



INVESTMENT WORKSHOP

UNIVERSITY OF HOUSTON SYSTEM

AUGUST 2021



WORKSHOP OVERVIEW & GOALS

- Review current UHS portfolio & compare to peers
- Explore asset classes and expectations
- Preview topics likely to be discussed at future meetings



AGENDA FOR TODAY

- **Asset Allocation**
 - UHS asset allocation and peer comparison
 - Role of each asset class
- **Active vs. Passive Management**
 - Current use of passive management in UHS portfolio
 - Additional opportunities for passive management
- **Public Equity**
 - Review of current managers and fees
 - Introduction to global equity
- **Fixed Income**
 - Review of current sub asset classes
 - Introduction to potential new sub asset classes
- **Peer Benchmarking**
 - Review of NACUBO and Investment Metrics
- **Topics for Future Discussion**





ASSET ALLOCATION

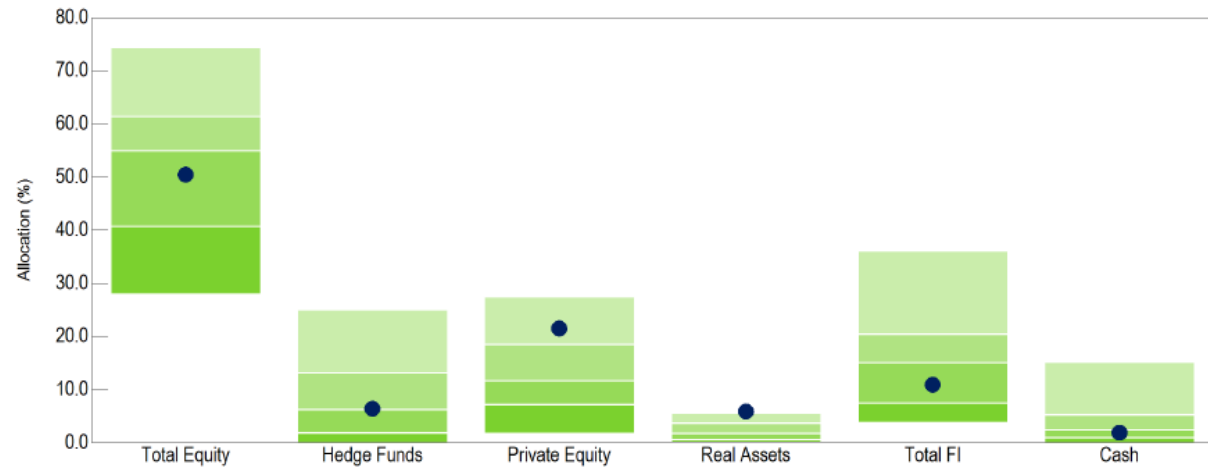
- Peer Comparison
- Return Expectations



HOW DOES UHS COMPARE TO PEERS?

- Compared to Endowments & Foundations, UHS asset allocation is broadly in line with peers, though overexposed to Real Assets.
- Private Equity may seem high, but is in line with universities. Also, UHS combined level of Private + Public Equity is fairly typical.

Total Plan Allocation vs. InvMetrics All E&F > \$500mm Net
As of March 31, 2021



	Allocation (Rank)											
5th Percentile	74.4		25.1		27.5		5.6		36.1		15.1	
25th Percentile	61.4		13.2		18.6		3.8		20.5		5.3	
Median	55.0		6.3		11.8		1.8		15.2		2.5	
75th Percentile	40.8		1.9		7.3		0.6		7.6		1.1	
95th Percentile	28.1		0.0		1.9		0.1		3.8		0.0	
# of Portfolios	39		24		35		16		38		39	
● UHS Endowment Fund	50.5	(62)	6.4	(50)	21.5	(17)	5.9	(4)	10.9	(67)	1.9	(55)



