

# Pension

March 31, 2022

**UC INVESTMENTS** 

# **UC Investments Way**



### **UC Pension**

- 1. Asset Allocation
- 2. Performance
- 3. Asset Classes
- 4. Risk Allocation

#### INVESTMENT OBJECTIVES

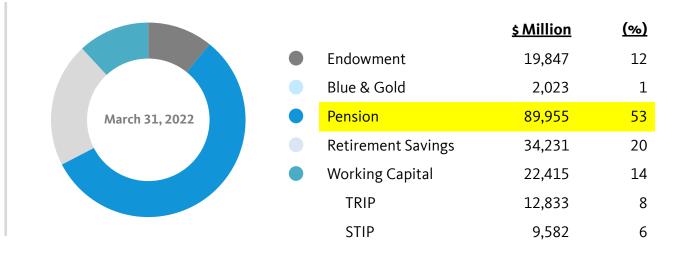
- Maximize real, long-term total returns (income plus capital appreciation adjusted for inflation), while assuming appropriate levels of risk.
- Maximize the probability of meeting the Plan's liabilities, subject to the Regents' funding policy.

#### **UC Investments**

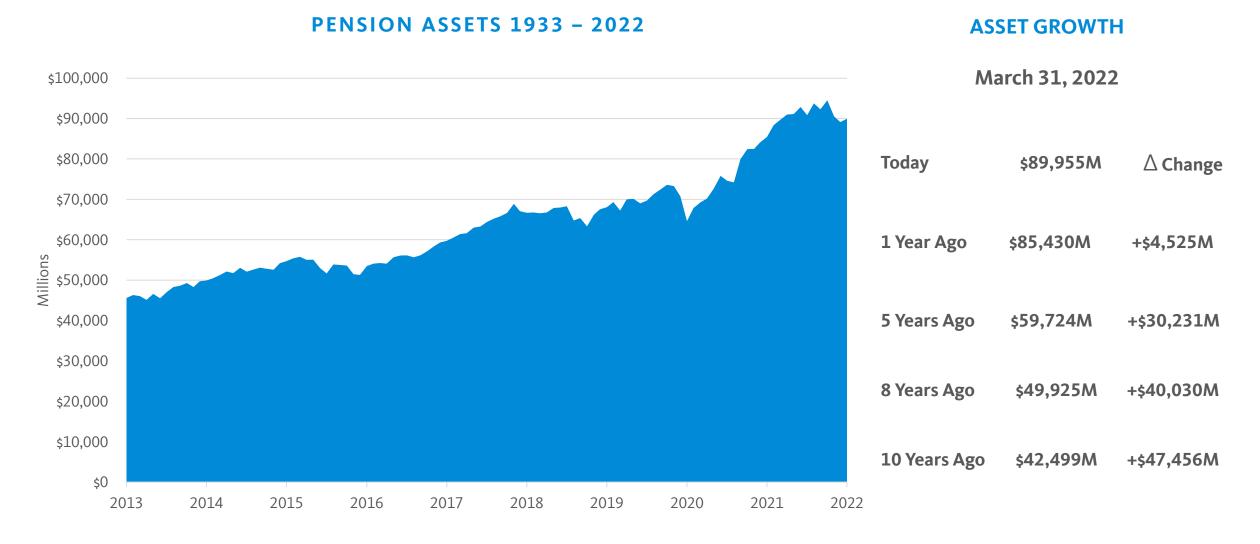
#### **INVESTMENT PRODUCTS**

- Investing Endowment assets since 1933 (89 years)
- Investing **Blue & Gold** assets since 2019 (3 years)
- Investing **Pension** assets since 1961 (61 years)
- Investing Retirement Savings assets since 1967 (55 years)
- Investing **Working Capital** since 1976 (46 years)
  Investing Total Return since 2008 (12 years)
  Investing Short Term since 1976 (46 years)

