



**BOARD OF TRUSTEES
INVESTMENT COMMITTEE
Allen L. Ryan, Jr., Chair
Charles T. George, Vice Chair
All Trustees are Members**

**Tuesday, September 19, 2023
10:30 a.m. or immediately following
previous meeting**

**Board Room
Tod Hall**

AGENDA

- A. Disposition of Minutes for Meeting**
- B. Old Business**
- C. Committee Item**
 - 1. Discussion Item**

C.1.a. = Tab 1 a. September 19, 2023 Quarterly Portfolio Asset Allocation and Investment Performance Review
John Colla, Clearstead, will report.

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



September 19, 2023

**YOUNGSTOWN STATE
UNIVERSITY**



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INSIGHTS & NEWS

PUBLICATIONS

CLEARPOINT

[Demystifying Private Alternatives and Debunking Fears](#)

[The Outcome is Income – Evolving Portfolio Construction](#)

[A Review of Our Next Generation of Leaders and Engaging Them in the Workplace](#)

RESEARCH CORNER

[Weekly Updates from our Investment Office](#)

MARKET MINUTE

[Review of April 2023](#)

[Review of May 2023](#)

[Review of June 2023](#)

PODCAST & VIDEOS



Podcast Episode 10:
[A Discussion of the Banking Sector](#)

VIDEOS

2Q23 Quarterly Insights

[About Clearstead](#)

[Private Wealth Management](#)

[Institutional Investment Consulting](#)

[The Investment Office](#)

PR, AWARDS, & INITIATIVES

PR

[Clearstead Advisors Acquires Santa Fe-Based Avalon Trust](#)

[Clearstead Acquires the Business of CLS Consulting, LLC](#)

AWARD

[2022 NAPA Top DC Advisor Teams*](#)



INITIATIVE

[Sustainable Clearstead 2022 Impact Report](#)

*The National Association of Plan Advisors (NAPA) Top DC Advisor Teams list is an independent listing produced annually by NAPA. The data reported was as of 12/31/2022. The NAPA Top DC Advisor Teams list is based on self-reported data from RIA firms, regulatory disclosures and NAPA's research. The listing is based on RIAs that provide services to defined contribution plans in the following primary areas: assets under advisement for DC plans supported, total number of DC plans supported, % of total firm revenue from DC plan support. This award does not evaluate the quality of services provided to clients and is not indicative of the practice's future performance. While Clearstead is a member of NAPA, neither participating RIA firms nor their employees pay a fee to NAPA in exchange for inclusion in the NAPA Top DC Advisor Teams list.

CONTENTS

1. Initiatives
2. Capital Markets Update
3. Non-Endowment Assets: Performance & Asset Allocation Review
4. Strategic Asset Allocation Review
 - ORC Compliance
5. Fee Analysis

APPENDIX

- Endowment Assets: Performance & Asset Allocation Review
- Detailed Performance
- Supporting Information

 clearstead INITIATIVES

2023 CALENDAR YEAR INITIATIVES

	1Q	2Q	3Q	4Q	COMMENTS:
STRATEGIC / ADMINISTRATIVE		✓			Updates with Discretion Decision
			✓		
				<input type="checkbox"/>	
				<input type="checkbox"/>	
		✓			Completed in June 2023
PORTFOLIO		✓			
		✓			March '23: Real Assets
				<input type="checkbox"/>	
		✓			Infrastructure Manager Recommendation
PERFORMANCE	✓	✓	✓	<input type="checkbox"/>	
	✓	✓	✓	<input type="checkbox"/>	
	✓	✓	✓	<input type="checkbox"/>	
OTHER			✓		
			✓		
	✓				
	✓				

LAST REVIEWED	
Investment Policy:	03/02/2022
Strategic Asset Allocation:	03/02/2022
Fee Review:	09/20/2022

MEETING SCHEDULE	
1Q:	March 1, 2023
2Q:	June 21, 2023
3Q:	September 19, 2023
4Q:	December 6, 2023



CAPITAL MARKETS UPDATE

QUARTERLY THEMES

WHAT HAPPENED LAST QUARTER?

- Markets shifted attention from banking stress to Artificial Intelligence, boosting technology stocks
- “Magnificent Seven” were responsible for the bulk of the rally, while the rest of the market was flat
- Equities performed well during the quarter, led by developed markets, while EM stocks lagged
 - Quarter: S&P 500 +8.7%; MSCI EAFE +3.0%; MSCI Emerging Markets +0.9%
 - YTD: S&P 500 +16.9%; MSCI EAFE +11.7%; MSCI Emerging Markets +4.9%
- U.S. economy remained resilient in the first half of 2023, widening the runway for a potential soft-landing

LOOKING FORWARD:

- Recession timing expected to be pushed to 2024 with declining impact
 - Federal Reserve driven recessionary risks waning; Consensus expecting soft-landing scenario
 - Technical indicators appear strong with breakout from rangebound market in 2Q
- Corporate earnings to be a key indicator to watch as rally extends
 - Hinges on continued strength of U.S. labor market and consumer spending
- New paradigm shift – higher interest rates for longer; Consumers and businesses must adjust to interest costs
 - Highly levered business sectors will experience a gradual shake-out

Source: Clearstead, Federal Reserve, Bloomberg LP. As of 6/30/2023. Past performance is not an indicator of future results.

ASSET CLASS RETURNS

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Q1 2023	Q2 2023	2023 YTD
Sm/Mid 36.8%	Large Cap 13.7%	Large Cap 1.4%	Sm/Mid 17.6%	Em Mkt 37.3%	Cash 1.9%	Large Cap 31.5%	Sm/Mid 20.0%	Large Cap 28.7%	Cash 1.5%	Dev Intl 8.5%	Large Cap 8.7%	Large Cap 16.9%
Large Cap 32.4%	Sm/Mid 7.1%	US Bonds 0.6%	Hi Yld 17.5%	Dev Intl 25.0%	US Bonds 0.0%	Sm/Mid 27.8%	Large Cap 18.4%	Sm/Mid 18.2%	Hdg Fnds -4.7%	Large Cap 7.5%	Sm/Mid 5.2%	Dev Intl 11.7%
Dev Intl 22.8%	US Bonds 6.0%	Cash 0.1%	Large Cap 12.0%	Large Cap 21.8%	Glb Bond -0.9%	Dev Intl 22.0%	Em Mkt 18.3%	Dev Intl 11.3%	Hi Yld -11.2%	Em Mkt 4.0%	Dev Intl 3.0%	Sm/Mid 8.8%
Hdg Fnds 9.0%	Hdg Fnds 3.4%	Hdg Fnds -0.3%	Em Mkt 11.2%	Sm/Mid 16.8%	Hi Yld -2.3%	Em Mkt 18.4%	Hdg Fnds 10.9%	Hdg Fnds 6.5%	US Bonds -13.0%	Hi Yld 3.7%	Hi Yld 1.6%	Hi Yld 5.4%
Hi Yld 7.4%	Hi Yld 2.5%	Dev Intl -0.8%	US Bonds 2.7%	Glb Bond 9.3%	Hdg Fnds -4.0%	Hi Yld 14.4%	Glb Bond 9.5%	Hi Yld 5.4%	Dev Intl -14.5%	Sm/Mid 3.4%	Hdg Fnds 1.5%	EM Mkt 4.9%
Cash 0.1%	Cash 0.0%	Sm/Mid -2.9%	Glb Bond 1.9%	Hdg Fnds 7.8%	Large Cap -4.4%	US Bonds 8.8%	Dev Intl 7.8%	Cash 0.1%	Large Cap -18.1%	Glb Bond 3.1%	Cash 1.2%	Cash 2.3%
US Bonds -2.0%	Em Mkt -2.2%	Hi Yld -4.6%	Dev Intl 1.0%	Hi Yld 7.5%	Sm/Mid -10.0%	Hdg Fnds 8.4%	US Bonds 7.5%	US Bonds -1.5%	Sm/Mid -18.4%	US Bonds 3.0%	EM Mkt 0.9%	Hdg Fnds 2.3%
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 5.0%	Hi Yld 6.2%	Em Mkt -2.5%	Glb Bond -19.6%	Hdg Fnds 1.6%	US Bonds -0.8%	US Bonds 2.1%
Glb Bond -4.9%	Dev Intl -4.5%	Em Mkt -14.9%	Cash 0.3%	Cash 0.9%	Em Mkt -14.6%	Cash 2.3%	Cash 0.5%	Glb Bond -8.2%	Em Mkt -20.1%	Cash 1.1%	Glb Bonds -2.9%	Glb Bonds 0.1%

Past performance is not an indicator 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; Hdg Fnds - HFRI FOF; Diversified Index; Cash - Merrill Lynch 91-day Tbill. Data as of 6/30/2023. Source: Morningstar Direct.

U.S. ECONOMIC PROJECTIONS

FEDERAL RESERVE BOARD MEMBERS & BANK PRESIDENTS

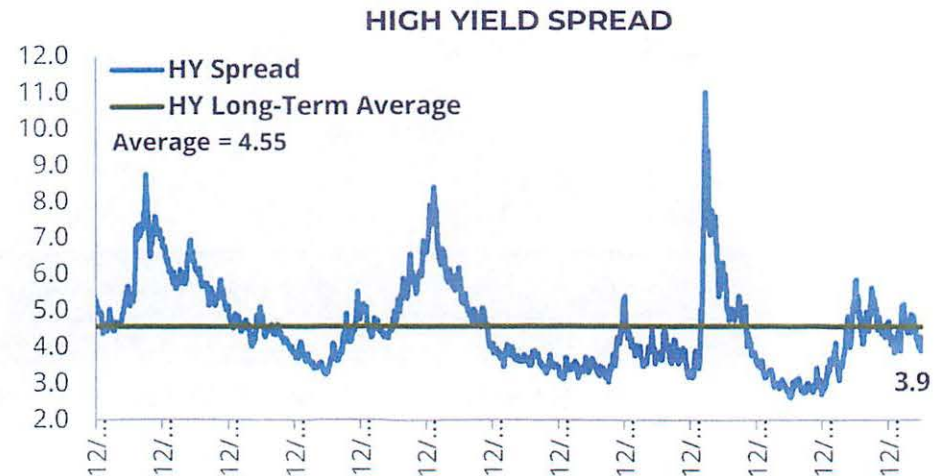
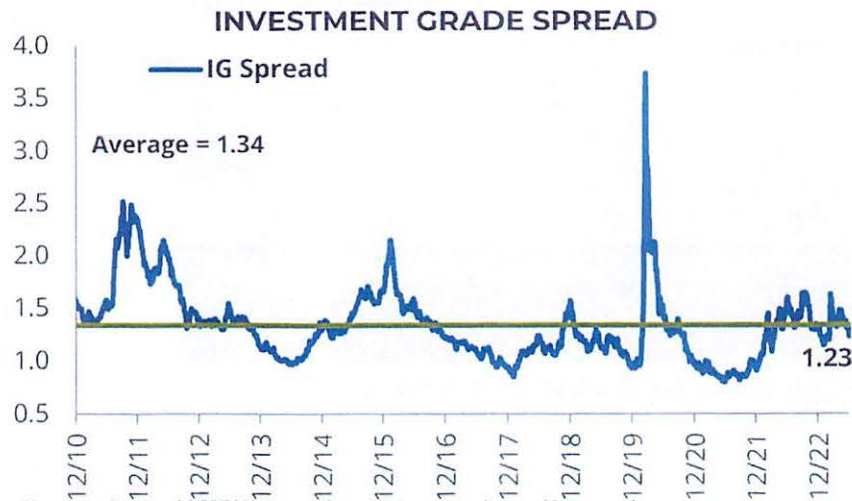
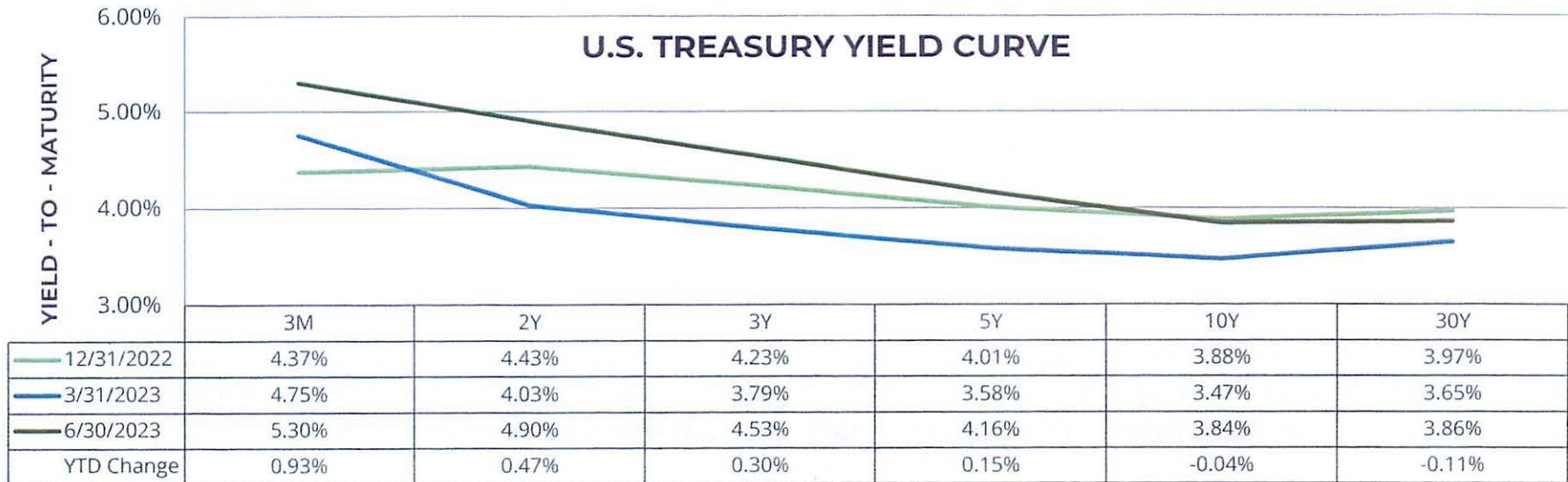
		2023	2024	2025	LONGER RUN*
GDP	June 2023	1.0%	1.1%	1.8%	1.8%
	March 2023	0.4%	1.2%	1.9%	1.8%
	December 2022	0.5%	1.6%	1.8%	1.8%
	September 2022	1.2%	1.7%	1.8%	1.8%
Unemployment Rate	June 2023	4.1%	4.5%	4.5%	4.0%
	March 2023	4.5%	4.6%	4.6%	4.0%
	December 2022	4.6%	4.6%	4.5%	4.0%
	September 2022	4.4%	4.4%	4.3%	4.0%
Core PCE Inflation	June 2023	3.9%	2.6%	2.2%	
	March 2023	3.6%	2.6%	2.1%	
	December 2022	3.5%	2.5%	2.1%	
	September 2022	3.1%	2.3%	2.1%	
Federal Funds Rate	June 2023	5.6%	4.6%	3.4%	2.5%
	March 2023	5.1%	4.3%	3.1%	2.5%
	December 2022	5.1%	4.1%	3.1%	2.5%
	September 2022	4.6%	3.9%	2.9%	2.5%
# of implied 25 bps rate changes year	June 2023	5	-4	-5	
	March 2023	3	-3	-5	
	December 2022	3	-4	-4	
	September 2022	1	-3	-4	

*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: Clearstead, U.S. Federal Reserve.
Data as of 06/30/2023. Past performance is not an indicator of future results.