ASSET CLASSES: DEFINITIONS & COMMENTARY

	Asset Class	Rationale and Commentary
Public Equity	U.S. Equity	<ul style="list-style-type: none"> U.S. Equities are a logical place to utilize passive management (index funds). It can be difficult for managers to outperform (consistently or in sufficient magnitude), particularly within Large Cap; cost savings can be significant.
	Int'l Equity	<ul style="list-style-type: none"> International Equity represents non-US developed exposure, which is a key portion of the global market.
	Emerging Market Equity	<ul style="list-style-type: none"> Emerging market equities remain attractive and offer robust total returns; small cap/consumer focused strategies in particular offer a structural bias away from commodity exposures and state-owned enterprises.
	Global Equity	<ul style="list-style-type: none"> Global Equity allows managers build "best ideas" portfolios of stocks in U.S. and non-U.S. markets; this flexibility has allowed strong managers to consistently outpace global equity markets over time (MSCI ACWI Index). Geographic fluctuations have been modest and are typically a byproduct of stock selection, not a manager's desire to tactically overweight / underweight U.S. or non-U.S.
Fixed Income	Treasuries & TIPS	<ul style="list-style-type: none"> A dedicated allocation to Treasuries & TIPS is designed to provide both defense and liquidity, enabling pursuit of higher risk/return elsewhere and providing funds to rebalance amid downturns.
	Core Bonds	<ul style="list-style-type: none"> Core Bonds provide safe haven exposure, with a bit more risk / reward than Treasuries & TIPS.
	Diversified Fixed Income	<ul style="list-style-type: none"> Diversified fixed income strategies invest across a broad spectrum of credit market sectors including high yield, levered loans, and emerging market debt. These investments look to earn income and exploit credit spread changes across credit cycles.
Hedge Funds	Hedge Funds	<ul style="list-style-type: none"> Hedge Funds use a variety of strategies to earn returns, and can include event-driven, market neutral, merger arbitrage, and global macro approaches. For UHS, they are meant to serve as diversifiers.
Private Markets	Private Equity and Debt	<ul style="list-style-type: none"> Private Equity and Private Credit are sources of investment capital provided by institutions and high net worth individuals for the purposes of acquiring interests in companies and/or products. The role in a portfolio is as a return enhancer, with the premium earned over other investment options serving to compensate for the risk associated with illiquidity.
	Real Assets	<ul style="list-style-type: none"> These funds have a mix of real estate and other real asset exposure, like energy, commodities, and natural resources.



NEPC CAPITAL MARKETS FORECASTS: LOWER RETURNS

	Asset Class	03/31/2021 10-Year	Annual Change
	Cash	1.3%	+0.6%
	US Inflation	2.3%	+0.6%
Equity	US Large-Cap Equity	5.1%	-1.5%
	Non-US Developed Equity	5.3%	-2.2%
	Emerging Market Equity	7.4%	-2.8%
	Global Equity*	5.8%	-1.9%
	Private Equity*	9.0%	-1.9%
Fixed Income	US Treasury Bond	1.6%	+1.0%
	US Aggregate Bond*	2.1%	+0.5%
	US TIPS	1.7%	+0.5%
	US High Yield Corporate Bond	3.2%	-2.4%
	Private Debt*	6.5%	-1.5%
Real Assets	Commodity Futures	1.7%	+0.3%
	Gold	3.6%	-
	Core Real Estate	4.6%	+0.1%
	Private Real Assets - Infrastructure	5.4%	-0.8%
Multi-Asset	60% S&P 500 & 40% US Aggregate	4.2%	-0.7%
	60% MSCI ACWI & 40% US Aggregate	4.6%	-1.0%
	Hedge Fund*	4.3%	-0.7%

Note: Projected returns above do not include or assume any outperformance from active management (alpha)

*Calculated as a blend of other asset classes



ACTIVE VS. PASSIVE MANAGEMENT



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FEE REVIEW: UHS PUBLIC EQUITY MANAGERS

	Allocation	Asset Class	Active/Passive	Management Fee
Northern Trust Russell 3000 Index Fund	13.4%	US Equity	Passive	0.05%
Columbia Focused Large Cap Growth	7.5%	US Equity	Active	0.55%
Vulcan Value Partners	8.1%	US Equity	Active	0.60%
William Blair International Growth	7.3%	International Equity	Active	1.00%
Silchester International Value	7.6%	International Equity	Active	0.74%
Global Alpha Int'l Small Cap	3.3%	International Equity	Active	0.65%
Oldfield Emerging Markets	1.5%	Emerging Equity	Active	0.90%
Somerset Global Emerging Markets	1.5%	Emerging Equity	Active	0.65%
Edgbaston Asian Equity	1.3%	Emerging Equity	Active	1.25%

Only 13.4% of the portfolio is currently passively managed

ACTIVE MANAGEMENT: NEPC PHILOSOPHY

- **NEPC's views on active vs. passive management in public markets are informed by market history and investor experience**
- **We specifically focus on two considerations (or "tests") to make this recommendation to our clients*:**
 - High Dispersion of Manager Returns
 - Is there a significant difference in returns between top quartile and bottom quartile managers in the asset class?
 - Median Manager Beats the Benchmark
 - In essence, does the average manager beat the relevant index over the long term?
- **Additionally, passive management may be impractical or costly to implement in some asset classes. In such cases, we may favor active management for basic exposure (not to generate outperformance)**