#### \$168,470 MILLION ACROSS 6 PRODUCTS



#### Pension Assets Growth



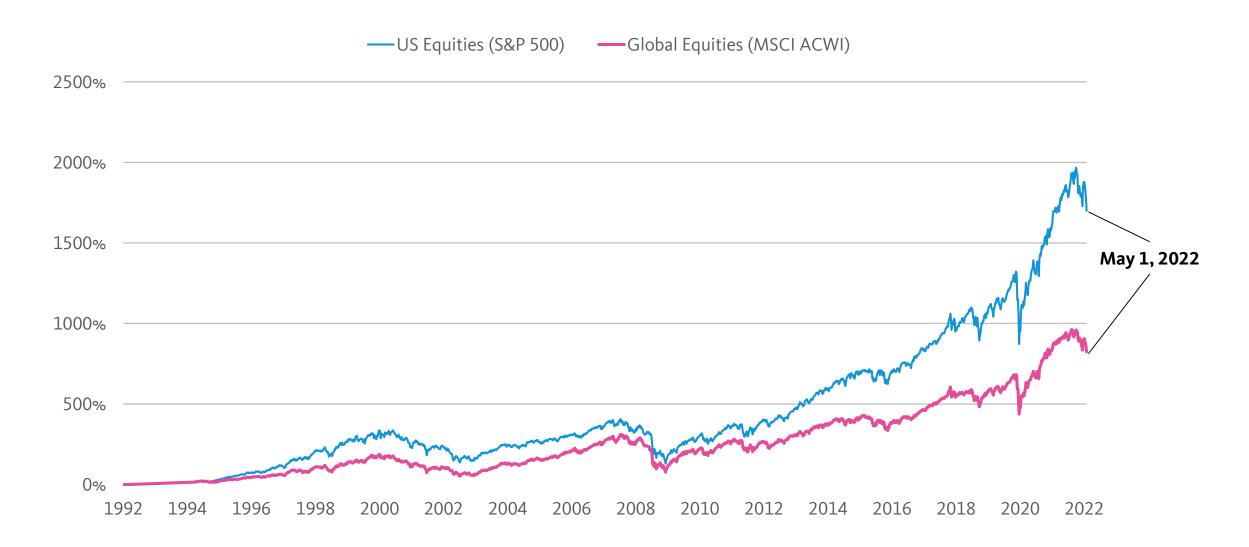
# Assets Under Management

Quarter To Date (3 Months)	Market Value (\$M)	Fiscal Year To Date (9 Months)	Market Value (\$M)
December 31, 2021	94,524	June 30, 2021	90,977
Market Gains	(4,148)	Market Gains	309
Value Added	209	Value Added	(735)
Net Cash Flow	(630)	Net Cash Flow	(596)
March 31, 2022	89,955	March 31, 2022	89,955

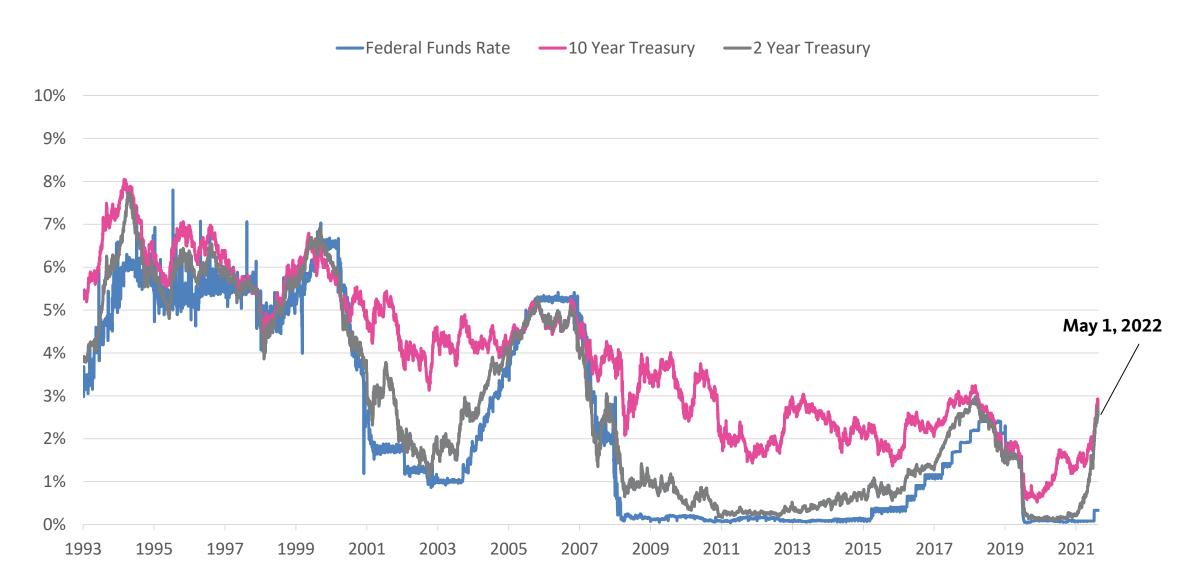
## Pension Asset Allocation

As of March 31, 2022	Market Value (\$M)	Weight (%)	Over/Underweight to Interim Policy (%)	Interim Policy (%)	Long-Term Target (%)
Public Equity	49,701	55.3	2.3	53.0	53
Active - Public Equity	14,658	16.3			
Passive - Public Equity	35,043	39.0			
Fixed Income	12,517	13.9	(3.1)	17.0	17
Private Markets	27,047	30.0	0.0	30.0	30
Private Equity	12,667	14.1	2.1	12.0	12
Active - Private Equity	9,346	10.4			
Passive - Private Equity	3,322	3.7			
Absolute Return	2,920	3.2	(0.3)	3.5	4
Real Estate	5,776	6.4	(0.6)	7.0	7
Real Assets	3,170	3.5	(0.5)	4.0	4
Private Credit	2,512	2.8	(0.7)	3.5	4
Cash and Equivalent	690	0.8	0.8	0.0	0
Total	\$89,955M	100.0%		100.0%	100.0%