FIXED INCOME MARKETS: RATES HIGHER AND NARROW SPREADS



Source: Bloomberg. Data as of 6/30/2023. Past performance is not an indicator of future results.

MARKET PERFORMANCE: JULY UPDATE

July was a good month for risk assets; market leadership broadened as small caps and EM/China led the way.

- Little difference between value vs. growth in U.S. large-cap, but mid-caps and dividend strategies outperformed; “Magnificent Seven” lagged on a relative basis

In fixed income, yields trended higher, and high-yield outperformed; U.S. Dollar weakened modestly.

July was dominated by positive economic surprises and a soft-landing scenario becoming entrenched; Early Q2 earning season largely also better than expected; Investor sentiment rose sharply.

MARKET	2022	Q1-23	Q2-23	Jul-23	YTD	Trend
S&P 500	-18.1%	7.5%	8.7%	3.2%	20.6%	■ ■ _
Russell 2000	-20.5%	2.7%	5.2%	6.1%	14.7%	_ ■ ■
MSCI EAFE	-14.5%	8.5%	3.0%	3.2%	15.3%	■ _ _
MSCI EM	-20.1%	4.0%	0.9%	6.2%	11.4%	■ _ ■
MSCI China	-21.9%	4.7%	-9.7%	10.8%	4.7%	■ ■ ■
MSCI ACWI	-18.0%	7.4%	6.2%	3.7%	18.5%	■ ■ _
Bloomberg US Agg Bond	-13.0%	3.0%	-0.8%	-0.1%	2.0%	■ ■ ■
Bloomberg High Yield Bond	-11.2%	3.6%	1.8%	1.4%	6.8%	■ ■ ■
Bloomberg Muni Bond	-8.5%	2.8%	-0.1%	0.4%	3.1%	■ ■ ■

Source: Bloomberg 7/31/2023. Past performance is not an indicator of future results



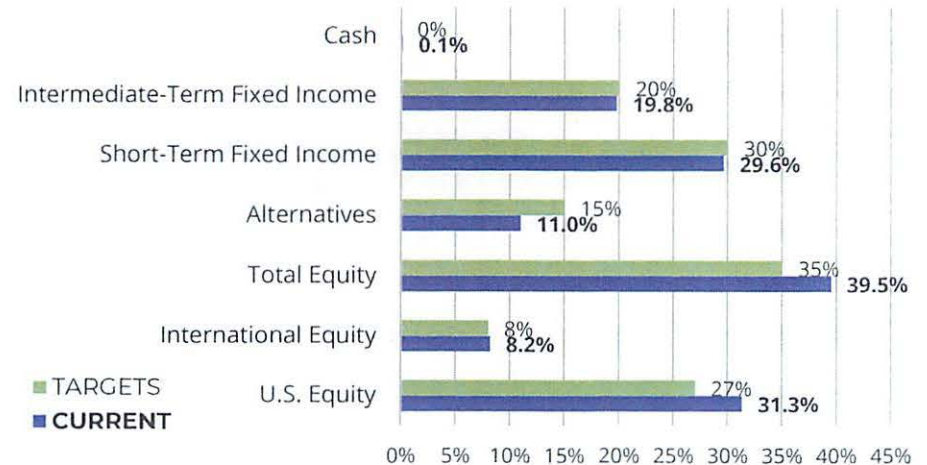
**NON-ENDOWMENT ASSETS:
PERFORMANCE & ASSET ALLOCATION
REVIEW**

NON-ENDOWMENT PERFORMANCE REVIEW (AS OF 6/30/2023)

NON-ENDOWMENT ASSETS	MARKET VALUE (\$MM)	TRAILING PERIODS								CALENDAR YEARS			SINCE INCEPTION ⁴
		QTD	FYTD	CYTD	1 YR	3 YR	5 YR	7 YR	10 YR	2022	2021	2020	
Total Non-Endowment Assets	\$77.312	2.4%	6.9%	5.9%	6.9%	5.1%	4.7%	4.9%	4.2%	-7.8%	7.8%	9.5%	4.0%
<i>Benchmark¹</i>		1.9%	5.7%	4.4%	5.7%	3.1%	3.4%	3.5%	3.0%	-4.7%	4.3%	5.9%	3.1%
Operating & Short-Term Pool	\$13.965	1.2%	3.6%	2.3%	3.6%	1.2%	1.6%	1.4%	1.0%	1.4%	0.0%	1.1%	0.8%
<i>Benchmark²</i>		1.1%	3.4%	2.2%	3.4%	1.2%	1.5%	1.3%	1.0%	1.2%	0.0%	0.8%	0.8%
Long-Term Pool	\$63.347	2.7%	7.9%	6.5%	7.9%	4.9%	4.6%	5.2%	4.8%	-11.2%	9.5%	8.8%	4.9%
<i>Benchmark³</i>		2.4%	7.4%	6.2%	7.4%	4.6%	4.8%	5.2%	4.7%	-9.7%	8.0%	10.0%	4.6%

LONG-TERM POOL ASSET ALLOCATION

	CURRENT	TARGETS	RANGE	+ / -
U.S. Equity	31.3%	27%	20-35%	4.3%
International Equity	8.2%	8%	0-15%	0.2%
Total Equity	39.5%	35%	25-45%	4.5%
Alternatives	11.0%	15%	0-20%	-4.0%
Short-Term Fixed Income	29.6%	30%	25-45%	-0.4%
Intermediate-Term Fixed Income	19.8%	20%	10-30%	-0.2%
Cash	0.1%	0%	0-5%	0.1%



1) 45% BofA Merrill Lynch 91-Day T-Bill / 17% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 11% BBgBarc. US Govt/Credit Int TR / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE.
 2) 95% BofA Merrill Lynch 91-Day T-Bill / 5% Barclays 1-3 Yr. Govt.
 3) 27% Russell 3000 / 8% MSCI EAFE / 15% Total Alternatives Benchmark / 30% BofA Merrill Lynch US Corp & Gov 1-3 Yrs / 20% BBgBarc. US Govt/Credit Int TR.
 4) Inception date for Long-Term and Short-Term Pools: June 2010, Inception Date for Total Non-Endowment Assets: March 2004.

LONG-TERM POOL PERFORMANCE REVIEW: JULY UPDATE

	Market Value 07/01/2023	Market Value 07/31/2023	% of Portfolio	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	Inception (%)	Inception Date
Total University Assets	\$77,312,438	\$71,407,647	100.0	1.5	1.5	7.5	5.2	4.7	4.8	4.1	Apr-04
<i>Total Policy Benchmark¹</i>				1.0	1.0	5.5	4.8	3.1	3.4	3.1	
Total Operating & Short Term	\$13,965,019	\$6,999,552	100.0	0.4	0.4	2.7	3.9	1.4	1.7	0.8	Jul-10
<i>Total Operating & Short Term Benchmark²</i>				0.4	0.4	2.6	3.8	1.3	1.6	0.8	
Federated Hermes Government Obligations Fund	\$13,965,019	\$6,999,552	100.0	0.4	0.4	2.6	3.8	1.3	1.4	2.3	Oct-21
<i>90 Day U.S. Treasury Bill</i>				0.4	0.4	2.7	4.0	1.4	1.6	2.4	
Total Long Term/ Reserves Pool	\$63,347,419	\$64,408,094	100.0	1.7	1.7	8.3	5.4	4.5	4.6	5.0	Jul-10
<i>Total Long Term/ Reserves Fund Benchmark³</i>				1.6	1.6	7.9	5.4	4.4	4.8	4.7	
Total Equity	\$25,067,744	\$25,904,463	40.2	3.3	3.3	17.2	12.1	12.4	9.6	12.1	Jul-10
Total Domestic Equity	\$19,851,345	\$20,526,728	31.8	3.4	3.4	17.9	11.9	13.6	10.9	13.7	Jul-10
<i>Russell 3000 Index</i>				3.6	3.6	20.3	12.6	13.1	11.4	14.0	
Vanguard Institutional Index	\$13,457,064	\$13,888,919	21.6	3.2	3.2	20.6	13.0	13.7	12.2	14.3	Jul-10
<i>S&P 500 Index</i>				3.2	3.2	20.6	13.0	13.7	12.2	14.3	
Vanguard Mid Cap Index Adm	\$3,107,711	\$3,217,585	5.0	3.5	3.5	12.7	7.4	10.9	8.8	11.8	Oct-10
<i>Vanguard Mid Cap Index Benchmark</i>				3.5	3.5	12.7	7.4	10.9	8.8	11.8	
Loomis Sayles Sm Growth N	\$1,675,166	\$1,705,395	2.7	1.8	1.8	11.2	9.0	6.3	6.8	7.8	Sep-19
<i>Russell 2000 Growth Index</i>				4.7	4.7	18.9	11.6	6.5	4.8	7.7	
Victory Integrity Small Value Y	\$1,611,404	\$1,714,829	2.7	6.4	6.4	13.4	13.6	24.7	6.8	10.6	Oct-10
<i>Russell 2000 Value Index</i>				7.5	7.5	10.2	3.9	17.5	4.7	9.5	
Total International Equity	\$5,216,400	\$5,377,735	8.3	3.1	3.1	14.5	13.0	8.4	5.1	5.4	Oct-10
<i>MSCI EAFE (Net)</i>				3.2	3.2	15.3	16.8	9.3	4.5	5.5	
William Blair International Growth I	\$2,384,004	\$2,406,479	3.8	0.9	0.9	12.3	6.5	2.4	4.6	6.9	Jul-12
<i>MSCI AC World ex USA (Net)</i>				4.1	4.1	13.9	13.4	7.1	3.9	5.9	
Dodge & Cox Internat'l Stock	\$2,832,396	\$2,971,256	4.7	4.9	4.9	16.1	18.3	14.0	4.9	5.7	Oct-10
<i>MSCI EAFE (Net)</i>				3.2	3.2	15.3	16.8	9.3	4.5	5.5	

LONG-TERM POOL PERFORMANCE REVIEW: JULY UPDATE

	Market Value 07/01/2023	Market Value 07/31/2023	% of Portfolio	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	Inception (%)	Inception Date
Total Alternatives	\$6,955,894	\$7,016,176	10.9	0.9	0.9	4.4	5.2	2.8	1.2	1.4	Mar-15
<i>Total Alternatives Benchmark*</i>				1.1	1.1	3.4	4.0	4.6	3.0	2.7	
Weatherlow Offshore Fund I Ltd CI IIA	\$4,637,098	\$4,697,380	7.3	1.3	1.3	5.1	5.9	5.5	5.9	-2.9	Jul-21
<i>HFRI Fund of Funds Composite Index</i>				1.1	1.1	3.4	4.0	4.6	3.5	-0.5	
H.I.G. Whitehorse Principal Lending Offshore Feeder Fd, L.P.	\$2,318,796	\$2,318,796	3.5	0.0	0.0	3.2	7.3	-	-	6.7	Jul-22
<i>Credit Suisse Leveraged Loan Index</i>				1.3	1.3	7.7	9.5	6.0	4.1	10.6	
Total Fixed Income	\$31,232,337	\$31,395,283	48.8	0.5	0.5	2.6	0.4	-1.0	1.7	1.8	Jul-10
<i>Total Fixed Income Benchmark²</i>				0.4	0.4	1.7	-0.2	-1.4	1.2	1.4	
JPMorgan Core Bond	\$5,091,468	\$5,082,391	7.9	-0.1	-0.1	2.5	-2.7	-3.7	1.1	0.7	Sep-17
<i>Blmbg. U.S. Aggregate Index</i>				-0.1	-0.1	2.0	-3.4	-4.5	0.7	0.3	
YSU Intermediate Term Bond	\$4,300,262	\$4,317,614	6.7	0.4	0.4	2.3	-0.8	-2.3	1.7	3.0	Apr-04
<i>Blmbg. Intermed. U.S. Government/Credit</i>				0.3	0.3	1.8	-1.4	-2.6	1.3	2.7	
PGIM High Yield R6	\$3,084,329	\$3,142,778	4.9	1.9	1.9	6.6	3.6	2.3	3.7	4.2	Jan-17
<i>Blmbg. U.S. Corp: High Yield Index</i>				1.4	1.4	6.8	4.4	2.0	3.4	3.9	
YSU Short Term Bond	\$12,649,758	\$12,705,829	19.7	0.4	0.4	1.8	0.9	-0.5	1.5	2.1	Apr-04
<i>ICE BofA 1-3 Yr. Gov/Corp</i>				0.4	0.4	1.6	0.5	-0.8	1.2	1.9	
Lord Abbett Short Duration Income I	\$6,106,520	\$6,146,671	9.5	0.7	0.7	2.4	1.0	0.4	1.7	1.7	Apr-18
<i>ICE BofA 1-3 Yr. Gov/Corp</i>				0.4	0.4	1.6	0.5	-0.8	1.2	1.2	
Total Cash & Cash Equivalents	\$91,445	\$92,173	0.1	0.8	0.8	3.0	4.2	1.5	1.4	1.3	Apr-18
<i>90 Day U.S. Treasury Bill</i>				0.4	0.4	2.7	4.0	1.4	1.6	1.6	
Federated Hermes Government Obligations Fund	\$91,445	\$92,173	0.1	0.4	0.4	2.6	3.8	1.3	1.4	1.2	Dec-19
<i>90 Day U.S. Treasury Bill</i>				0.4	0.4	2.7	4.0	1.4	1.6	1.4	

*90 Day U.S. Treasury Bill: 45.00%, Russell 3000 Index: 15.00%, Blmbg. Intermed. U.S. Government/Credit: 11.00%, MSCI EAFE (Net): 4.00%, ICE BofA 1-3 Yr. Gov/Corp: 17.00%, Total Alternatives Benchmark: 8.00%

²90 Day U.S. Treasury Bill: 95.00%, Blmbg. 1-3 Govt: 5.00%

³Russell 3000 Index: 27.00%, Blmbg. Intermed. U.S. Government/Credit: 20.00%, MSCI EAFE (Net): 8.00%, ICE BofA 1-3 Yr. Gov/Corp: 30.00%, Total Alternatives Benchmark: 15.00%

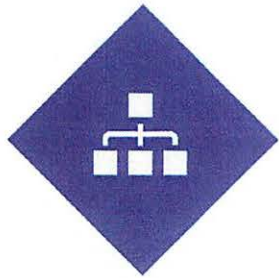
⁴HFRI Fund of Funds Composite Index: 100.00%