*Combination of 10-year annualized returns and rolling 3-year annualized returns

PUBLIC EQUITIES: ACTIVE VS. PASSIVE

Equities

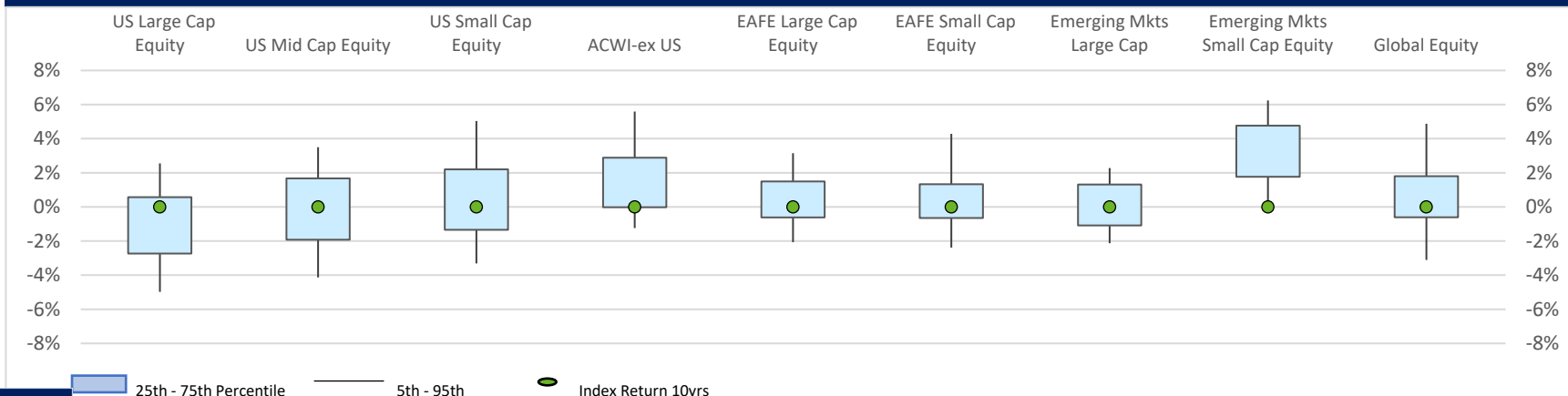
Larger cap markets tend to be more efficient and provide fewer opportunities for alpha generation through active management

Active management is more attractive outside the US and in smaller cap stocks

NEPC Active Management Tests

Asset Class	Test 1 Dispersion	Test 2 Median Outperf
US Large Cap	Red	Red
US Mid Cap	Green	Red
US Small Cap	Green	Green
ACWI ex-US	Green	Green
EAFE Large Cap	Red	Green
EAFE Small Cap	Green	Green
EM Large Cap	Red	Green
EM Small Cap	Green	Green
Global Equity	Green	Green

10 Year Excess Returns – Net of Fees



Benchmarks: US Large Cap (S&P 500), US Small Cap (Russell 2000), ACWI ex-US (MSCI ACWI ex-US), EAFE Large Cap (MSCI EAFE), EAFE SC (MSCI EAFE SC), EM Large Cap (MSCI Emerging Markets), EM Small Cap SC (MSCI EM SC), Global Equity (MSCI ACWI)

Source: eVestment

FIXED INCOME: ACTIVE VS. PASSIVE

Overview

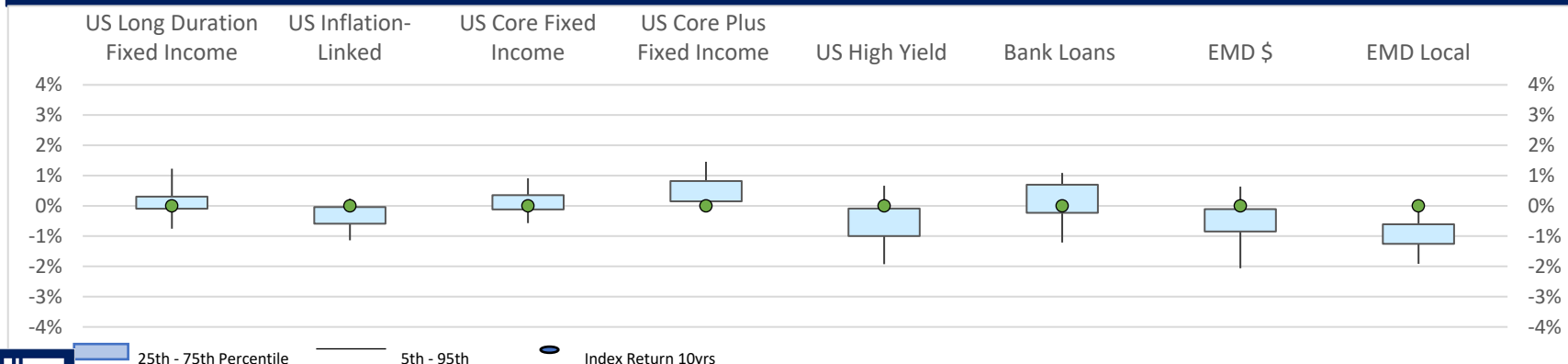
Fixed income focus may often be obtaining exposure rather than alpha (outperformance)

NOTE: Diversified Fixed Income does not appear here but merits strong consideration. Diversified Fixed Income features meaningful manager dispersion; by definition these “unconstrained” strategies can be difficult to benchmark against an index.