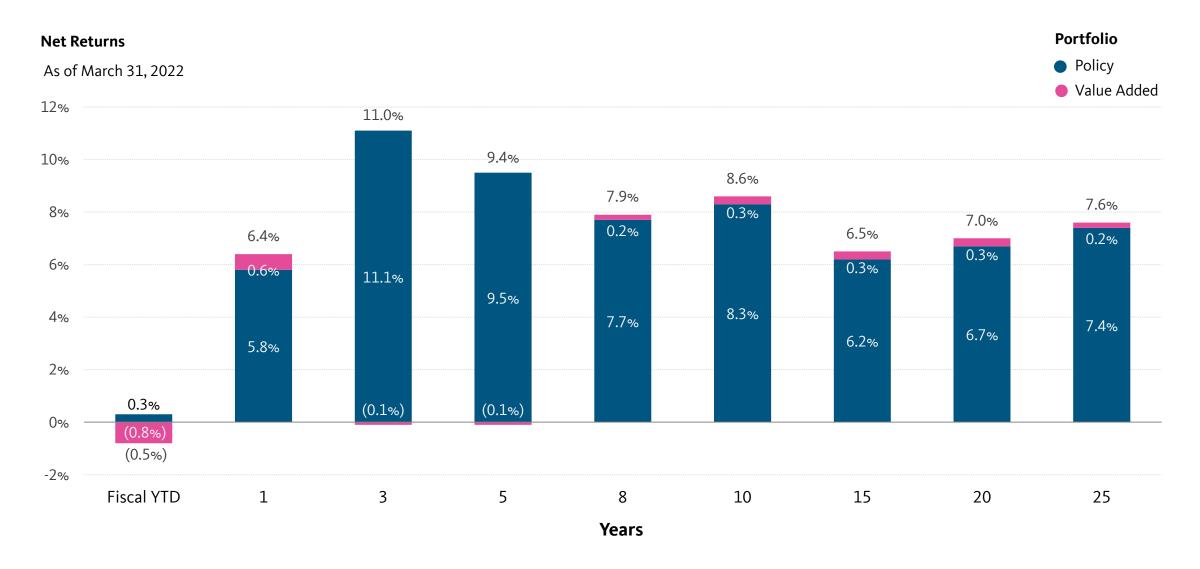
# Where Will Equities Go?



# Lower Rates for Longer



### Pension Performance

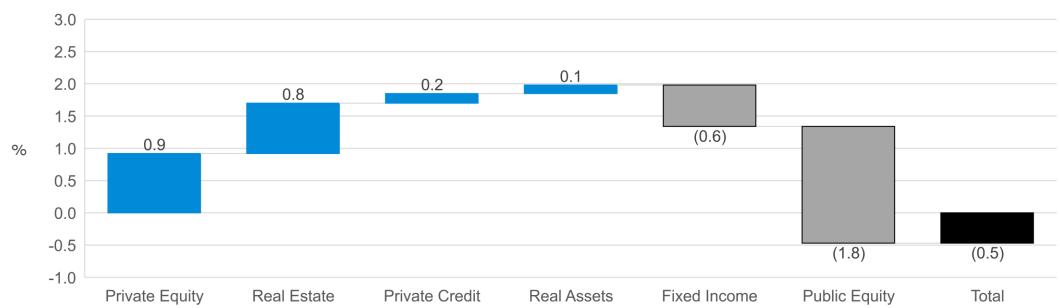


### Pension Performance

As of March 31, 2022	Market	Fiscal YTD				Annualized Returns				
Net Returns (%)	Value (\$M)	9 Months	1 Year	3 Year	5 Year	8 Year	10 Year	15 Year	20 Year	25 Year
UC Pension	89,955	(0.5)	6.4	11.0	9.4	7.9	8.6	6.5	7.0	7.6
Policy Benchmark*		0.3	5.8	11.1	9.5	7.7	8.3	6.2	6.7	7.4
Value Added		(0.8)	0.6	(0.1)	(0.1)	0.2	0.3	0.3	0.3	0.2

<sup>\*</sup>The Policy Benchmark is a weighted average of investment policy targets.





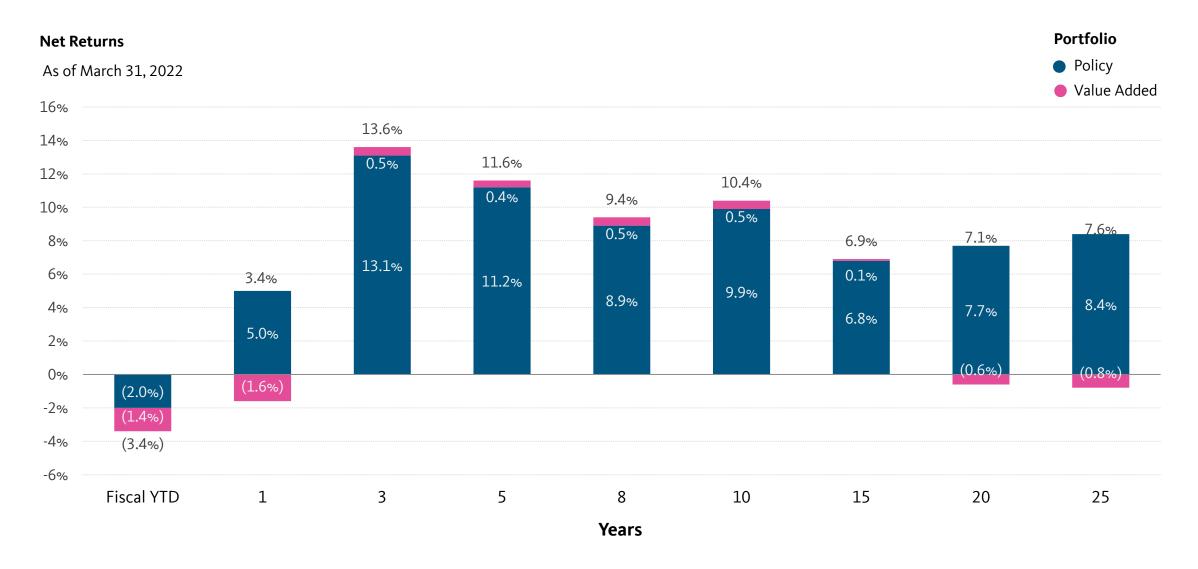
# Pension Attribution – Fiscal Year to Date