⁵Blmbg. Intermed. U.S. Government/Credit: 36.00%, ICE BofA 1-3 Yr. Gov/Corp: 64.00%



STRATEGIC ASSET ALLOCATION REVIEW

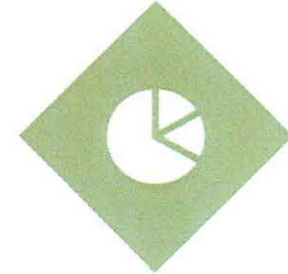
HOLISTIC REVIEW OF RISK



ORGANIZATION



**STRATEGIC INVESTMENT
APPROACH**



**INVESTMENT
PORTFOLIO**

LEVELS OF RISKS

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

OBJECTIVES & RISK CONSIDERATIONS

PORTFOLIO OBJECTIVES

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

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

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

RISK CONSIDERATIONS

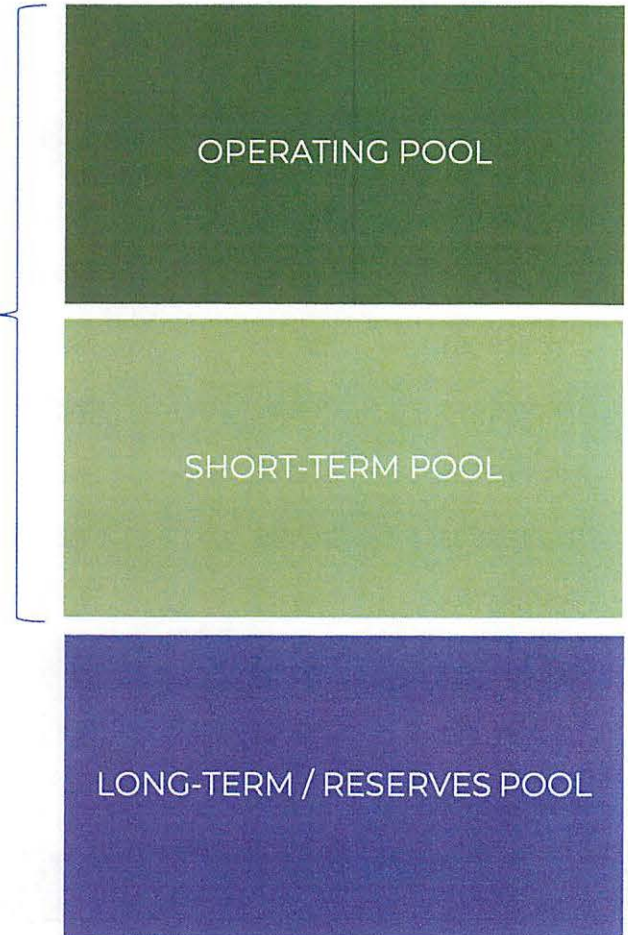
- Ohio Revised Code 3345.05
 - ❖ Short-Term pool provides compliance; additionally, approximately 10-15% of the Long-Term Pool assets provide additional support
- Liquidity
 - ❖ 100% of the Non-Endowment assets have daily liquidity
- Cash flow forecast
 - ❖ YSU does not anticipate needing to withdraw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

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

LIQUIDITY MANAGEMENT & INVESTMENT POOL STRUCTURE

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

COMBINED



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

LONG-TERM POOL GROWTH

CALENDAR YEAR	INVESTMENT ASSETS CASH OUTFLOW	INVESTMENT ASSETS CASH INFLOW	YEAR END (12/31) EQUITY %	YEAR END (12/31) ALTERNATIVES %	YEAR END (12/31) FIXED INCOME %	CALENDAR YEAR RETURN	MARKET VALUE (12/31)
2010	-	+\$46,871,000 <i>(Creation of LT Pool)</i>	19.2%	0%	80.8%	+5.5%	\$50,383,000
2011	-\$8,000,000	-	24.9%	0%	75.1%	+1.9%	\$43,392,000
2012	-	-	27.1%	0%	72.9%	+6.4%	\$46,190,324
2013	-	-	33.8%	0%	66.2%	+8.7%	\$50,249,454
2014	-	-	37.7%	0%	62.3%	+4.5%	\$52,491,768
2015	-	-	35.0%	11.9%	53.2%	-0.5%	\$52,324,443
2016	-	-	36.5%	15.6%	47.9%	+4.0%	\$54,892,466
2017	-	-	37.0%	15.1%	47.8%	+10.5%	\$60,625,347
2018	-\$8,000,000	-	33.2%	15.0%	51.8%	-3.4%	\$51,238,803
2019	-	-	35.9%	14.8%	49.2%	+15.3%	\$59,067,298
2020	-\$2,900,000	-	38.7%	11.2%	50.2%	+8.8%	\$66,471,553
2021	-	-	41.2%	10.4%	48.3%	+9.5%	\$67,042,600
2022	-	-	38.8%	11.2%	50.0%	-11.2%	\$59,507,519
2023*	-	-	39.6%	10.9%	49.5%	+6.5%	\$63,347,374

*2023 figures as of 6/30/2023 and do not represent year-end or calendar year information.

FORWARD LOOKING ANALYSIS (LONG-TERM POOL)

	YSU LONG-TERM POOL CURRENT ALLOCATION
U.S. Equity	31%
International Equity	8%
Alternative Investments	11%
Fixed Income: Short-Term	30%
Fixed Income: Intermediate-Term	20%
Total	100%
*10-Year Forecasted Return	5.8%
*10-Year Forecasted Returns (75th - 25th Percentile Outcomes)	4.7% - 7.1%
*Forecasted (Annual) Volatility	7.3%

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

YSU ASSET ALLOCATION GUIDELINES

Clearstead has reviewed YSU's Asset Allocation Guidelines and recommends **no changes** to the current guidelines at this time.

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

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

 clearstead **ORC COMPLIANCE**

ORC COMPLIANCE REVIEW (AS OF 6/30/2023)

	TOTAL NON-ENDOWMENT ORC 3345.05 DEFINED ASSETS*	% FROM SHORT-TERM POOL	% FROM LONG-TERM POOL
9/30/22	46%	36%	10%
12/31/22	31%	18%	12%
3/31/23	40%	30%	10%
6/30/23	29%	18%	11%
Average	36%	26%	11%

YSU is in-line with the Ohio Revised Code 3345.05 Compliance requirements.

OHIO REVISED CODE 3345.05 COMPLIANCE	
	COMPLIANT
Over 25% of Total Portfolio in Cash Equivalents/Govt Securities (average amount over previous FY)	Yes
Investment policy adopted in public session	Yes
Quarterly Investment Committee meetings	Yes
Recommend changes to the Board's Investment Policy that assist in meeting the Committee's fiduciary duties	Yes
Retain an investment advisor who meets the qualifications	Yes

*A minimum of 25% of the average amount of the University's investment portfolio over the course of the previous fiscal year must be invested according to ORC guidelines (i.e., US government bonds, cash equivalents). Analysis does not include cash equivalent or government security exposure in Long-Term Pool fixed income managers invested in through mutual funds. With this exposure, YSU's allocation and average would be higher.



FEE ANALYSIS

FEE ANALYSIS

YOUNGSTOWN STATE UNIVERSITY INVESTMENTS

AS OF JUNE 30, 2023

NON-ENDOWMENT ASSETS FEE REVIEW

	Market Value (\$)	% of Pool	Expense Ratio (%)	Morningstar Institutional Average Fee (%)
Total Operating & Short Term				
Federated Hermes Government Obligations Fund	\$13,965,019	100%	0.28%	-
Total Operating & ST Investment Management Fee	\$13,965,019		0.28%	
Total Domestic Equity	\$19,851,345	31.3%		
Vanguard Institutional Index	\$13,457,064	21.2%	0.04%	0.06%
Vanguard Mid Cap Index Adm	\$3,107,711	4.9%	0.05%	0.84%
Loomis Sayles Sm Growth N	\$1,675,166	2.6%	0.82%	0.94%
Victory Integrity Small Value Y	\$1,611,404	2.5%	1.07%	0.94%
Total International Equity	\$5,216,400	8.2%		
William Blair International Growth I	\$2,384,004	3.8%	0.99%	0.85%
Dodge & Cox Internat'l Stock	\$2,832,396	4.5%	0.62%	0.85%
Total Alternatives	\$6,955,849	11.0%		
Weatherlow Offshore Fund I Ltd. CI IA	\$4,637,053	7.3%	1.00%	n/a
H.I.G. Principal Lending Fund	\$2,318,796	3.7%	1.25%	n/a
Total Fixed Income	\$31,232,337	49.3%		
JPMorgan Core Bond	\$5,091,468	8.0%	0.50%	0.43%
YSU Intermediate Term Bond	\$4,300,262	6.8%	0.15%	0.43%
PGIM High Yield R6	\$3,084,329	4.9%	0.38%	0.66%
YSU Short Term Bond	\$12,649,758	20.0%	0.15%	0.39%
Lord Abbett Short Duration Income I	\$6,106,520	9.6%	0.38%	0.39%
Total Cash & Cash Equivalents	\$91,445	0.0%		
Federated Government Obligations	\$91,445	0.1%	0.28%	-
Total LT/Reserves Pool Investment Management Fee	\$63,347,376		0.38%	
Total Assets	\$77,312,395		0.36%	
Clearstead Consulting Fees			0.06%	
Trustee & Custody Fee (PNC)			0.03%	
Total Non-Endowment Assets Fees			0.46%	

Weatherlow and H.I.G. fee is management expense only, and does not include underlying investment management expenses or performance based fees.

ENDOWMENT ASSETS FEE REVIEW

	Market Value (\$)	% of Portfolio	Annual Manager Fee (%)	Morningstar Institutional Average Fee (%)
YSU Endowment Fund				
YSU Endowment Fund Fees	\$15,158,118	100.0%	0.45%	n/a

YSU Endowment Fund does not include any investment management expenses that may be used by Huntington.



APPENDIX



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

ENDOWMENT ASSETS: PERFORMANCE & ASSET ALLOCATION (AS OF 6/30/2023)

ENDOWMENT ASSETS	MARKET VALUE (\$MM)	ASSET ALLOCATION	COMPOSITION	TRAILING PERIODS							CALENDAR YEARS			SINCE INCEPTION ³
				QTD	FYTD	CYTD	1 YR	3 YR	5 YR	7 YR	2022	2021	2020	
YSU Endowment Fund	\$15.158	67% Equity / 3% Alts / 30% Fixed Income & Cash	Stocks, Bonds, Mutual Funds	3.5%	9.6%	6.6%	9.6%	8.5%	8.4%	8.5%	-15.7%	20.9%	16.3%	8.2%
			Benchmark ¹	6.3%	14.4%	13.1%	14.4%	9.9%	9.6%	10.3%	-16.6%	20.6%	16.2%	10.1%
			Benchmark ²	4.9%	11.2%	10.8%	11.2%	7.1%	7.9%	8.3%	-15.8%	15.9%	14.7%	8.5%

COMPLIANCE

- Reporting & Oversight by Clearstead, Management by Huntington
- Asset Allocation Guidelines: 70% Equities (60-80%) / 30% Cash & Fixed Income (20-40%) **(IN COMPLIANCE)**

HOLDINGS

- Equity Mutual Funds – 11% (Mutual Funds & ETFs)
- Stocks – 56% (30-60 Concentrated U.S. Large/Mid-Cap Stock Portfolio)
- Alternatives – 3% (Real Estate Mutual Fund)
- Fixed Income Mutual Funds – 2% (Federated Total High Yield)
- Individual Bonds – 26% (Individual Bond Portfolio: U.S. Corporate / Gov't / Asset Backed Debt)
- Cash – 3%

1) Benchmark: 75% S&P 500 / 25% BBg US Aggregate.

2) Benchmark: 60% S&P 500 / 40% BBg US Aggregate.

3) Inception date: 06/2013.



DETAILED PERFORMANCE

EXECUTIVE SUMMARY

	Market Value 04/01/2023	Market Value 06/30/2023	% of Portfolio	2nd Quarter 2023 (%)	YTD (%)
Total University Assets	\$88,538,544	\$77,312,393	100.0	2.4	5.9
<i>Total Policy Benchmark¹</i>				1.9	4.4
Total Operating & Short Term	\$26,829,002	\$13,965,019	18.1	1.2	2.3
<i>Total Operating & Short Term Benchmark²</i>				1.1	2.2
Total Long Term/ Reserves Pool	\$61,709,542	\$63,347,374	81.9	2.7	6.5
<i>Total Long Term/ Reserves Fund Benchmark³</i>				2.4	6.2
Total Domestic Equity	\$18,499,343	\$19,851,345	25.7	7.3	14.0
<i>Russell 3000 Index</i>				8.4	16.2
Total International Equity	\$5,037,898	\$5,216,400	6.7	3.5	11.1
<i>MSCI EAFE (Net)</i>				3.0	11.7
Total Alternatives	\$6,858,198	\$6,955,849	9.0	2.0	3.5
<i>Total Alternatives Benchmark</i>				1.4	2.2
Total Fixed Income	\$31,260,231	\$31,232,337	40.4	-0.1	2.0
<i>Total Fixed Income Benchmark⁴</i>				-0.5	1.3
Total Cash & Cash Equivalents	\$53,871	\$91,445	0.1	1.1	2.2
<i>90 Day U.S. Treasury Bill</i>				1.2	2.3

1) Total Policy Benchmark: 45% ICE BofA 91 Days T-Bills / 17% ICE BofA 1-3 Yr US Corp & Govt / 11% BBgBarc US Govt/Credit Int / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE.

2) Total Operating & Short-Term Benchmark: 95% ICE BofA 91 Days T-Bills / 5% BBgBarc US Govt 1-3 Yr.

3) Total Long-Term / Reserves Fund Benchmark: 27% Russell 3000 / 8% MSCI EAFE / 15% Total Alternatives Benchmark / 30% ICE BofA 1-3 Yr US Corp & Govt / 20% BBgBarc US Govt/Credit Int.

4) Total Alternatives Benchmark: 100% HFRI Fund of Funds Composite.

5) Total Fixed Income Benchmark: 64% ICE BofA 1-3 Yr US Corp & Govt / 36% BBgBarc US Govt/Credit Int.