NEPC Active Management Tests

Asset Class	Test 1 Dispersion	Test 2 Median Outperf
US Long Duration	Red	Red
US Inflation-Linked	Red	Red
US Core Bonds	Green	Green
US Core Plus	Green	Green
US High Yield	Red	Red
Bank Loans	Red	Red
EMD Dollar	Red	Red
EMD Local	Red	Red

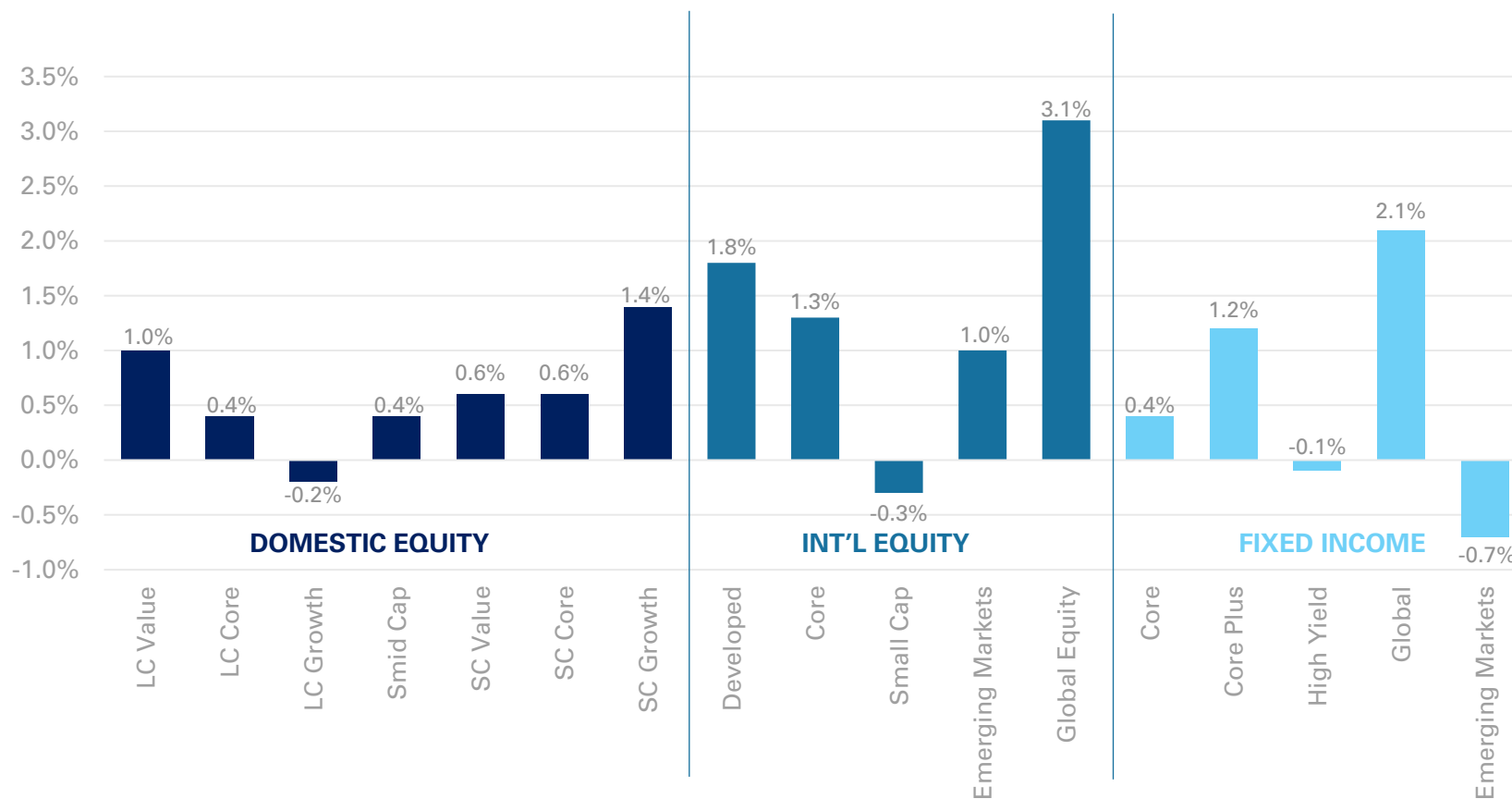
10 Year Excess Returns – Net of Fees



Benchmarks: Core FI and Core Plus (Barclays Agg), US Long Duration (Barclays Long Govt/Credit), US Inflation-Linked (Barclays US TIPS), High Yield (Barclays US High Yield), Bank Loans (S&P/LSTA Leveraged Loan), EMD \$ (JPM EMBI Global), EMD Local (JPM GBI Global Diversified Unhedged). Source: eVestment

NEPC MANAGER RESEARCH SUCCESS

NEPC CLIENTS' PUBLIC MARKETS MANAGER PERFORMANCE AVERAGE EXCESS RETURNS 2011-2020



The data represents the average excess return above the benchmark, gross of fee, of all current or former managers across all current or former NEPC clients, excluding outliers. Outliers are defined as accounts two standard deviations from the median annual performance for each asset class. Not all managers were placed by NEPC. All plan and sponsor types reported through InvestorForce (part of Investment Metrics) are included. Does not include passively managed accounts (index funds), accounts NEPC does not advise on, or accounts being funded or liquidated.