As of March 31, 2022	Contribution To Return	Portfolio Return	Benchmark Return	Allocation Attribution	Selection Attribution	Total Attribution
Public Equity	(1.8)	(3.4)	(2.0)	(0.1)	(0.8)	(0.9)
Fixed Income	(0.6)	(4.2)	(4.6)	0.1	0.0	0.2
Private Markets	2.0	7.3	7.2	(0.4)	0.3	(0.1)
Private Equity	0.9	7.2	4.3	0.1	0.4	0.5
Absolute Return	0.0	0.1	(1.3)	0.0	0.0	0.0
Private Credit	0.1	5.8	1.6	0.0	0.1	0.1
Real Estate	0.8	15.4	22.7	(0.4)	(0.3)	(0.7)
Real Assets	0.1	3.9	3.9	0.0	0.0	0.0
Cash	0.0	0.8	0.0	0.0	0.0	0.0
Total	(0.5)	(0.5)	0.3	(0.3)	(0.5)	(0.8)

# Pension Policy Benchmark

Asset Class	Policy Benchmark Component	Interim Policy (%)	Allowable Ranges Min (%) Max (%)		Long-Term Allowable Ranges Target (%) Min (%) (%)Ma		
Public Equity	MSCI All Country World Index (ACWI) Investable Market Index (IMI) Tobacco and Fossil Fuel Free - Net Dividends	53.0	43.0	63.0	53.0	43.0	63.0
Total Fixed Income							
Core Fixed Income	Bloomberg Barclays 1-5 Year US Government/Credit Index	13.0	10.0	16.0	13.0	10.0	16.0
High Yield Fixed Income	Merrill Lynch High Yield Cash Pay Index Fossil Free	2.5	0.0	5.0	2.5	0.0	5.0
Emerging Market Fixed Income	JP Morgan Emerging Markets Bond Index Global Diversified FF	1.5	0.0	3.0	1.5	0.0	3.0
Private Assets							
Private Equity		12.0	7.0	17.0	12.0	7.0	17.0
Active Private Equity	Russell 3000 Index + 3%						
Passive Private Equity	Russell 3000 Tobacco and Fossil Fuel Free						
Absolute Return	HFRI Fund of Funds Composite	3.5	0.0	5.5	3.5	0.0	5.5
Real Estate	NCREIF ODCE Index	7.0	2.0	12.0	7.0	2.0	12.0
Real Assets	Actual Real Asset Portfolio Returns	4.0	0.0	8.0	4.0	0.0	8.0
Private Credit	75% Credit Suisse Leveraged Loan Total Return FF / 25% BofA/ML BB-B US High Yield Constrained Index FF + 1.5%	3.5	0.0	7.0	3.5	0.0	7.0
Cash	Bank of America 3-Month US Treasury Bill Index	0.0	0.0	5.0	0.0	0.0	5.0

# **Public Equity**

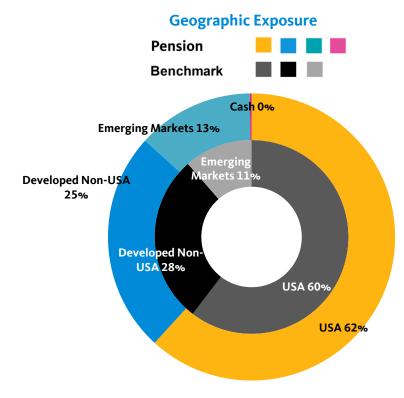


# **Public Equity**

As March 31, 2022 Net Returns (%)	Market	Weight	Fiscal YTD	Annualized Returns							
	Value (\$M)	(%)	9 Months	1 Year	3 Year	5 Year	8 Year	10 Year	15 Year	20 Year	25 Year
Public Equity	49,701	100	(3.4)	3.4	13.6	11.6	9.4	10.4	6.9	7.1	7.6
Policy Benchmark*			(2.0)	5.0	13.1	11.2	8.9	9.9	6.8	7.7	8.4
Value Added			(1.4)	(1.6)	0.5	0.4	0.5	0.5	0.1	(0.6)	(0.8)
Active	14,658	30	(7.7)	(1.9)	13.0	-	-	-	-	-	-
Passive	35,032	70	(1.5)	5.6	13.7	-	-	-	-	-	=

<sup>\*</sup> From July 1, 2020 the public equity benchmark is the MSCI ACWI IMI Tobacco and Fossil Fuel Free Index. From July 1, 2016 to June 30, 2020 the total public equity benchmark the MSCI ACWI IMI Tobacco Free Index. Prior to July 1, 2016, the total public equity benchmark was an aggregate of benchmarks for underlying equity portfolios.