ASSET ALLOCATION GUIDELINES COMPLIANCE

Total Plan Asset Allocation Policy	Range	Current
Operating & Short-Term Pool	0% - 50%	18%
Long Term/ Reserves Pool	50% - 100%	82%

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

Long Term/ Reserves Pool	Target	Range	Current
Domestic Equity	27%	20% - 35%	31%
International Equity	8%	0% - 15%	8%
Total Equity	35%	25% - 45%	40%
Alternatives	15%	0%-20%	11%
Short-Term Fixed Income	30%	25% - 45%	30%
Intermediate Fixed Income	20%	10% - 30%	20%
Cash & Cash Equivalents	0%	0% - 5%	0%

In Line Within Tolerance Review

SCHEDULE OF ASSETS

	Ticker	Account Type	Begin Market Value \$	Market Value 06/30/2023	% of Portfolio
Total University Assets			\$88,538,544	\$77,312,393	100.0
Total Operating & Short Term			\$26,829,002	\$13,965,019	18.1
Federated Hermes Government Obligations Fund	GOSXX	Cash	\$26,735,168	\$13,965,019	18.1
Total Long Term/ Reserves Pool			\$61,709,542	\$63,347,374	81.9
Total Domestic Equity			\$18,499,343	\$19,851,345	25.7
Vanguard Institutional Index	VINIX	US Stock Large Cap Core	\$12,376,327	\$13,457,064	17.4
Vanguard Mid Cap Index Adm	VIMAX	US Stock Mid Cap Core	\$2,966,458	\$3,107,711	4.0
Loomis Sayles Sm Growth N	LSSNX	US Stock Small Cap Growth	\$1,601,484	\$1,675,166	2.2
Victory Integrity Small Value Y	VSVIX	US Stock Small Cap Value	\$1,555,074	\$1,611,404	2.1
Total International Equity			\$5,037,898	\$5,216,400	6.7
William Blair International Growth I	BIGIX	International	\$2,322,406	\$2,384,004	3.1
Dodge & Cox Internat'l Stock	DODFX	International	\$2,715,492	\$2,832,396	3.7
Total Alternatives			\$6,858,198	\$6,955,849	9.0
Weatherlow Offshore Fund I Ltd CI IIA		Hedge Fund	\$4,502,265	\$4,637,053	6.0
H.I.G. Whitehorse Principal Lending Offshore Feeder Fd, L.P.		Direct Lending	\$2,355,933	\$2,318,796	3.0
Total Fixed Income			\$31,260,231	\$31,232,337	40.4
JPMorgan Core Bond	WOBDX	US Fixed Income Core	\$5,133,055	\$5,091,468	6.6
YSU Intermediate Term Bond		US Fixed Income Core	\$4,321,681	\$4,300,262	5.6
PGIM High Yield R6	PHYQX	US Fixed Income High Yield	\$3,036,980	\$3,084,329	4.0
YSU Short Term Bond		US Fixed Income Short Term	\$12,669,817	\$12,649,758	16.4
Lord Abbett Short Duration Income I	LLDYX	US Fixed Income Short Term	\$6,098,698	\$6,106,520	7.9
Total Cash & Cash Equivalents			\$53,871	\$91,445	0.1
Federated Hermes Government Obligations Fund	GOSXX	Cash	\$53,871	\$91,445	0.1

ATTRIBUTION OF MARKET VALUE

TOTAL UNIVERSITY ASSETS

	Q3-2022	Q4-2022	Q1-2023	Q2-2023	One Year
Total University Assets					
Beginning Market Value	\$77,012,438	\$89,310,042	\$73,068,111	\$88,538,544	\$77,012,438
Contributions	\$14,000,897	\$2,048	\$20,000,000	-	\$34,002,945
Distributions	-\$5,475	-\$19,013,567	-\$7,041,880	-\$13,094,223	-\$39,155,145
Net Cash Flows	\$13,995,422	-\$19,011,519	\$12,958,120	-\$13,094,223	-\$5,152,200
Net Investment Change	-\$1,697,818	\$2,769,588	\$2,512,313	\$1,868,072	\$5,452,155
Ending Market Value	\$89,310,042	\$73,068,111	\$88,538,544	\$77,312,393	\$77,312,393
Change \$	\$12,297,604	-\$16,241,932	\$15,470,433	-\$11,226,151	\$299,954

LONG-TERM POOL

	Q3-2022	Q4-2022	Q1-2023	Q2-2023	One Year
Total Long Term/ Reserves Pool					
Beginning Market Value	\$58,753,018	\$56,949,726	\$59,507,519	\$61,709,542	\$58,753,018
Contributions	\$897	\$2,048	-	-	\$2,945
Distributions	-\$4,578	-\$13,567	-\$41,880	-	-\$60,025
Net Cash Flows	-\$3,681	-\$11,519	-\$41,880	-	-\$57,080
Net Investment Change	-\$1,799,612	\$2,569,312	\$2,243,903	\$1,637,832	\$4,651,436
Ending Market Value	\$56,949,726	\$59,507,519	\$61,709,542	\$63,347,374	\$63,347,374
Change \$	-\$1,803,292	\$2,557,793	\$2,202,023	\$1,637,832	\$4,594,356

PERFORMANCE SUMMARY

	QTD (%)	FYTD (%)	YTD (%)	1 Yr (%)	2 Yr (%)	3 Yr (%)	5 Yr (%)	7 Yr (%)	10 Yr (%)	2022 (%)	2021 (%)	2020 (%)	Inception (%)	Inception Date
Total University Assets	2.4	6.9	5.9	6.9	-0.1	5.1	4.7	4.9	4.2	-7.8	7.8	9.5	4.0	Apr-04
<i>Total Policy Benchmark¹</i>	<i>1.9</i>	<i>5.7</i>	<i>4.4</i>	<i>5.7</i>	<i>0.5</i>	<i>3.1</i>	<i>3.4</i>	<i>3.5</i>	<i>3.0</i>	<i>-4.7</i>	<i>4.3</i>	<i>5.9</i>	<i>3.1</i>	
Total Operating & Short Term	1.2	3.6	2.3	3.6	1.8	1.2	1.6	1.4	1.0	1.4	0.0	1.1	0.8	Jul-10
<i>Total Operating & Short Term Benchmark²</i>	<i>1.1</i>	<i>3.4</i>	<i>2.2</i>	<i>3.4</i>	<i>1.7</i>	<i>1.2</i>	<i>1.5</i>	<i>1.3</i>	<i>1.0</i>	<i>1.2</i>	<i>0.0</i>	<i>0.8</i>	<i>0.8</i>	
Total Long Term/ Reserves Pool	2.7	7.9	6.5	7.9	-1.4	4.9	4.6	5.2	4.8	-11.2	9.5	8.8	4.9	Jul-10
<i>Total Long Term/ Reserves Fund Benchmark³</i>	<i>2.4</i>	<i>7.4</i>	<i>6.2</i>	<i>7.4</i>	<i>-0.8</i>	<i>4.6</i>	<i>4.8</i>	<i>5.2</i>	<i>4.7</i>	<i>-9.7</i>	<i>8.0</i>	<i>10.0</i>	<i>4.6</i>	
Total Domestic Equity	7.3	18.4	14.0	18.4	1.5	14.4	10.9	12.6	12.0	-17.7	26.9	18.5	13.5	Jul-10
<i>Russell 3000 Index</i>	<i>8.4</i>	<i>19.0</i>	<i>16.2</i>	<i>19.0</i>	<i>1.2</i>	<i>13.9</i>	<i>11.4</i>	<i>12.9</i>	<i>12.3</i>	<i>-19.2</i>	<i>25.7</i>	<i>20.9</i>	<i>13.8</i>	
Total International Equity	3.5	14.9	11.1	14.9	-4.5	8.9	5.0	7.5	5.8	-17.6	10.0	16.7	5.2	Oct-10
<i>MSCI EAFE (Net)</i>	<i>3.0</i>	<i>18.8</i>	<i>11.7</i>	<i>18.8</i>	<i>-1.2</i>	<i>8.9</i>	<i>4.4</i>	<i>6.9</i>	<i>5.4</i>	<i>-14.5</i>	<i>11.3</i>	<i>7.8</i>	<i>5.3</i>	
Total Alternatives	2.0	5.5	3.5	5.5	-2.5	3.1	1.3	2.2	-	-6.9	5.3	-3.7	1.3	Mar-15
<i>Total Alternatives Benchmark⁴</i>	<i>1.4</i>	<i>3.6</i>	<i>2.2</i>	<i>3.6</i>	<i>-1.1</i>	<i>5.1</i>	<i>2.8</i>	<i>3.5</i>	<i>-</i>	<i>-5.3</i>	<i>6.2</i>	<i>5.4</i>	<i>2.6</i>	
Total Fixed Income	-0.1	1.4	2.0	1.4	-2.5	-0.9	1.6	1.2	1.5	-6.7	0.1	5.2	1.8	Jul-10
<i>Total Fixed Income Benchmark⁵</i>	<i>-0.5</i>	<i>0.3</i>	<i>1.3</i>	<i>0.3</i>	<i>-2.4</i>	<i>-1.4</i>	<i>1.2</i>	<i>0.9</i>	<i>1.2</i>	<i>-5.4</i>	<i>-0.8</i>	<i>4.5</i>	<i>1.4</i>	
Total Cash & Cash Equivalents	1.1	3.5	2.2	3.5	1.8	1.2	1.2	-	-	1.5	0.0	0.4	1.2	Apr-18
<i>90 Day U.S. Treasury Bill</i>	<i>1.2</i>	<i>3.6</i>	<i>2.3</i>	<i>3.6</i>	<i>1.9</i>	<i>1.3</i>	<i>1.6</i>	<i>1.4</i>	<i>1.0</i>	<i>1.5</i>	<i>0.0</i>	<i>0.7</i>	<i>1.6</i>	

1) Total Policy Benchmark: 45% ICE BofA 91 Days T-Bills / 17% ICE BofA 1-3 Yr US Corp & Govt / 11% BBgBarc US Govt/Credit Int / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE.

2) Total Operating & Short-Term Benchmark: 95% ICE BofA 91 Days T-Bills / 5% BBgBarc US Govt 1-3 Yr.

3) Total Long-Term / Reserves Fund Benchmark: 27% Russell 3000 / 8% MSCI EAFE / 15% Total Alternatives Benchmark / 30% ICE BofA 1-3 Yr US Corp & Govt / 20% BBgBarc US Govt/Credit Int.

4) Total Alternatives Benchmark: 100% HFRI Fund of Funds Composite.

5) Total Fixed Income Benchmark: 64% ICE BofA 1-3 Yr US Corp & Govt / 36% BBgBarc US Govt/Credit Int.

PERFORMANCE REPORT CARD

	% of Portfolio	QTD (%)	FYTD (%)	YTD (%)	1 Yr (%)	2 Yr (%)	3 Yr (%)	5 Yr (%)	7 Yr (%)	10 Yr (%)	2022 (%)	2021 (%)	2020 (%)	Inception (%)	Inception Date
Total University Assets	100.0	2.4	6.9	5.9	6.9	-0.1	5.1	4.7	4.9	4.2	-7.8	7.8	9.5	4.0	Apr-04
<i>Total Policy Benchmark</i>		1.9	5.7	4.4	5.7	0.5	3.1	3.4	3.5	3.0	-4.7	4.3	5.9	3.1	
Total Operating & Short Term	18.1	1.2	3.6	2.3	3.5	1.8	1.2	1.6	1.4	1.0	1.4	0.0	1.1	0.8	Jul-10
<i>Total Operating & Short Term Benchmark</i>		1.1	3.4	2.2	3.4	1.7	1.2	1.5	1.3	1.0	1.2	0.0	0.8	0.8	
Federated Hermes Government Obligations Fund	18.1	1.1	3.5	2.2	3.5	1.8	1.2	1.3	1.1	0.8	1.4	0.0	0.3	2.1	Nov-21
<i>90 Day U.S. Treasury Bill</i>		1.2	3.6	2.3	3.6	1.9	1.3	1.6	1.4	1.0	1.5	0.0	0.7	2.2	
Total Long Term/ Reserves Pool	81.9	2.7	7.9	6.5	7.9	-1.4	4.9	4.6	5.2	4.8	-11.2	9.5	8.8	4.9	Jul-10
<i>Total Long Term/ Reserves Fund Benchmark</i>		2.4	7.4	6.2	7.4	-0.8	4.6	4.8	5.2	4.7	-9.7	8.0	10.0	4.6	
Total Domestic Equity	25.7	7.3	18.4	14.0	18.4	1.5	14.4	10.9	12.6	12.0	-17.7	26.9	18.5	13.5	Jul-10
<i>Russell 3000 Index</i>		8.4	19.0	16.2	19.0	1.2	13.9	11.4	12.9	12.3	-19.2	25.7	20.9	13.8	
Vanguard Institutional Index	17.4	8.7	19.5	16.9	19.5	3.4	14.6	12.3	13.4	12.8	-18.1	28.7	18.4	14.1	Jul-10
<i>S&P 500 Index</i>		8.7	19.6	16.9	19.6	3.4	14.6	12.3	13.4	12.9	-18.1	28.7	18.4	14.1	
Vanguard Mid Cap Index Adm	4.0	4.8	13.7	8.8	13.7	-2.3	12.0	8.6	10.3	10.4	-18.7	24.5	18.2	11.5	Oct-10
<i>Vanguard Mid Cap Index Benchmark</i>		4.8	13.7	8.8	13.7	-2.3	12.0	8.6	10.3	10.5	-18.7	24.5	18.2	11.6	
Loomis Sayles Sm Growth N	2.2	4.6	18.4	9.2	18.4	-6.9	8.0	6.7	11.8	10.1	-22.8	10.2	34.3	7.5	Sep-19
<i>Russell 2000 Growth Index</i>		7.1	18.5	13.6	18.5	-11.2	6.1	4.2	9.3	8.8	-26.4	2.8	34.6	6.6	
Victory Integrity Small Value Y	2.1	3.6	16.7	6.6	16.7	1.5	23.1	5.7	9.1	8.3	-7.7	33.6	1.2	10.1	Oct-10
<i>Russell 2000 Value Index</i>		3.2	6.0	2.5	6.0	-5.8	15.4	3.5	7.7	7.3	-14.5	28.3	4.6	8.9	
Total International Equity	6.7	3.5	14.9	11.1	14.9	-4.5	8.9	5.0	7.5	5.8	-17.6	10.0	16.7	5.2	Oct-10
<i>MSCI EAFE (Net)</i>		3.0	18.8	11.7	18.8	-1.2	8.9	4.4	6.9	5.4	-14.5	11.3	7.8	5.3	
<i>MSCI AC World ex USA (Net)</i>		2.4	12.7	9.5	12.7	-4.7	7.2	3.5	6.3	4.7	-16.0	7.8	10.7	4.3	
William Blair International Growth I	3.1	2.7	14.9	11.3	14.9	-10.5	4.6	4.6	7.1	5.8	-28.3	9.0	32.0	6.8	Jul-12
<i>MSCI AC World ex USA (Net)</i>		2.4	12.7	9.5	12.7	-4.7	7.2	3.5	6.3	4.7	-16.0	7.8	10.7	5.5	
Dodge & Cox Internat'l Stock	3.7	4.3	14.7	10.7	14.7	1.1	12.8	4.9	7.5	5.3	-6.8	11.0	2.1	5.4	Oct-10
<i>MSCI EAFE (Net)</i>		3.0	18.8	11.7	18.8	-1.2	8.9	4.4	6.9	5.4	-14.5	11.3	7.8	5.3	

