, the Emerging Markets Index, and the non-ERISA portion of the CMBS Index. The **BC 1-3 Year Government Credit Index** is an unmanaged index considered representative of performance of short-term U.S. corporate bonds and U.S. government bonds with maturities from one to three years. The **BC 1-5 Year Government Credit Index** is an unmanaged index considered representative of performance of short-term U.S. corporate bonds and U.S. government bonds with maturities from one to five years. The **BC Long-term Government Index** is an unmanaged index reflecting performance of the long-term government bond market. **The BC Intermediate Aggregate Index** measures the performance of intermediate-term investment grade bonds. **The BC Intermediate 1-3 Year Government/Credit Index** measures the performance of U.S. Dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one year and less than ten years. The **BC U.S. 1-3 Year Government Bond Index** is composed of treasury bond and agency bond 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 zeroes, step-up coupon structures, and 144-As 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 A+ U.S. Credit Index** measures the performance of investment grade corporate debt and agency bonds that are dollar denominated and have a maturity of greater than 10+ years. The **BC U.S. Gov/Credit: 5-10 Year Index** includes all medium and 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 means represent the end to end rate of return calculated on the aggregate of all cash flows and market values reported by the general partners of the underlying constituents in the quarterly and annual reports. 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 & Govt 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 be valued at least quarterly, either internally or externally, using standard commercial real estate appraisal methodology. Each property must be independently appraised a minimum of once every three years. Please Note: the performance of this index lags by 1 quarter. The **NCREIF Timberland Index** is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only.

The **Ibbotson Intermediate Government Bond Index** is measured using a one-bond portfolio with a maturity near 5 years.

The **JP Morgan Emerging Markets Bond Index Plus (EMBI+) Index** tracks total returns for traded external debt instruments (external meaning foreign currency denominated fixed income) in the emerging markets. The **JPMorgan GBI Global ex-US Index** represents the total return performance of major non-U.S. bond markets.

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. **HFR Relative Value Index** tracks investment managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction. **HFRI Fund of Funds Conservative Index** is an equal-weighted index representing funds or funds that invest with multiple managers focused on consistent performance and lower volatility via absolute strategies. **HFRI ED: 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 market capitalization–weighted index that is designed to measure the performance of all tax–qualified Real Estate Investment Trusts (REITs) that are listed on the New York Stock Exchange, the American Stock Exchange, or the NASDAQ National Market List. The **FTSE NAREIT Equity REIT Index** is an unmanaged index reflecting performance of the U.S. real estate investment trust market.

The **Consumer Price Index (CPI)** is an inflationary indicator that measures the change in the cost of a fixed basket of products and services, including housing, electricity, food, and transportation. The CPI is published monthly. Please Note: the performance of this index lags by 1 month.

The **Credit Suisse Leveraged Loan Index** is a market value–weighted index designed to represent the investable universe of the U.S. dollar–denominated leveraged loan market. The **Dow Jones (DJ) 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, 20005, 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 indexes 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.

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

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

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

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

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

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

YOUNGSTOWN STATE UNIVERSITY

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

WHEREAS, the Investment Subcommittee of the Board of Trustees of Youngstown State University is responsible for identification of asset classes, strategic asset allocation, acceptable asset ranges above and below the strategic asset allocation, and selecting investment managers, pursuant to University policy 3356-3-10; and

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

NOW, THEREFORE, BE IT RESOLVED, that the Investment Subcommittee of the Board of Trustees of Youngstown State University does hereby approve the rebalance, as shown on page 20 of the December 4, 2019, Investment Subcommittee Agenda item C.1.a.

Board of Trustees Meeting
December 5, 2019
YR 2020-

PORTFOLIO RECOMMENDATIONS (ACTION)

YOUNGSTOWN STATE UNIVERSITY AS OF OCTOBER 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		**$23,401,110**	**100.0%**	***$0***	**$23,401,110**	**100.0%**	**100.0%**		
Operating Assets		**$22,271,401**	**95.2%**		**$22,271,401**	**95.2%**		**60-100%**	
JPMorgan 100% U.S. Treas. MM Instl	JTSXX	$15,121,833	64.6%		$15,121,833	64.6%			
Star Plus*	-	$2,546,258	10.9%		$2,546,258	10.9%			
Star Ohio*	-	$4,603,310	19.7%		$4,603,310	19.7%			
Short-Term Assets		**$1,129,709**	**4.8%**		**$1,129,709**	**4.8%**		**0-40%**	
Vanguard Short-Term Federal Adm	VSGDX	$1,129,709	4.8%		$1,129,709	4.8%			
Total Long Term Reserves Pool		**$57,358,572**	**100.0%**	***$0***	**$57,358,572**	**100.0%**	**100.0%**		
Domestic Equity		**$15,775,597**	**27.5%**		**$15,525,597**	**27.1%**	**27.0%**	**20-35%**	**0.1%**
Vanguard Instl Index	VINIX	$11,222,110	19.6%	***-$500,000***	$10,722,110	18.7%			
Vanguard Mid Cap Index Adm	VIMAX	$2,399,049	4.2%		$2,399,049	4.2%			
Loomis Sayles Small Growth Instl	LSSIX	$1,153,875	2.0%	***$40,000***	$1,193,875	2.1%			
Victory Integrity Small Cap Value Y	VSVIX	$1,000,563	1.7%	***$210,000***	$1,210,563	2.1%			
International Equity		**$4,215,189**	**7.3%**		**$4,465,189**	**7.8%**	**8.0%**	**0-15%**	**-0.2%**
William Blair International Growth I	BIGIX	$2,147,129	3.7%	***$100,000***	$2,247,129	3.9%			
Dodge & Cox International Stock	DODFX	$2,068,060	3.6%	***$150,000***	$2,218,060	3.9%			
Total Equity		**$19,990,786**	**34.9%**		**$19,990,786**	**34.9%**	**35.0%**	**25-45%**	**-0.1%**
Alternatives		**$8,602,019**	**15.0%**		**$8,602,019**	**15.0%**	**15.0%**	**0-20%**	**0.0%**
JPMorgan Strategic Income Opps Fd	JSOSX	$2,146,817	3.7%		$2,146,817	3.7%			
Wells Fargo Adv Absolute Return I	WABIX	$2,182,256	3.8%		$2,182,256	3.8%			
Diamond Hill Long-Short Y	DIAYX	$2,386,873	4.2%		$2,386,873	4.2%			
Brookfield Global Real Estate	BLRIX	$1,886,073	3.3%		$1,886,073	3.3%			
Fixed Income		**$28,765,710**	**50.2%**		**$28,765,710**	**50.2%**	**50.0%**	**35-75%**	**0.2%**
YSU Short Term Bond		$11,700,783	20.4%		$11,700,783	20.4%			
Lord Abbett Short Duration	LLDYX	$2,689,225	4.7%		$2,689,225	4.7%			
DFA Five-Year Global	DFGBX	$1,933,586	3.4%		$1,933,586	3.4%			
JPMorgan Core Bond Fund Sel	WOBDX	$5,497,537	9.6%		$5,497,537	9.6%			
YSU Intermediate Term Fixed		$4,278,151	7.5%		$4,278,151	7.5%			
Prudential High Yield Bond R6	PHYQX	$2,666,428	4.6%		$2,666,428	4.6%			
Cash & Cash Equivalents		**$58**	**0.0%**		**$58**	**0.0%**	**0.0%**	**0-5%**	**0.0%**
Equity Account Cash	-	$58	0.0%		$58	0.0%			
Total University Assets		**$80,759,682**			**$80,759,682**				

*As of 9/30/2019