Active Managers	# of funds	Weight
Global Generalist	4	13.1%
USA	4	7.9%
Developed Non-USA	3	2.3%
Global Sector Specialist	2	1.4%
Emerging Markets	7	4.1%
	20	28.7%
Passive Index Exposure	Strategy	Weight
MSCI ACWI IMI Tobacco and Fossil Fuel Free	Global Passive	64.5%
S&P 500 Tobacco and Fossil Fuel Free	<b>US Passive</b>	5.9%



# **Public Equity**

#### **Attribution:**

UCRP relative performance FYTD 2021/22 hurt by overweight to China and (to a much smaller extent) communication services.

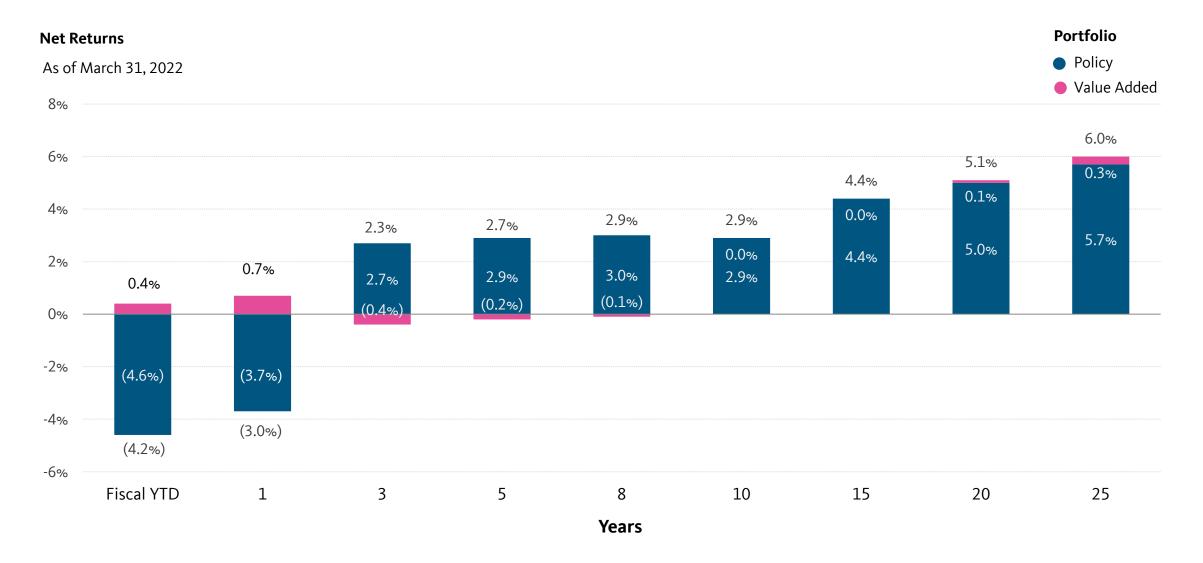
Top 3 Absolute Performers FYTD	FYTD return	Weight
1. Global Generalist	8.6%	4.4%
2. USA	6.8%	4.5%
3. Emerging Markets	4.9%	0.6%

Bottom 3 Absolute Performers FYTD	FYTD return	Weight
1. Emerging Markets	-38.6%	0.4%
2. Emerging Markets	-34.9%	0.2%
3. Emerging Markets	-33.4%	0.5%

UCRP Benchmark (MSCI ACWI IMI TF FF) -2.0%

Geographic Exposures	Portfolio	Benchmark
US Equity	61.8%	60.4%
Developed Non-US Equity	24.9%	28.2%
Emerging Market Equity	13.1%	11.4%
Cash	0.2%	0.0%