PERFORMANCE REPORT CARD

	% of Portfolio	QTD (%)	FYTD (%)	YTD (%)	1 Yr (%)	2 Yr (%)	3 Yr (%)	5 Yr (%)	7 Yr (%)	10 Yr (%)	2022 (%)	2021 (%)	2020 (%)	Inception (%)	Inception Date
Total Alternatives	9.0	2.0	5.5	3.5	5.5	-2.5	3.1	1.3	2.2	-	-6.9	5.3	-3.7	1.3	Mar-15
<i>Total Alternatives Benchmark</i>		1.4	3.6	2.2	3.6	-1.1	5.1	2.8	3.5	-	-5.3	6.2	5.4	2.6	
Weatherlow Offshore Fund I Ltd CI IIA	6.0	3.0	6.1	3.7	6.1	-3.7	5.5	5.6	6.1	5.2	-8.9	5.6	24.7	-3.7	Jul-21
<i>HFRI Fund of Funds Composite Index</i>		1.4	3.6	2.2	3.6	-1.1	5.0	3.3	4.0	3.4	-5.3	6.2	10.9	-1.1	
H.I.G. Whitehorse Principal Lending Offshore Feeder Fd, L.P.	3.0	0.0	7.3	3.2	7.3	-	-	-	-	-	-	-	-	7.3	Jul-22
<i>Credit Suisse Leveraged Loan Index</i>		3.1	10.1	6.3	10.1	3.5	6.2	4.0	4.6	4.1	-1.1	5.4	2.8	10.1	
Total Fixed Income	40.4	-0.1	1.4	2.0	1.4	-2.5	-0.9	1.6	1.2	1.5	-6.7	0.1	5.2	1.8	Jul-10
<i>Total Fixed Income Benchmark</i>		-0.5	0.3	1.3	0.3	-2.4	-1.4	1.2	0.9	1.2	-5.4	-0.8	4.5	1.4	
JPMorgan Core Bond	6.6	-0.9	-0.7	2.6	-0.7	-5.2	-3.2	1.2	0.8	1.6	-12.3	-1.1	8.1	0.7	Sep-17
<i>Blmbg. U.S. Aggregate Index</i>		-0.8	-0.9	2.1	-0.9	-5.7	-4.0	0.8	0.4	1.5	-13.0	-1.5	7.5	0.4	
YSU Intermediate Term Bond	5.6	-0.5	0.6	1.9	0.6	-3.5	-2.1	1.6	1.1	1.6	-8.0	-1.3	7.5	3.0	Apr-04
<i>Blmbg. Intermed. U.S. Government/Credit</i>		-0.8	-0.1	1.5	-0.1	-3.8	-2.5	1.2	0.8	1.4	-8.2	-1.4	6.4	2.7	
PGIM High Yield R6	4.0	1.6	7.0	4.7	7.0	-2.8	3.2	3.5	4.7	4.7	-11.5	6.5	5.7	4.0	Jan-17
<i>Blmbg. U.S. Corp: High Yield Index</i>		1.7	9.1	5.4	9.1	-2.5	3.1	3.4	4.5	4.4	-11.2	5.3	7.1	3.7	
YSU Short Term Bond	16.4	-0.2	1.1	1.4	1.1	-1.2	-0.6	1.4	1.1	1.1	-3.3	-0.4	3.7	2.1	Apr-04
<i>ICE BofA 1-3 Yr. Gov/Corp</i>		-0.3	0.5	1.1	0.5	-1.6	-0.9	1.1	0.9	1.0	-3.8	-0.4	3.3	1.9	
Lord Abbett Short Duration Income I	7.9	0.1	1.4	1.8	1.4	-1.4	0.4	1.6	1.7	1.9	-4.6	1.1	3.2	1.6	Apr-18
<i>ICE BofA 1-3 Yr. Gov/Corp</i>		-0.3	0.5	1.1	0.5	-1.6	-0.9	1.1	0.9	1.0	-3.8	-0.4	3.3	1.1	
Total Cash & Cash Equivalents	0.1	1.1	3.5	2.2	3.5	1.8	1.2	1.2	-	-	1.5	0.0	0.4	1.2	Apr-18
<i>90 Day U.S. Treasury Bill</i>		1.2	3.6	2.3	3.6	1.9	1.3	1.6	1.4	1.0	1.5	0.0	0.7	1.6	
Federated Hermes Government Obligations Fund	0.1	1.1	3.5	2.2	3.5	1.8	1.2	1.3	1.1	0.8	1.4	0.0	0.3	1.1	Dec-19
<i>90 Day U.S. Treasury Bill</i>		1.2	3.6	2.3	3.6	1.9	1.3	1.6	1.4	1.0	1.5	0.0	0.7	1.3	

1) Total Policy Benchmark: 45% ICE BofA 91 Days T-Bills / 17% ICE BofA 1-3 Yr US Corp & Govt / 11% BBgBarc US Govt/Credit Int / 8% Total Alternatives Benchmark / 15% Russell 3000 / 4% MSCI EAFE.

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




4) Total Alternatives Benchmark: 100% HFRI Fund of Funds Composite.

5) Total Fixed Income Benchmark: 64% ICE BofA 1-3 Yr US Corp & Govt / 36% BBgBarc US Govt/Credit Int.



SUPPORTING INFORMATION

ECONOMIC OUTLOOK: 2ND HALF 2023

AREA	EXPECTATIONS
 Labor Markets	U.S. may track to 75k-175k jobs per month in Q3-2023; unemployment rate may rise but remain <4.0% by Dec-2023; average hourly wages remain ≈4% YoY
 Manufacturing	Contraction in manufacturing activity continues; supply-chain nearly fully normalized; input prices falling
 Services	Services industry stabilizing and positive; spending remains resilient as US is at full employment, but tighter credit conditions pose some risks
 Inflation	Core CPI remains elevated (≈5% YoY) but likely to move lower throughout 2023; headline CPI likely to fall towards 3%; service sector prices remain stubbornly high due to elevated wage costs
 Fixed Income Markets	10-Yr U.S. Treasury likely range bound between 3.5% and 4.5% this Summer; some uncertainty around Fed policy in Q4-2023; QT continues unabated
 Equity Markets	Volatility may increase in H2-2023; new S&P range ≈ 4,000 to 4,500, some technical support moves towards the higher end; market's assumption for a soft-landing scenario is growing more likely

Source: Clearstead, as of 6/30/2023.
 Expectations for second half of calendar year 2023.

HEADWINDS AND TAILWINDS



TAILWINDS

- Market technicals have improved and are positive; more than the “magnificent seven”
- Housing showing life
- Corporate America working through higher rates
- Services still expanding; consumers still spending down savings



HEADWINDS

- Monetary policy uncertainty amid sticky inflation
- Potential drag from student loan payments resuming
- Labor markets holding up, but softening
- Manufacturing still in contraction, new orders declining

Image source: openai.com DALL-E

GLOBAL INFLATION MIXED

GLOBAL HEADLINE CPI

	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Dev. Markets																												
US	1.7	2.6	4.2	5.0	5.4	5.4	5.3	5.4	6.2	6.8	7.0	7.5	7.9	8.5	8.3	8.6	9.1	8.5	8.3	8.2	7.7	7.1	6.5	6.4	6.0	5.0	4.9	4.0
EU	0.9	1.3	1.6	2.0	1.9	2.2	3.0	3.4	4.1	4.9	5.0	5.1	5.9	7.5	7.5	8.1	8.6	8.9	9.1	10.0	10.7	10.0	9.2	8.5	8.5	6.9	7.0	6.1
Japan	-0.5	-0.4	-1.1	-0.8	-0.5	-0.3	-0.4	0.2	0.1	0.6	0.8	0.5	0.9	1.2	2.5	2.5	2.4	2.6	3.0	3.0	3.7	3.8	4.0	4.3	3.3	3.2	3.5	3.5
UK	0.4	0.7	1.5	2.1	2.5	2.0	3.2	3.1	4.2	5.1	5.4	5.5	6.2	7.0	9.0	9.1	9.4	10.1	9.9	10.1	11.1	10.7	10.5	10.1	10.4	10.1	8.7	8.7
Canada	1.1	2.2	3.4	3.6	3.1	3.7	4.1	4.4	4.7	4.7	4.8	5.1	5.7	6.7	6.8	7.7	8.1	7.6	7.0	6.9	6.9	6.8	6.3	5.9	5.2	4.3	4.4	4.4
Australia	0.9	1.1	1.1	1.1	3.8	3.8	3.8	3.0	3.0	3.0	3.5	3.5	3.5	5.1	5.1	5.1	6.1	6.1	6.1	7.3	7.3	7.3	7.8	7.8	7.8	7.0	7.0	7.0
Switzerland	-0.5	-0.2	0.3	0.6	0.6	0.7	0.9	0.9	1.2	1.5	1.5	1.6	2.2	2.4	2.5	2.9	3.4	3.4	7.3	7.2	7.2	7.2	7.2	7.2	3.4	2.9	2.6	2.2
Norway	3.3	3.1	3.0	2.7	2.9	3.0	3.4	4.1	3.5	5.1	5.3	3.2	3.7	4.5	5.4	5.7	6.3	6.8	6.5	6.9	7.5	6.5	5.9	7.0	6.3	6.5	6.4	6.7
Sweden	1.4	1.7	2.2	1.8	1.3	1.4	2.1	2.5	2.8	3.3	3.9	3.7	4.3	6.0	6.4	7.3	8.7	8.5	8.9	10.8	10.9	11.5	12.3	11.7	12.0	10.6	10.5	9.7
Asia																												
China	-0.2	0.4	0.9	1.3	1.1	1.0	0.8	0.7	1.5	2.3	1.5	0.9	0.9	1.5	2.1	2.1	2.5	2.7	2.5	2.8	2.1	1.6	1.8	2.1	1.0	0.7	0.1	0.2
India	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.5	4.8	5.6	5.8	5.0	5.4	6.3	7.0	6.2	5.8	5.9	6.5	6.1	5.4	5.8	6.2	6.2	5.8	5.1	5.1
Indonesia	1.4	1.4	1.4	1.7	1.3	1.5	1.6	1.6	1.7	1.7	1.9	2.2	2.1	2.6	3.5	3.6	4.4	4.9	4.7	6.0	5.7	5.4	5.5	5.3	5.5	5.0	4.3	4.0
Malaysia	0.1	1.7	4.7	4.4	3.4	2.2	2.0	2.2	2.9	3.3	3.2	2.3	2.2	2.2	2.3	2.8	3.4	4.4	4.7	4.5	4.0	4.0	3.8	3.7	3.7	3.4	3.3	3.3
S Korea	1.4	1.9	2.5	2.6	2.4	2.6	2.6	2.4	3.2	3.8	3.7	3.6	3.7	4.1	4.8	5.4	6.0	6.3	5.7	5.6	5.7	5.0	5.0	5.2	4.8	4.2	3.7	3.3
Taiwan	1.4	1.2	2.1	2.5	1.8	1.9	2.3	2.6	2.6	2.9	2.6	2.8	2.3	3.3	3.4	3.4	3.6	3.4	2.7	2.8	2.7	2.4	2.7	3.1	2.4	2.4	2.4	2.0
Latin America																												
Brazil	5.2	6.1	6.8	8.1	8.4	9.0	9.7	10.3	10.7	10.7	10.1	10.4	10.5	11.3	12.1	11.7	11.9	10.1	8.7	7.2	6.5	5.9	5.8	5.8	5.6	4.7	4.2	3.9
Chile	2.8	2.9	3.3	3.6	3.8	4.5	4.8	5.3	6.0	6.7	7.2	7.7	7.8	9.4	10.5	11.5	12.5	13.1	14.1	13.7	12.8	13.3	12.8	12.3	11.9	11.1	9.9	8.7
Colombia	1.6	1.5	2.0	3.3	3.6	4.0	4.4	4.5	4.6	5.3	5.6	6.9	8.0	8.5	9.2	9.1	9.7	10.2	10.8	11.4	12.2	12.5	13.1	13.3	13.3	13.3	12.8	12.4
Mexico	3.8	4.7	6.1	5.9	5.9	5.8	5.6	6.0	6.2	7.4	7.4	7.1	7.3	7.5	7.7	7.7	8.0	8.2	8.7	8.7	8.4	7.8	7.8	7.9	7.6	6.9	6.3	5.8

Inflation has started to ease in select markets but remains uncomfortably high in most countries.

- Only China and Taiwan have seen negligible rises in inflation
- The U.S., Brazil, and most of Europe have started to see declines in inflation

Bloomberg Inflation Monitor as of 06/30/2023.