PUBLIC EQUITY



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INVESTMENT POLICY RECOMMENDATIONS

Asset Group	Current UHS Portfolio	Current UHS Investment Policy	NEPC Proposed
US Equity	28.2	23.0	22.0
International Equity	18.0	17.0	10.0
Emerging Markets	4.3	5.0	5.0
Global Equity			15.0
Public Equities	50.4	45.0	52.0
Private Equity	21.5	25.0	22.0
Private Debt			3.0
Private Real Assets/Real Estate	5.9	6.0	6.0
Private Markets	27.3	31.0	31.0
Core/Core Plus Fixed Income	9.1	12.0	4.0
Treasuries/TIPS			4.0
Diversified Fixed Income	1.9		4.0
Fixed Income	11.0	12.0	12.0
Hedge Funds	6.4	5.0	5.0
Liquid Real Assets	3.0	4.0	
Multi-Asset	9.4	9.0	5.0
Cash	1.9	3.0	
Cash	1.9	3.0	

- **Addition of Global Equity to Public Equities exposure should increase alpha opportunities for UHS**

- Complementary managers will be introduced to the portfolio
- Would seek to optimize public equity structure and eliminate liquid real assets
- Public equity exposure would only be 2% higher than in current portfolio

Measure	Current UHS Portfolio	Current UHS Investment Policy	NEPC Proposed
Expected Return 10 Yr (Geometric)	6.4 %	6.5 %	6.7 %
Standard Deviation (Asset)	16.0 %	15.8 %	16.5 %
Sharpe Ratio (10 Years)	0.35	0.36	0.36



Expected returns do not reflect assumption of manager outperformance (alpha)
Current as of 3/31/21021

FEE REVIEW: UHS PUBLIC EQUITY MANAGERS

	Asset Class	Active/Passive	Management Fee
Northern Trust Russell 3000 Index Fund - Lending	US Equity	Passive	0.05%
Columbia Focused Large Cap Growth	US Equity	Active	0.55%
Vulcan Value Partners	US Equity	Active	0.60%
William Blair International Growth	International Equity	Active	1.00%
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Global Alpha Int'l Small Cap	International Equity	Active	0.65%
Oldfield Emerging Markets	Emerging Equity	Active	0.90%
Somerset Global Emerging Markets	Emerging Equity	Active	0.65%
Edgbaston Asian Equity	Emerging Equity	Active	1.25%
Global Equity Manager 1	Global Equity	Active	0.68%
Global Equity Manager 2	Global Equity	Active	0.75%
Global Equity Manager 3	Global Equity	Active	0.75%
Current Manager Fees – Public Equity			0.56%
Projected Manager Fees – Public Equity			0.56%



GLOBAL EQUITY: RECOMMENDED MANAGERS

Key Statistics	UHS Global Equity Managers
Realized Alpha	5.2%
Beta	1.0
Tracking Error	3.8%
Diversification Ratio	1.62
Information Ratio	1.38
Style	Neutral
Upside Market Capture	107%
Downside Market Capture	82%

	US / Developed Markets Exposure	Emerging Markets Exposure
Average	96%	4%
Min	65%	0%
Max	100%	10%

The combination of managers profiled is compelling given the significant historical alpha coupled with upside participation and protection on the downside.

Over the last ten years, the combination of the three profiled managers has shown limited geographic rotation with total emerging markets exposure between 0% and 10%, with an average of 4%.





FIXED INCOME



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FIXED INCOME: A LOOK AHEAD FOR UHS

Asset Group	Current UHS Portfolio	Current UHS Investment Policy	NEPC Proposed
US Equity	28.2	23.0	22.0
International Equity	18.0	17.0	10.0
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Private Real Assets/Real Estate	5.9	6.0	6.0
Private Markets	27.3	31.0	31.0
Core/Core Plus Fixed Income	9.1	12.0	4.0
Treasuries/TIPS			4.0
Diversified Fixed Income	1.9		4.0
Fixed Income	11.0	12.0	12.0
Hedge Funds	6.4	5.0	5.0
Liquid Real Assets	3.0	4.0	
Multi-Asset	9.4	9.0	5.0
Cash	1.9	3.0	
Cash	1.9	3.0	

Reconfiguring Fixed Income (and increasing to 12% Policy Target) should provide essential downside protection for UHS

- Introduce Treasuries / TIPS; they offer strongest liquidity and defense.
- Fixed Income environment today is challenged. Allowing managers flexibility to rotate across sectors and duration (even negative duration) can facilitate outperformance. This would be labeled “Diversified Fixed Income” for UHS.
- Core Fixed Income affords safe haven exposure, and would remain, though at a reduced level.