### Fixed Income

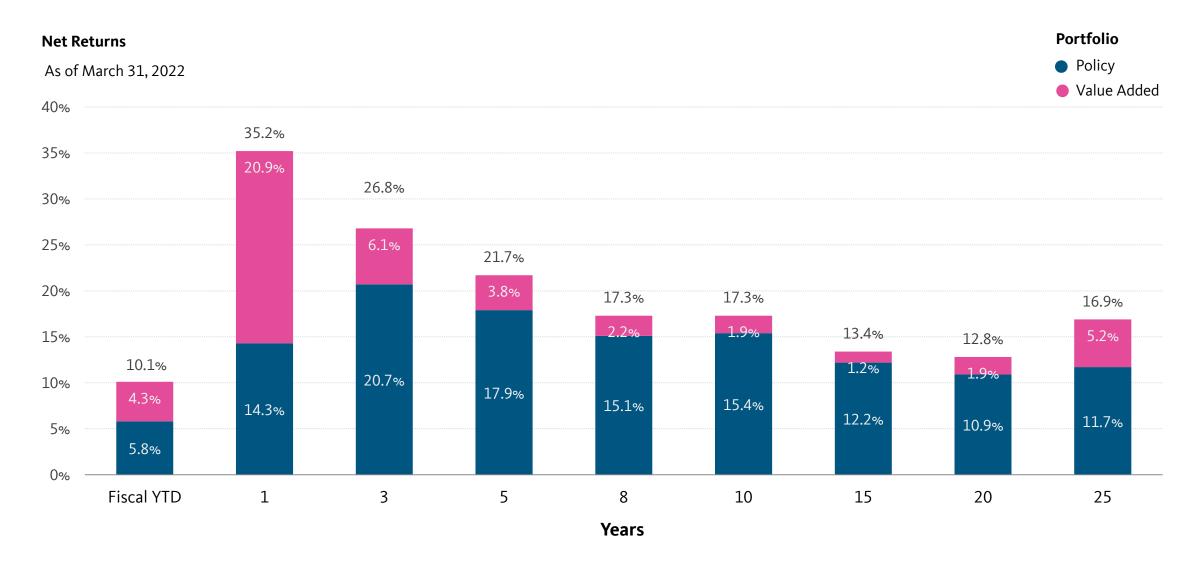


## Fixed Income

As of March 31, 2022	Market	Weight	Fiscal YTD	Annualized Returns							
Net Returns (%)	Value (\$M)	(%)	9 Months	1 Year	3 Year	5 Year	8 Year	10 Year	15 Year	20 Year	25 Year
Fixed Income	12,518	100	(4.2)	(3.0)	2.3	2.7	2.9	2.9	4.4	5.1	6.0
Policy Benchmark*			(4.6)	(3.7)	2.7	2.9	3.0	2.9	4.4	5.0	5.7
Value Added			0.4	0.7	(0.4)	(0.2)	(0.1)	0.0	0.0	0.1	0.3
Core Fixed Income	8,332	67	(3.8)	(3.5)	1.9	2.4	2.6	2.7	3.8	4.6	5.6
Policy Benchmark			(4.1)	(3.8)	2.6	2.7	2.7	2.5	3.8	4.5	5.3
Value Added			0.3	0.3	(0.7)	(0.3)	(0.1)	0.2	0.0	0.1	0.3
High Yield	3,099	24	(3.0)	(0.5)	4.4	4.6	4.5	5.8	5.8	-	-
Policy Benchmark			(3.2)	(0.7)	4.1	4.4	4.4	5.6	6.3	-	-
Value Added			0.2	0.2	0.3	0.2	0.1	0.2	(0.5)	-	-
Emerging Market Debt	1,087	9	(10.5)	(6.9)	0.2	1.8	2.7	2.7	4.6	-	-
Policy Benchmark**			(11.0)	(7.4)	0.0	1.7	3.4	3.6	5.1	-	-
Value Added			0.5	0.5	0.2	0.1	(0.7)	(0.9)	(0.5)	-	-

<sup>\*</sup> Total fixed income policy benchmark is an aggregate of underlying portfolio benchmarks. \*\* Emerging Market Debt: Passive Since May 2017.

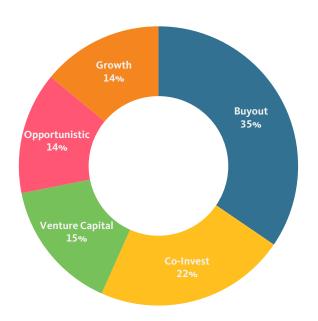
# **Active Private Equity**



# **Active Private Equity**

As of March 31, 2022	Market	Weight	Fiscal YTD	scal YTD Annualized Returns							
Net Returns (%)	Value (\$M)	(%)	9 Months	1 Year	3 Year	5 Year	8 Year	10 Year	15 Year	20 Year	25 Year
Active Private Equity	9,346	100	10.1	35.2	26.8	21.7	17.3	17.3	13.4	12.8	16.9
Policy Benchmark*			5.8	14.3	20.7	17.9	15.1	15.4	12.2	10.9	11.7
Value Added			4.3	20.9	6.1	3.8	2.2	1.9	1.2	1.9	5.2
Buyout	3,214	35	12.0	39.3	25.9	18.7	16.2	15.9	12.2	12.0	-
Co-Invest	2,062	22	5.8	37.8	36.3	34.6	31.8	34.9	-	-	-
Venture Capital	1,415	15	23.8	36.0	31.6	25.8	19.6	18.9	14	15.9	-
Opportunistic	1,315	14	3.8	35.5	24.2	16.0	10.0	18.4	14.6	12.3	10.3
Growth	1,304	14	8.1	24.6	18.6	15.6	11.1	12.6	11	0.0	(2.9)

<sup>\*</sup> As of July 1, 2021, the Private Equity policy benchmark is the Russell 3000 Index +3%. From July 1, 2020 to June 30, 2021, the Private Equity policy benchmark is the Russell 3000 Index +2.5%. From July 1, 2019 to June 30, 2020, the Private Equity policy benchmark was the Russell 3000 Index +2.0%. From July 1, 2017 to June 30, 2019, the Private Equity policy benchmark was the Russell 3000 Index +1.5%. From March 2005 to June 2017, the Private Equity benchmark was the actual private equity return. From January 2001 to February 2005, the Private Equity benchmark was Russell 3000 Index + 3% lagged one quarter. Prior to that, it was the S&P 500 Index + 5% lagged by a quarter.