GLOBAL ECONOMY PMI DATA

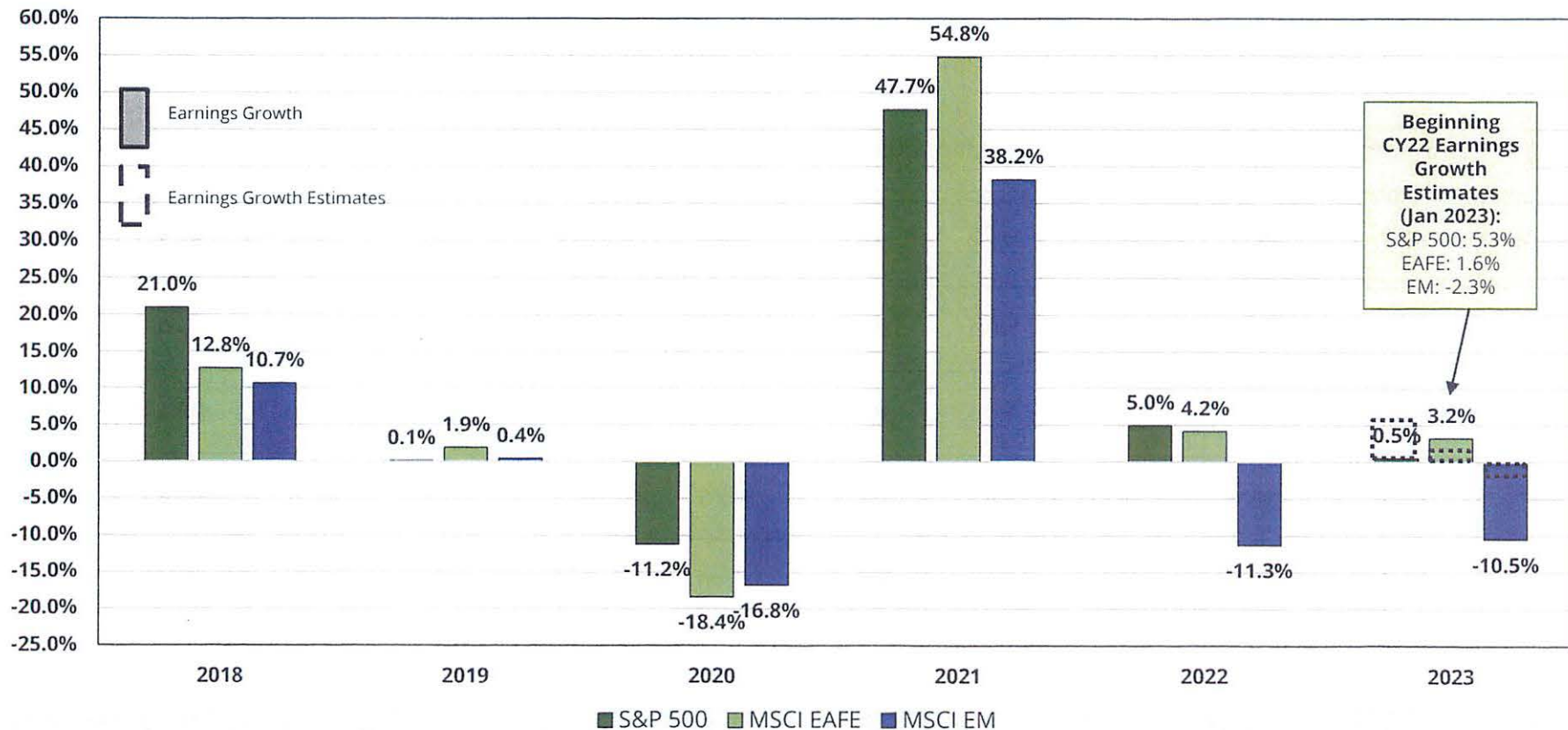
		Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	12M Trend
Global	Mfg	51.1	50.3	49.8	49.4	48.8	48.7	49.1	49.9	49.6	49.6	49.6	48.8	
	Serv	51.1	49.2	50.0	49.2	48.0	48.0	50.1	52.6	54.4	55.4	55.5	54.0	
US	Mfg	52.2	51.5	52.0	50.4	47.7	46.2	46.9	47.3	49.2	50.2	48.4	46.3	
	Serv	47.3	43.7	49.3	47.8	46.2	44.7	46.8	50.6	52.6	53.6	54.9	54.4	
Eurozone	Mfg	49.8	49.6	48.4	46.4	47.1	47.8	48.8	48.5	47.3	45.8	44.8	43.4	
	Serv	51.2	49.8	48.8	48.6	48.5	49.8	50.8	52.7	55.0	56.2	55.1	52.0	
UK	Mfg	52.1	47.3	48.4	46.2	46.5	45.3	47.0	49.3	47.9	47.8	47.1	46.5	
	Serv	52.6	50.9	50.0	48.8	48.8	49.9	48.7	53.5	52.9	55.9	55.2	53.7	
Japan	Mfg	52.1	51.5	50.8	50.7	49.0	48.9	48.9	47.7	49.2	49.5	50.6	49.8	
	Serv	50.3	49.5	52.2	53.2	50.3	51.1	52.3	54.0	55.0	55.4	55.9	54.0	
China	Mfg	50.4	49.5	48.1	49.2	49.4	49.0	49.2	51.6	50.0	49.5	50.9	50.5	
	Serv	55.5	55.0	49.3	48.4	46.7	48.0	52.9	55.0	57.8	56.4	57.1	53.9	
India	Mfg	56.4	56.2	55.1	55.3	55.7	57.8	55.4	55.3	56.4	57.2	58.7	57.8	
	Serv	55.5	57.2	54.3	55.1	56.4	58.5	57.2	59.4	57.8	62.0	61.2	58.5	
S. Korea	Mfg	49.8	47.6	47.3	48.2	49.0	48.2	48.5	48.5	47.6	48.1	48.4	47.8	

Global manufacturing and service PMIs have diverged in many major economies in Q2-2023.

- Manufacturing PMIs are still signaling contracting economic activity, while services PMIs are showing a mild economic expansion
- European and US manufacturing PMIs are consistent with a mild contraction in the manufacturing sector and slowing global trade
- China's services PMI been robust since it re-opened post-COVID, but shows signs of softening

Source: Bloomberg, Markit/HIS.
Data as of 06/30/2023.

GLOBAL EARNINGS OUTLOOK



- Earnings expectations have been revised lower as analysts downgrade their expectations
- Expectations for EM markets have eroded the most in the face of heightened energy costs, global monetary tightening, and the slowdown in the Chinese economy (CY2022 EM earnings ex Russia would be approximately -3%)

Source: Bloomberg, FactSet, Goldman Sachs.
 Data as of 6/30/2023.



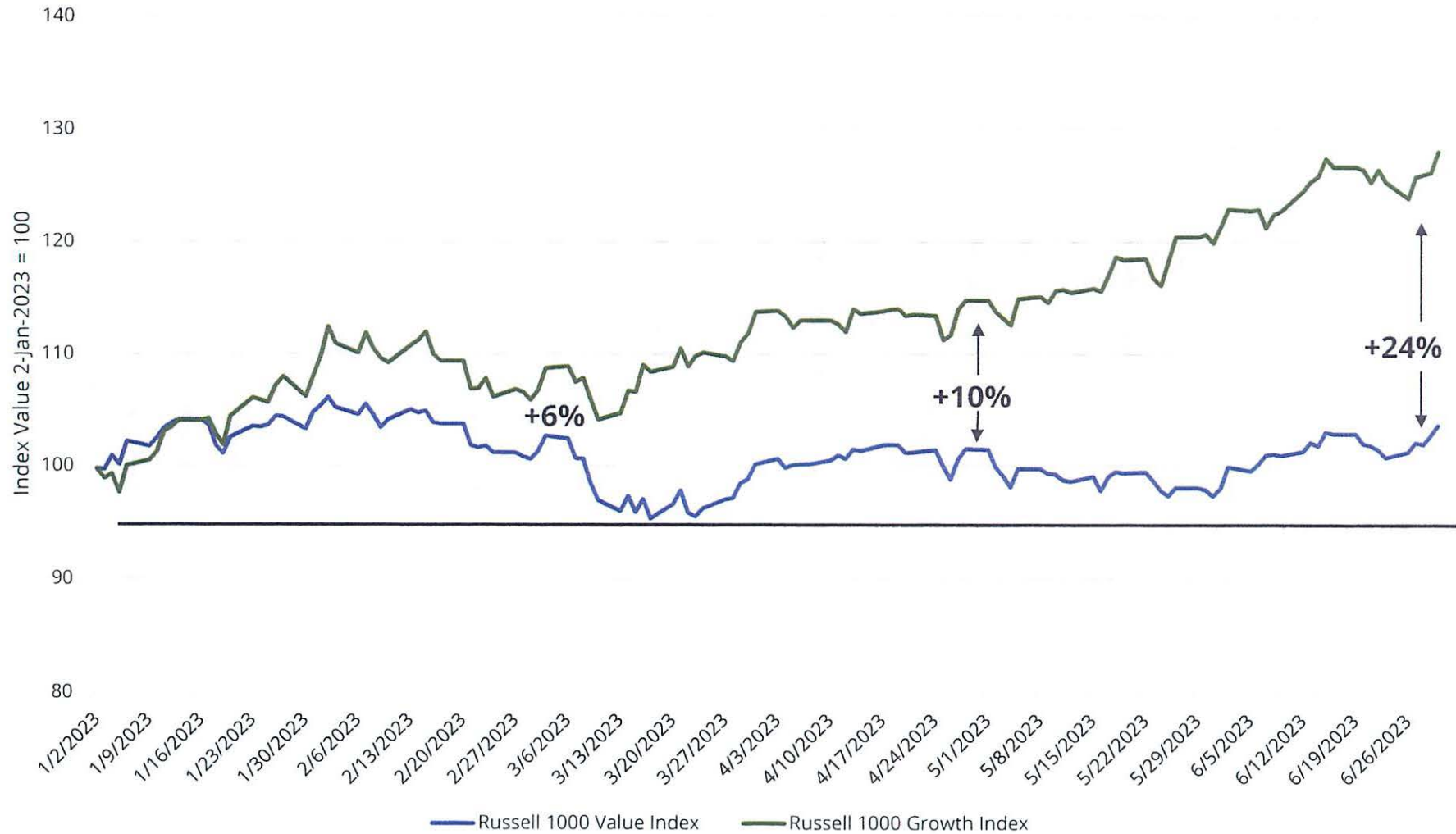
GLOBAL GDP OUTLOOK

	CY - 2022	CY2023 REAL GDP GROWTH ESTIMATES					CY2024 REAL GDP GROWTH ESTIMATES				
	ESTIMATE	IMF	OECD	BBG	GOLDMAN	AVG.	IMF	OECD	BBG	GOLDMAN	AVG.
U.S.	1.6%	1.6%	1.1%	1.2%	1.7%	1.4%	1.1%	0.8%	0.7%	1.6%	1.1%
EU	1.0%	0.8%	0.4%	0.6%	0.5%	0.6%	1.4%	1.3%	1.0%	1.4%	1.3%
China	4.5%	5.2%	5.6%	5.5%	5.4%	5.4%	4.5%	4.6%	4.9%	4.5%	4.6%
Japan	1.9%	1.3%	0.8%	1.2%	1.2%	1.1%	1.0%	0.7%	1.1%	1.2%	1.0%
UK	0.1%	-0.3%	--	0.2%	0.2%	0.0%	1.0%	--	0.9%	0.7%	0.9%
India	6.1%	5.9%	6.3%	7.0%	6.4%	6.4%	6.3%	6.4%	6.0%	6.3%	6.3%

- Global growth has been revised up slightly for the US, Europe, and other developed economies for CY 2023, but forecasts for 2024 have been lowered
 - Growth projections for CY2024 are on-par or below CY2023, and still represent below-trend real growth most of the world
 - Nominal growth for 2023 will much be higher than real growth as elevated inflation levels linger throughout much of the year; nominal growth in 2024 is likely to be lower than in 2023

Source: Clearstead, Nomura, Goldman Sachs, Bloomberg, and IMF.
Data as of 6/30/2023.

GROWTH OUTPERFORMING VALUE

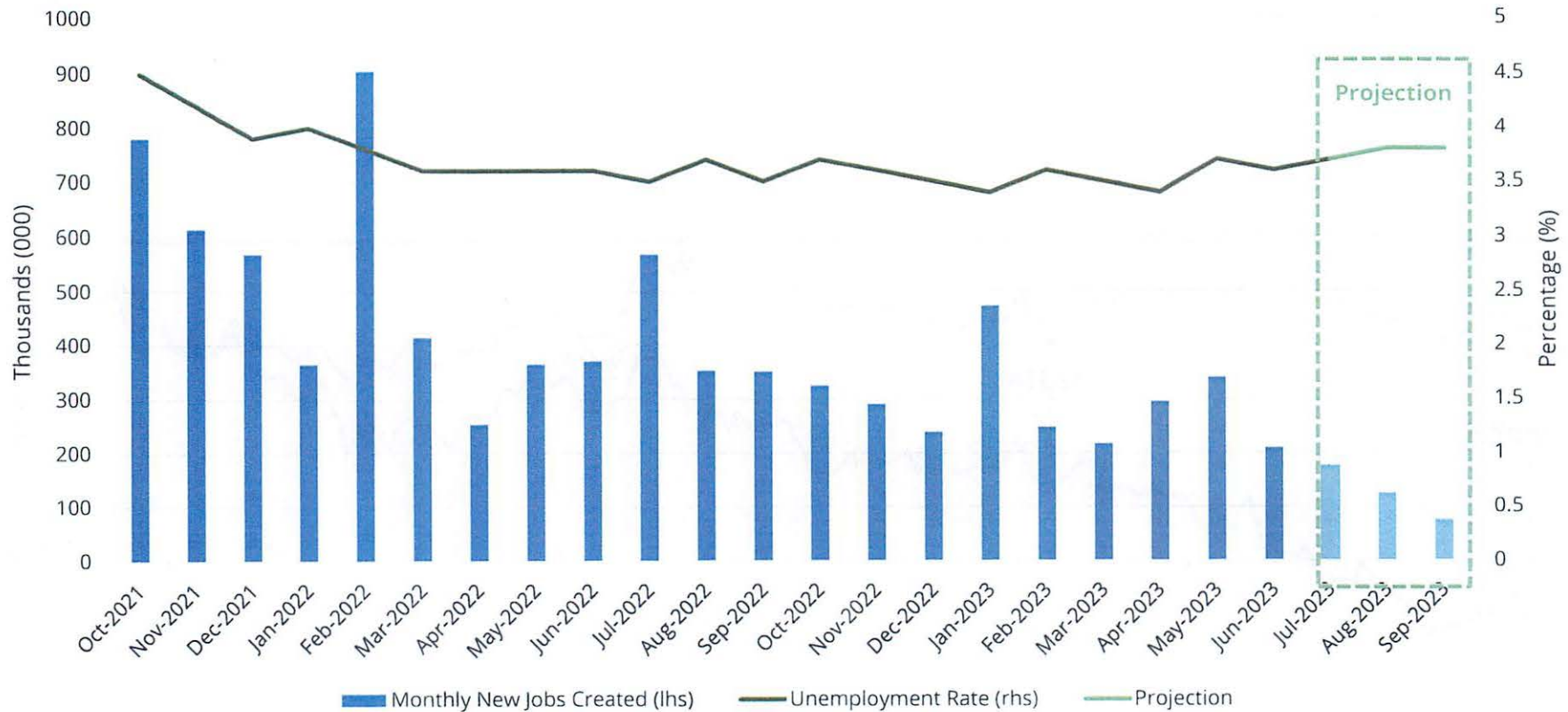


Source: Bloomberg LP, Clearstead, daily data as of 6/30/2023; Past performance is not an indicator of future results.