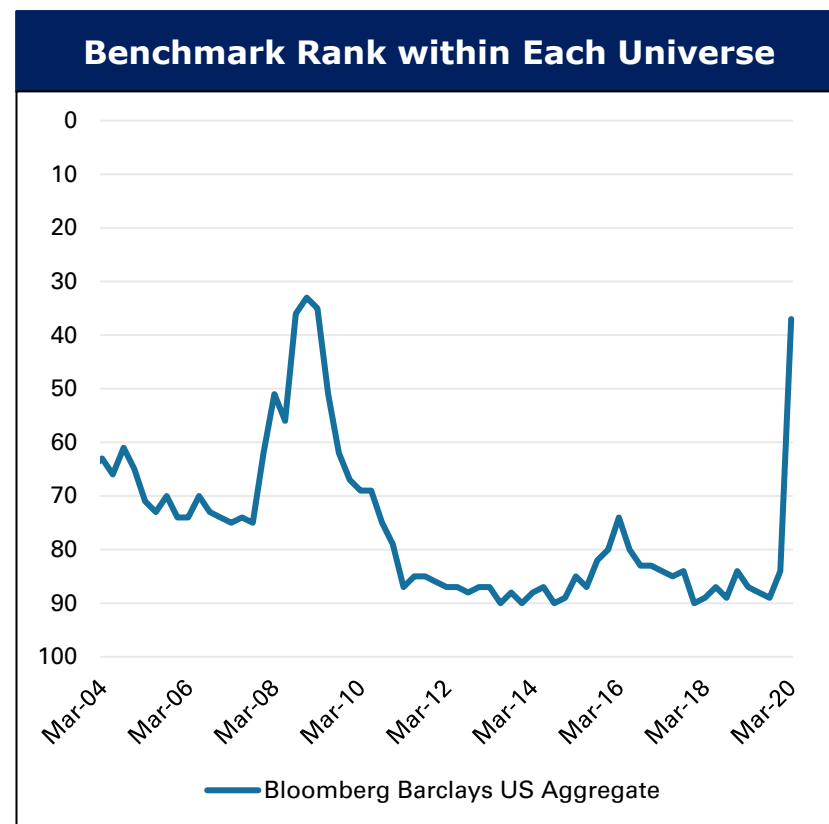
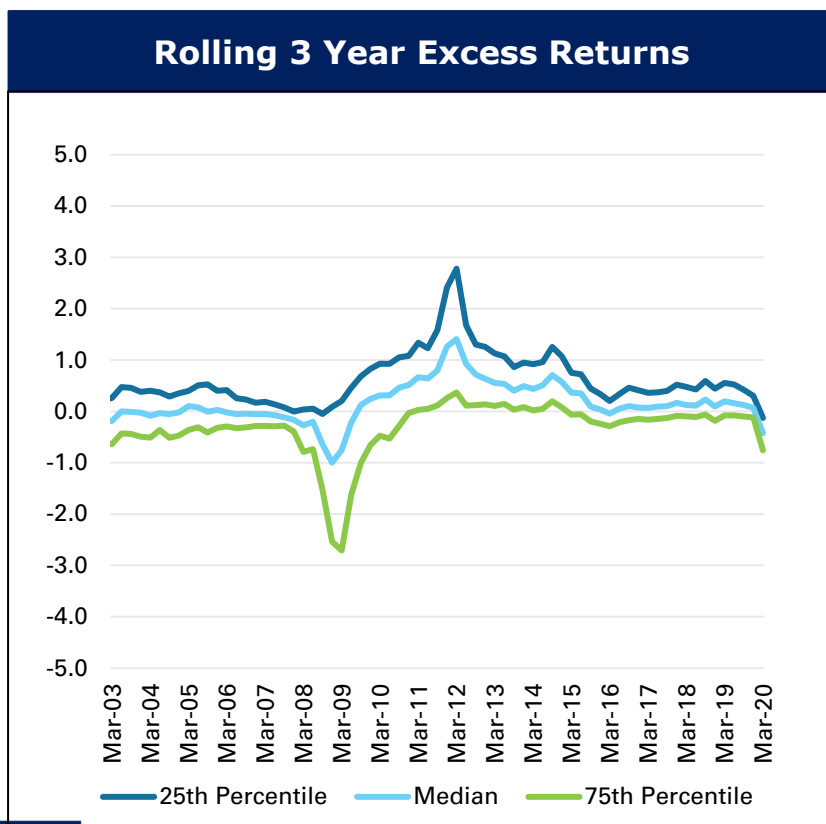
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Current as of 3/31/21021