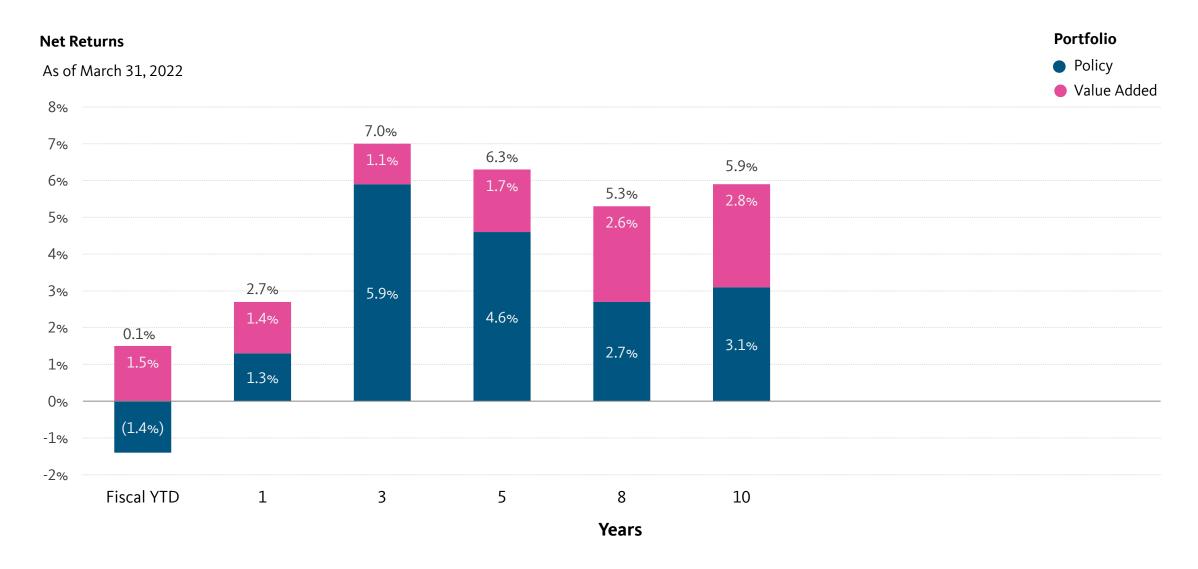


# Passive Private Equity

As of March 31, 2022 Net Returns (%)		Market Value (\$M)	Weight (%)	Fiscal YTD 9 Months	
	Passive Private Equity	3,322	100	0.3	

<sup>\*</sup> Inception date for Passive Private Equity is July 28, 2021.

### Absolute Return



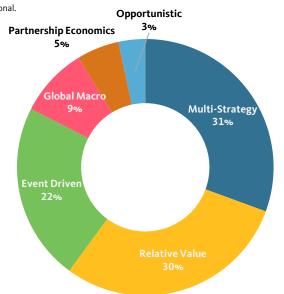
# Absolute Return

As of March 31, 2022	Market	Weight Fiscal YTD Annualized Retu					eturns	turns		
Net Returns (%)	Value (\$M)	(%)	9 Months	1 Year	3 Year	5 Year	8 Year	10 Year		
Absolute Return	2,921	100	0.1	2.7	7.0	6.3	5.3	5.9		
Policy Benchmark*			(1.4)	1.3	5.9	4.6	2.7	3.1		
Value Added			1.5	1.4	1.1	1.7	2.6	2.8		
Multi-Strategy	889	31	2.3	4.5	(0.6)	2.5	4.0	-		
Relative Value	858	30	0.7	3.6	6.8	7.2	6.8	7.1		
<b>Event Driven</b>	652	22	(3.7)	(3.2)	12.1	11.0	7.0	8.2		
Global Macro	255	9	(14.2)	(15.8)	(1.3)	(1.3)	0.4	0.2		
Partnership Economics	155	5	32.3	48.7	102.4	96.8	-	-		
Opportunistic	98	3	4.2	5.2	(5.4)	0.8	-	-		

<sup>\*</sup> As of July 1, 2017, the benchmark is HFRI Fund of Funds Composite. From March 1, 2016 to June 1, 2017, the benchmark was the HFRX Absolute Return.

From April 1, 2009 to February 1, 2016, the benchmark was 50% HFRX Absolute Return/50% HFRX Market Directional.

Prior to that, benchmark was 1 Month T-Bill+4.5%.