LABOR MARKET REMAINS TIGHT

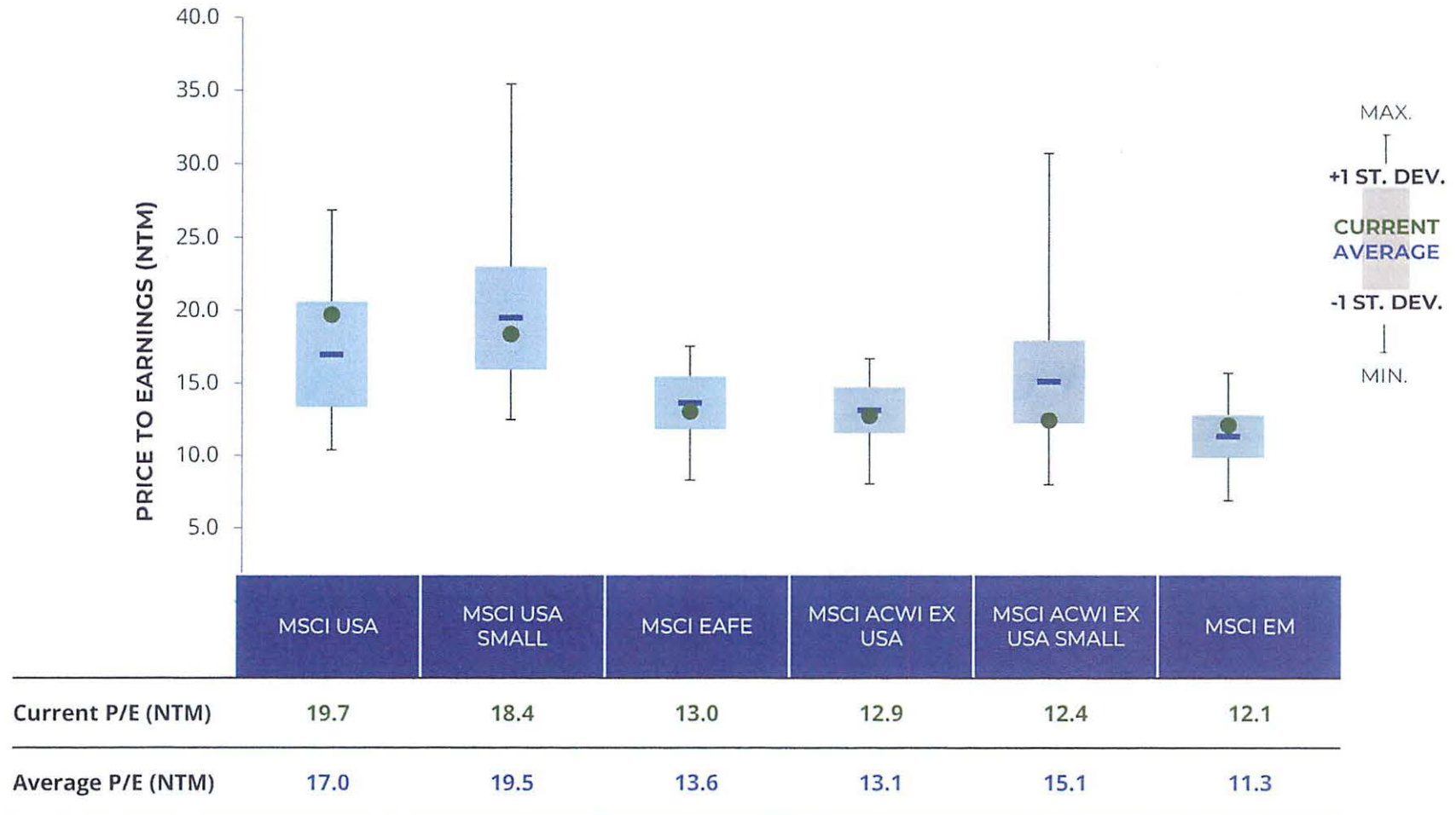
U.S. LABOR MARKET



- June’s non-farm payrolls increased by +209k.
- Average monthly job gains in the first half of 2023 to +278k. June marked the first ‘miss’ versus expectations breaking a string of 14 consecutive months of employment beating estimates.
- The unemployment rate ticked down to 3.6% from 3.7% in the prior month.

Source: Clearstead; BLS 7/7/2023; <https://www.bls.gov/news.release/empst.nr0.htm>, Bespoke Investment Group. Projection assumes steady decline of -50k jobs per month

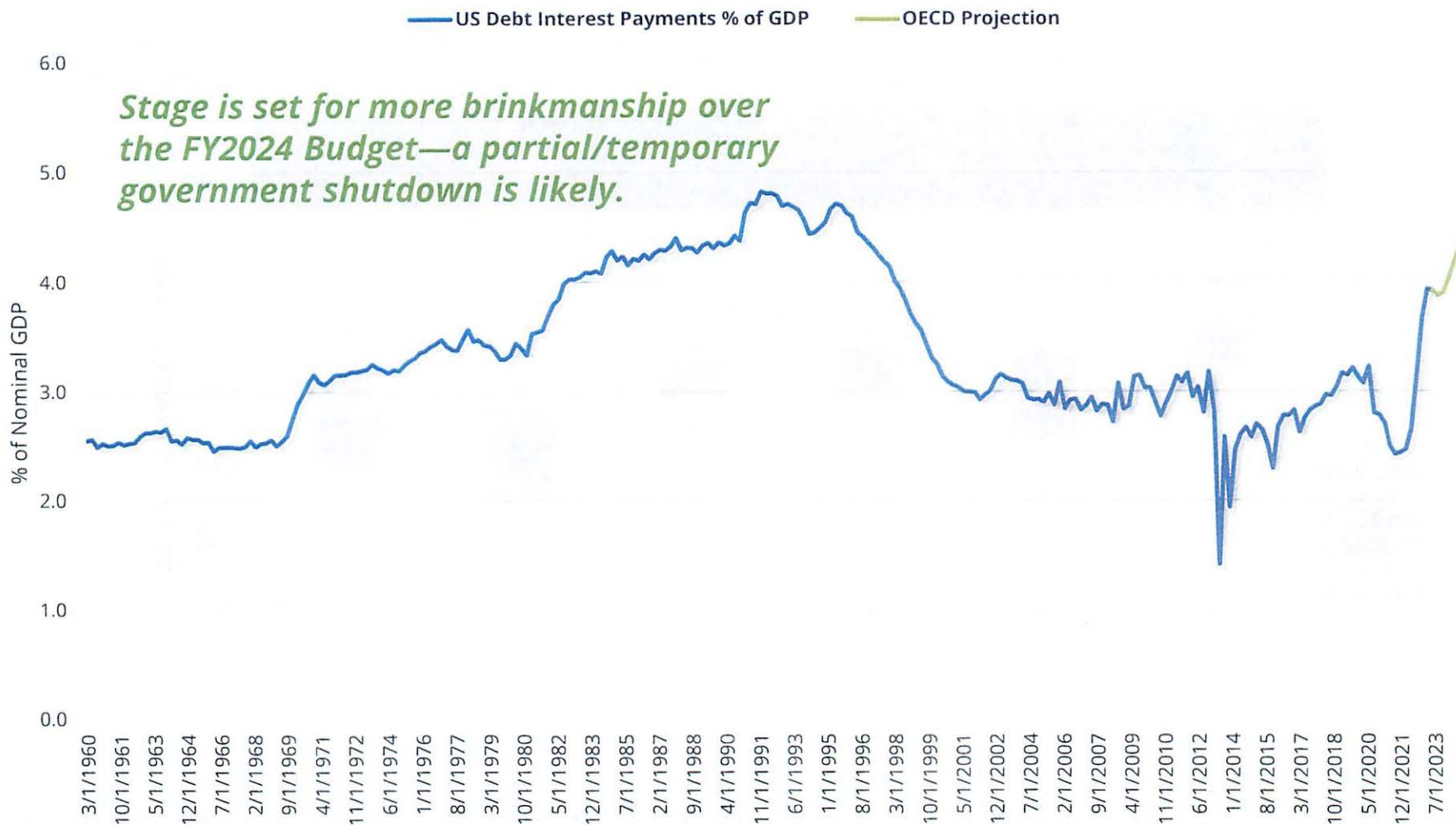
GLOBAL EQUITY VALUATIONS



Source: Bloomberg as of 06/30/2023. 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.

U.S. INTEREST INCREASING

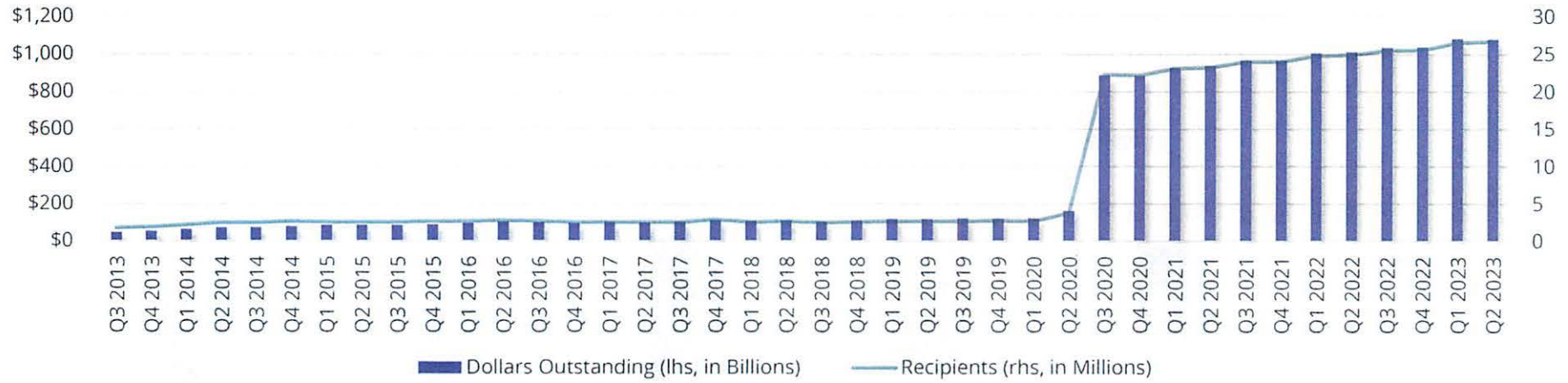
US Debt Payments



Source: Clearstead, Bloomberg LP, OECD 6/30/2023

STUDENT LOAN REPAYMENT

Federal Loans in Forebearance

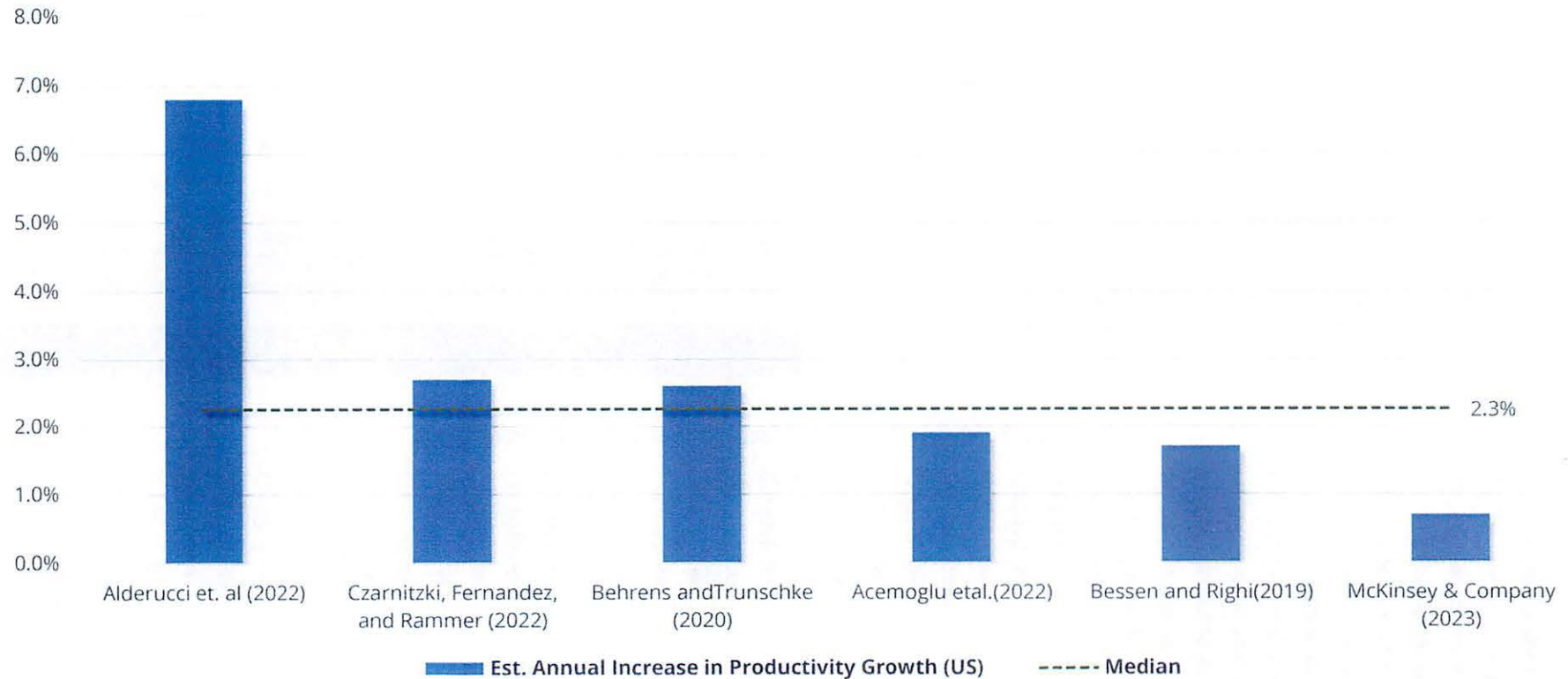


Federal Student Loans By Cohort			
Age Bracket	Total Federal Student Loans (BN)	Number of Borrowers (MM)	Average Amount Owed
24 and Younger	\$103.2	7.1	\$14,535
25 to 34	\$484.8	14.8	\$32,757
35 to 49	\$535.2	12.1	\$44,231
50 to 61	\$239.5	5.0	\$47,900
62 and Older	\$81.0	1.7	\$47,647
Total	\$1,443.7	40.7	\$35,472

- There are over 46 million borrowers with \$1.65 trillion in federal student debt; 40.7 million of which are in federal direct loans totaling \$1.44 trillion
- 26.7 million federal direct loan borrowers are currently in forbearance with average balance of over \$40,000. That equates to \$1.08 trillion of a total of \$1.44 trillion of direct loans.
- **Spending/investment/savings drag estimated at over \$10 billion per month.**

Source: Clearstead, StudentAid.gov (<https://studentaid.gov/data-center/student/portfolio>), as of Q2 2023. Total federal student loans includes Direct Loans (\$1.44 trillion), Federal Family Education Loans (\$194.70 billion), and Perkins Loans (\$3.70 billion); For illustrative purposes, spending drag assumes an average balance of \$40,000 financed over a 10-year period at 6% interest rate across 26.7 million borrowers.