CORE FIXED INCOME: ACTIVE MANAGEMENT CHALLENGED IN CURRENT ENVIRONMENT

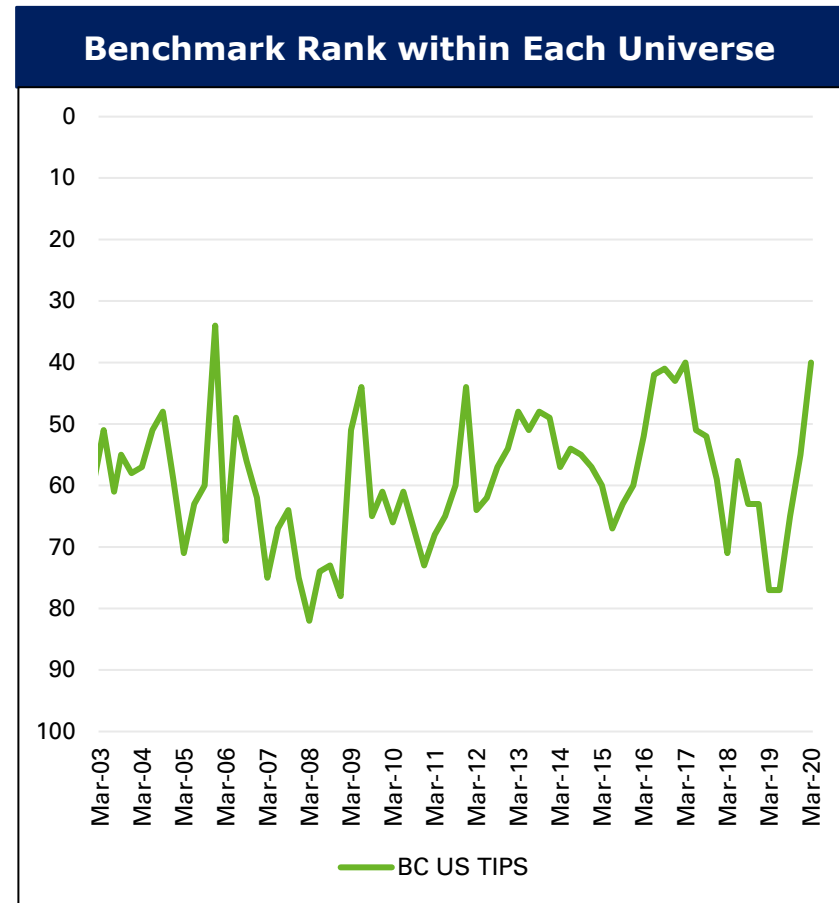
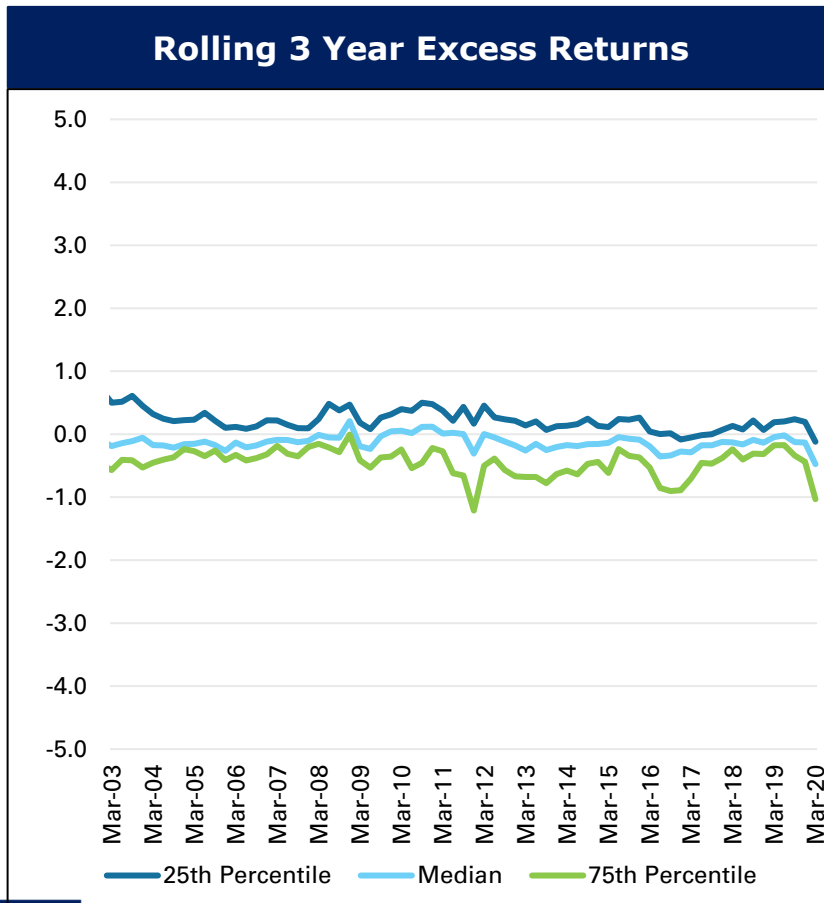
NEPC Active Management Views			
Asset Class	Median Fee	Test 1 Dispersion	Test 2 Median Outperf
Core Bonds	28 bps		



Data is net of fees. Core Bonds vs. Bloomberg Barclays US Aggregate Index.
Source: eVestment