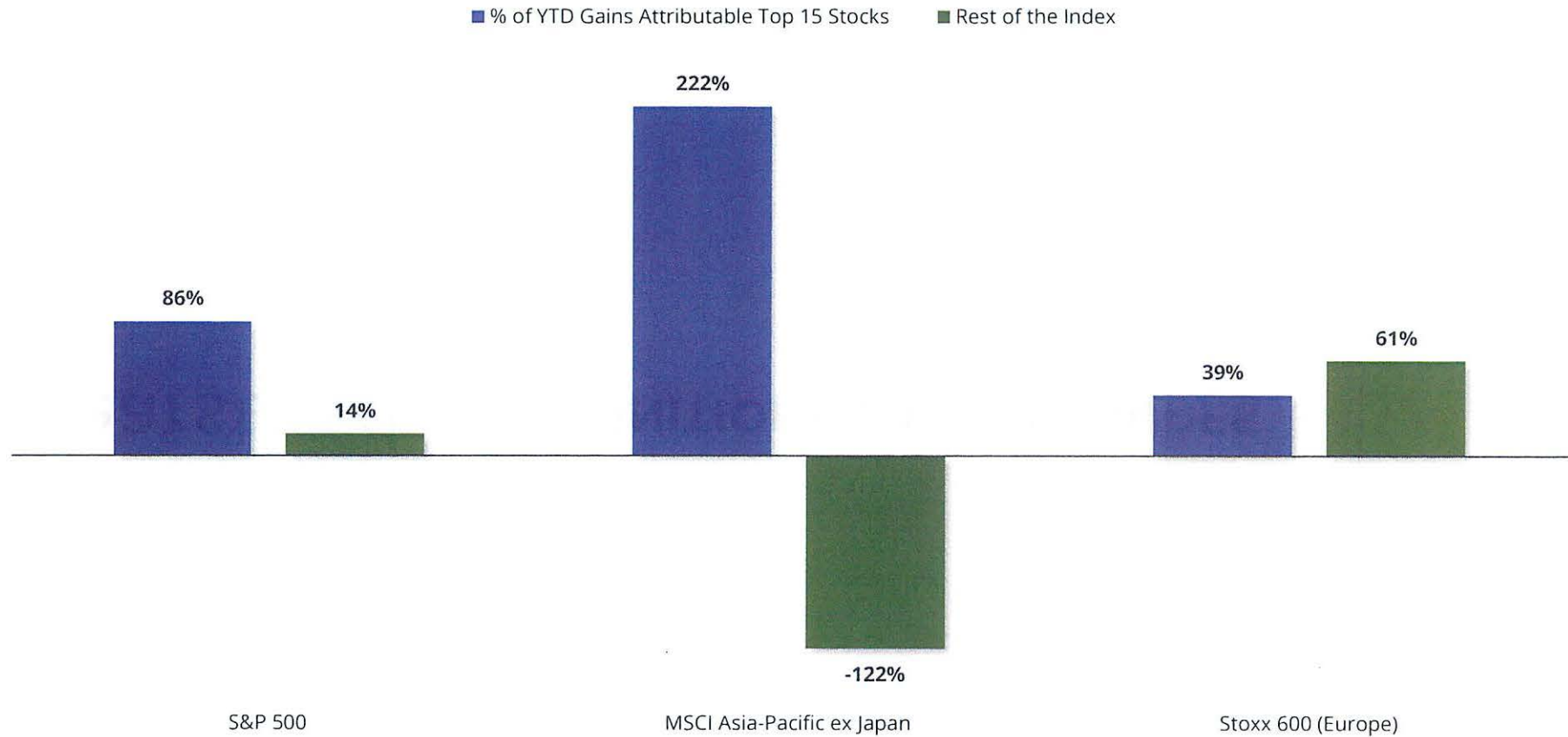
AI EXPECTED TO INCREASE PRODUCTIVITY



- Research points to a pick-up in productivity growth of ~1.5% to ~2.5% per year in the coming decade.
- Societal adjustments, labor disruption, occupational re training, could prove difficult to overcome.

Source: Clearstead, Goldman Sachs Global Investment Research, Goldman Sachs Equity Research: Generative AI – Part 1: Laying Out the Investment Framework, March 26, 2023, McKinsey & Company, The Economic Potential of Generative AI, June 2023, McKinsey estimates for 2022-2040, all others are 2022-2030

TOP STOCKS DRIVING GAINS



- History generally supports a catch-up w/ the rest of the index trading-up to the market leaders
 - However, corrections are deeper when preceded by narrow markets.

Source: Clearstead, Bloomberg LP, Goldman Sachs 6/30/2023, Past performance is not an indicator of future results



DEFINITIONS & DISCLOSURES

DEFINITIONS & DISCLOSURES

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Index Definitions:
The **S&P 500 Index** is a broad-based market index, composed 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 "SMIB". 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 composed of all stocks in the Wilshire 5000 Index below the 2,500th 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 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** generally considered to be a benchmark for long-term interest rates.
The **Merrill Lynch 91-day T-Bill Index** includes U.S. Treasury bills with a remaining maturity from 1 to 126 days.
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 cover minor commercial mortgage-backed securities of investment grade quality (BBB-/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 ARM) 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 regulated) bonds, and manufactured housing. The **BC Global Aggregate Index** is composed of three sub indices, the U.S. Aggregate Index, the Asian-Pacific 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 U.S. 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 USD-denominated debt from U.S. and non-U.S. industrial, utility and financial institutions issues 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 blue-chip fixed rate U.S. dollar-denominated corporate bond market. The **BC Global Treasury ex US Index** includes government bonds issued by investment grade countries outside the United States, in local currencies, that have a remaining maturity of one year or more and are rated investment grade or higher. The **BC Emerging Market Bond Index** is an unmanaged index that total returns for external-currency-denominated debt instruments of the emerging markets. The **BC U.S. Securitized Bond Index** is a composite of asset-backed securities, collateralized mortgage backed securities (CMBS) and fixed rate mortgage backed securities. The **BC Quality Distribution AAA, B, and CC-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 Fundstrat Index, the Emerging Market Index, and the non-USD 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 USD-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 **HFR 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 400 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 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. Commitments included in the NPI are valued at least quarterly, either internally or externally, using standard commercial real estate appraisal methodology. Each property must be independently appraised a minimum of once every three years.
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 Securities Index** is a fixed-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 FE 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 1994.
VIX - The CBOE Volatility Index (VIX) is based on the prices of 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 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.
HFR Emerging Markets: Asia ex-Japan, Global Index, Latin America Index, Russia/Eastern Europe Index. The constituents of the HFR Emerging Markets Index are selected according to their Regional Investment Focus only. There is no investment Strategy criteria for inclusion in these indices. Funds classified as Emerging Markets have a regional investment focus in one of the following geographic areas: Asia ex-Japan, Russia/Eastern Europe, Latin America, Africa or the Middle East.
HFRi EH: Energy/Basic Materials strategies which employ investment processes designed to identify opportunities in securities in specific niche areas of the market in which the Manager maintains a level of expertise which exceeds that of a market generalist.
HFRi EH: Equity Market Neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale.
HFRi EH: Short-Biased strategies employ analytical techniques in which the investment thesis is predicated on an 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 maintains 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 primarily focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or original (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 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 (bonds, credit cards) other than those of a specific corporation.
HFRi RV: Fixed Income - Convertible Arbitrage includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument.
HFRi RV: Multi-Sector 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 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, S&P 500 Index and S&P 500 Growth Index** are a broad-based market index that measure the performance of large capitalization value companies, large capitalization stocks 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 stocks 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 900 Index.
The **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, commonly referred to as "SMIB". The **Russell 3000 Value Index, Russell 3000 Index and Russell 3000 Growth Index** measure the performance of the 3,000 largest U.S. value stocks, 3,000 largest U.S. stocks and 3,000 largest U.S. growth stocks, respectively, based on total market capitalization. The **Russell Microcap Index** measures the performance of the microcap segment of the U.S. equity market. The **Russell Top 200 Value Index** measures the performance of the especially large cap segment of the U.S. equity universe represented by stocks in the largest 200 by market cap that exhibit value characteristics. The **Russell Developed ex US Large Cap Index** measures the performance of the largest investable securities in developed countries globally, excluding companies 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 250th rank. The **Wilshire 4500 Index** is comprised of all stocks in the Wilshire 5000 Index minus the stocks in the S&P 500. The **Wilshire Real Estate Securities Index (RESI)** is comprised of publicly traded real estate equity securities.

All MSCI indexes are gross, defined as With Dividends. Gross total return indexes are defined as the sum of a company's dividend payments plus 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 indexes 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 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 that excludes Japan. The **MSCI AC (All Countries) 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 ex US Gross Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the U.S. The **MSCI ACWI ex US Small Cap Growth Gross Index** is a market capitalization-weighted total return index designed to measure the equity market performance of developed and emerging markets. The **MSCI ACWI ex US Small Cap Growth 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 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 Europe, Australasia, and Far Eastern markets. The **MSCI EAFE Value Gross Index** is a market capitalization-weighted index that mirrors 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 U.S. equity market. The **MSCI US Mid Cap 450 Index** represents the universe of medium capitalization companies in the U.S. equity market. The **MSCI US Prime Market Growth Index** represents the growth companies of the MSCI US Prime Market 750 Index. The **MSCI US Prime Market Value Index** represents the value companies of the MSCI US Prime Market 750 Index.

The **Barclays Capital (BC) U.S. Treasury Index** is designed to cover public debt 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 91 days. The **BC U.S. Credit Bond Index** is designed to cover publicly traded U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, industry, 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 foreign debt guaranteed by the U.S. government. The **BC MBS Index** is designed to track common mortgage-backed securities of investment grade quality (Baa1/Baa2 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 ARM) issued by Ginnie Mae (Ginnie Mae), Fannie Mae (FHLM), 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 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 12 months and are part of a public deal-up of U.S. Treasury Inflation-Linked Index securities. The **BC U.S. 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 US dollar-denominated, non-investment grade, fixed rate, taxable corporate debt. 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 1-15 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** measures 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 held in the US market. The **BC Emerging Market Bond Index** is an unmanaged index that tracks returns for selected emerging market debt instruments of the emerging markets. The **BC U.S. Securitized Bond Index** is a composite of asset-backed securities, including mortgage-backed securities (MBS) and structured finance securities (SFS). The **BC Quality Distribution AA, B, and CC-D Index** measures the respective credit qualities of U.S. corporate and specified foreign debentures and secured notes. The **BC Universal Index** represents the union of the U.S. Aggregate Index, the U.S. High Yield Corporate Index, the iBoxx International mortgage backed securities (MBS) index and fixed rate mortgage backed securities. The **BC Quality Distribution AA, B, and CC-D Index** measures the respective credit qualities of U.S. corporate and specified foreign debentures and secured notes. The **BC Universal Index** represents the union of the U.S. Aggregate Index, the U.S. High Yield Corporate Index, the iBoxx International mortgage backed securities (MBS) index and fixed rate mortgage backed securities. 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 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 comprised of Treasury Inflation-Linked Index securities, Treasury Inflation-Protected Securities (TIPS), and agency bond issues that have maturities of one to three 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 securities with maturities of one to three years.

The **BC High Yield Index** covers the universe of fixed rate, non-investment grade debt: Payment in Kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) that are included in the EMG countries are included. Origin issue types, step-up coupon structures, and led assets are included. The **BC Intermediate Government Index** measures the performance of intermediate U.S. government securities. The **BC Intermediate Government/Credit 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 large issues of U.S. government, investment grade corporate, and investment grade international dollar-denominated bonds that have maturities between 5 and 10 years and are actively traded.

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, private equity, and special situation managers from 1960 to December 31, 2017. The performance of this index lags by 1 quarter. The **Bank of America Merrill Lynch (ML) 91-day T-Bill Index** tracks U.S. Treasury bills with a remaining maturity from 1 up to 3 months. The **BoFA ML US High Yield Master II Index** tracks the performance of below investment grade US dollar-denominated corporate bonds (junior) issued in the US market. Qualifying bonds have a one-year remaining term to maturity, are fixed coupon, schedule and not afloat, outstanding of \$100 million. The **BoFA ML All US Convertibles Index** consists of convertible bonds traded in the U.S. dollar-denominated investment grade and non-investment grade convertible securities sold into the U.S. market and publicly traded in the United States. The **BoFA ML US Corp & Gov 1-3 Yrs Index** tracks the performance of U.S. dollar-denominated investment grade government and corporate debt issued in the U.S. domestic bond market with at least 1 year and less than 3 years remaining to maturity, including U.S. Treasury, U.S. agency, foreign governments, supranational and corporate securities. The **BoFA ML U.S. High Yield BB-B Constrained Index** is a modified issuer, capitalization-weighted index of U.S. dollar-denominated, below-investment grade corporate debt publicly issued in the U.S. domestic market. The **BoFA Merrill Lynch US Year Treasury 1-3 Year Index** tracks the performance of the direct sovereign debt of the U.S. Government having a maturity of at least one year and less than three years. The **BoFA ML Treasury Rate CMS 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 **CI 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 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 approximately 22 countries with maturities ranging from one to five years. The **CREIT Property Index (NPI)** represents quarterly time series composite total rate of return measure of a very large pool of individual common real estate properties acquired in the private market. The index represents apartment, hotel, 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 25 designated agent. In addition these properties that are included must be investment grade, non-afloat and all income producing and all development projects are eligible. Commitments not in force in the NPI are valued at total 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 **NCRI 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 **JP Morgan Emerging Markets Bond Index Plus (EMBI+)** Index tracks total returns for (a) fixed external debt instruments (external master foreign currency denominated fixed income) in the emerging markets. The **JP Morgan GBI Global ex US Index** represents the total return performance of major non-US bond markets. The **HRF Funds of Funds Index (FFOI)** is an equal weighted index designed to measure the performance of hedge funds 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 micro and offshore funds and all returns are reported in USD. **HRF 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 prices range broadly across equity, fixed income, derivatives or other security types. Fixed income strategies are typically quantifiable while the ongoing relationship between instruments also, in some cases, identify attractive positions in which the risk-adjusted spread between these instruments represents an attractive opportunity for the investment manager. By position may be involved in corporate transactions outside strategies. **HRF ED: Merger Arbitrage** strategies which employ an investment thesis 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 mid-cap stocks providing coverage of developed and emerging markets, excluding the US. The **FTSE NAREIT Developed Index** is a global market capitalization-weighted index comprised of listed real estate securities from developed market countries in North America, Europe, and Asia. The **FTSE Global Equity Index Series (GLS)**, 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 index is published monthly. Please Note: The performance of this index lags by 1 month. The **Credit Suisse Leveraged Loan Index** is a market value-weighted index designed to represent the investable universe of the U.S. dollar-denominated leveraged loan market. The **Dow Jones (DJ) US Commodities 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 comprised 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 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) Indexes** were created to benchmark portfolios of stocks, bonds and cash. Each index is made up of composite indexes representing three asset classes. The asset class indexes are weighted differently within each target date index depending on the time horizon. Each month, the allocations among the asset class indexes are rebalanced to reflect an increasingly conservative asset mix. The **Morningstar Lifetime Allocation Index Series** consists of 13 indexes (today, 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 allocations methodologies developed by Morningstar Associates, a leader in asset allocation research and a Morningstar category since 2006. The indexes provide broad asset class exposure to global equities, global fixed income, alternatives, 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 all investors who are comfortable with lower average exposure to equity market volatility, investors who are comfortable with average exposure to equity market volatility, and well-timed investors who are comfortable with higher average exposure to equity market volatility, respectively.

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