US INFLATION-LINKED (TIPS): CASE FOR PASSIVE

NEPC Active Management Views			
Asset Class	Median Fee	Test 1 Dispersion	Test 2 Median Outperf
US Inflation-Linked	20 bps		



Data is net of fees. US Inflation-Linked vs. Bloomberg Barclays US TIPS Index.
Source: eVestment



PEER BENCHMARKING



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PEER BENCHMARKING: NACUBO DATA

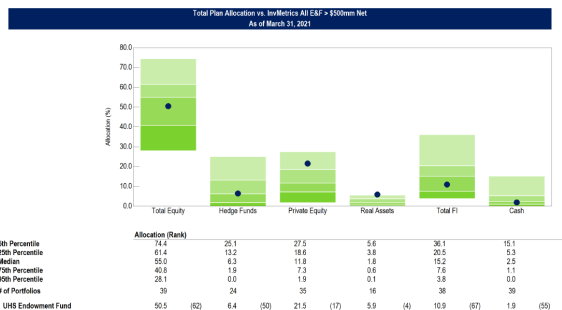
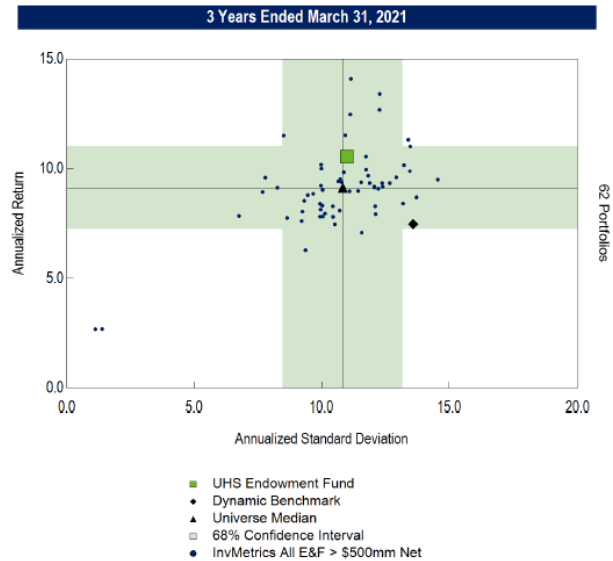
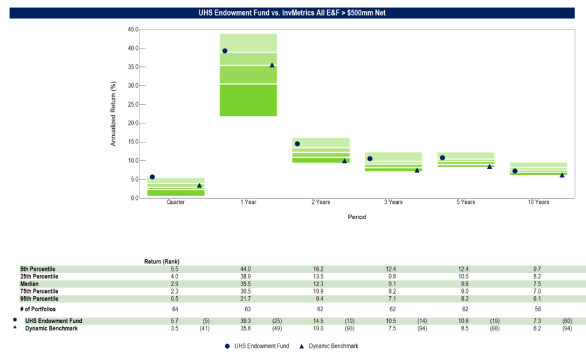
- **NACUBO releases an annual survey analyzing the financial, investment, and governance policies for hundreds of universities**
 - The 2020 survey includes 705 institutions representing \$637.7 billion in endowment assets
 - The NACUBO study compares investment returns and asset allocation (across higher education and for similarly-sized endowments).

- **NEPC will provide UHS a detailed peer analysis using NACUBO data; we will focus on universities of comparable size (endowment portfolios ranging from \$501 million to \$1 billion in size)**
 - UHS asset allocation vs. peers
 - Public US equities, public non-US equities, public global equities, private equity and venture capital, marketable alternatives, fixed income, and real assets, and more.
 - The survey also includes a review of active vs. passive management utilization.
 - UHS investment returns vs. peers
 - NACUBO examines net annualized returns for 1-, 3-, 5-, 10-, 20-, and 25-year periods.



ADDITIONAL PEER BENCHMARKING

- In addition to detailed peer benchmarking using the NACUBO study, NEPC will provide UHS with peer analysis using data from Investment Metrics, LLC.
 - This will afford a broad universe of peers (not just NEPC clients).
 - Data will include risk / return statistics as well as asset allocation



3 Years Ended March 31, 2021

	Anizd Ret	Rank	Anizd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio	Rank
UHS Endowment Fund	10.5%	14	11.0%	55	0.8	23	1.0	27
Dynamic Benchmark	7.5%	94	13.6%	98	0.5	99	0.6	99

*Marketable Real Assets are excluded from analysis.





FUTURE DISCUSSIONS



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FUTURE DISCUSSIONS FOR UHS

- **Private Equity – Pacing plan and strategic approach to commitments. Specific fund recommendations by NEPC.**
- **Hedge Funds – Reduce UHS exposure to 5% target and reconfigure**
- **Non-Endowed Assets – Strategic review & recommendations**
- **Core / Satellite Approaches**
- **Full review of UHS investment manager fees**

NEPC DISCLOSURES

Past performance is no guarantee of future results.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

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The opinions presented herein represent the good faith views of NEPC as of the publication date and are subject to change at any time.

This presentation contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.





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