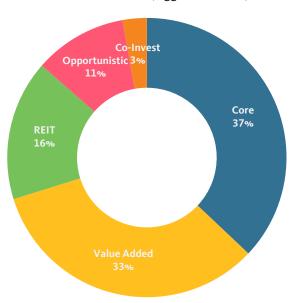
## Real Estate



### Real Estate

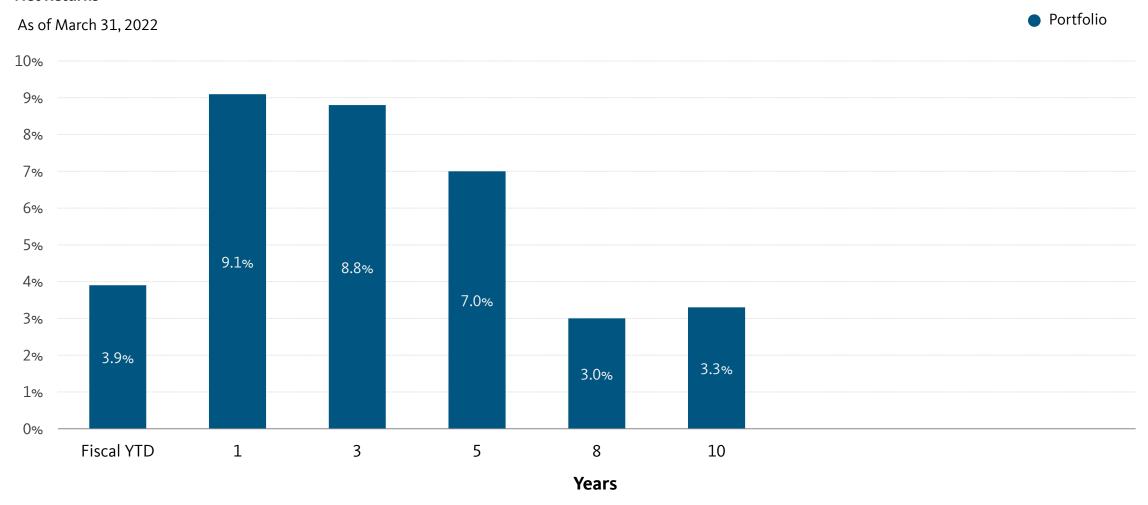
As of March 31, 2022	Market	Weight	Fiscal YTD	Annualized Returns							
Net Returns (%)	Value (\$M)	(%)	9 Months	1 Year	3 Year	5 Year	8 Year	10 Year	15 Year		
Real Estate	5,776	100	15.4	25.8	8.4	8.1	9.5	10.2	3.5		
Policy Benchmark*			22.7	27.3	10.8	9.2	10.0	10.2	3.8		
Value Added			(7.3)	(1.5)	(2.4)	(1.1)	(0.5)	0.0	(0.3)		
Core	2,140	37	14.2	29.0	11.7	10.2	10.7	11.0	-		
Value Added	1,914	33	19.0	24.8	5.8	6.1	8.3	8.7	(2.2)		
REIT	939	16	4.3	-	-	=	-	-	-		
Opportunistic	621	11	14.8	22.5	5.9	4.3	7.3	8.8	(14.7)		
Co-Invest	162	3	7.8	-	-	-	-	_	-		

<sup>\*</sup> As of July 1, 2020, the Real Estate policy benchmark is the NCREIF ODCE Index (unlagged 3 months). From April 1, 2011 to June 30, 2020, the Real Estate policy benchmark was the NCREIF ODCE Index (lagged 3 months).



## Real Assets

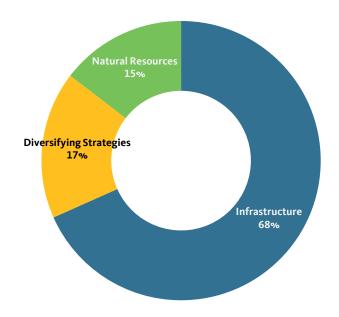
#### **Net Returns**



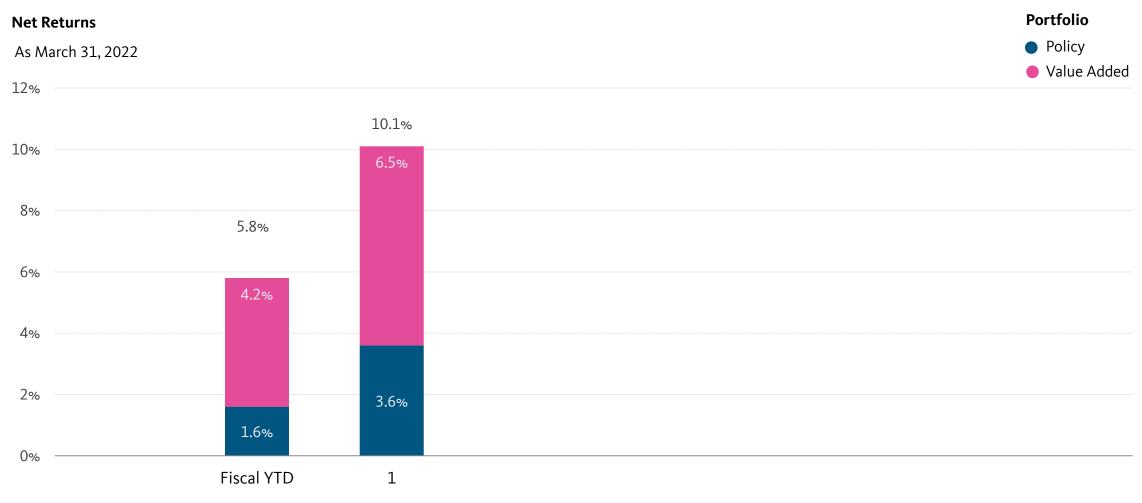
### Real Assets

As of March 31, 2022	Market	Weight	Fiscal YTD	Annualized Returns				
Net Returns (%)	Value (\$M)	(%)	9 Months	1 Year	3 Year	5 Year	8 Year	10 Year
Real Assets	3,171	100	3.9	9.1	8.8	7.0	3.0	3.3
Infrastructure	2,169	68	5.2	11.6	13.5	12.4	13.0	12.8
Diversifying Strategies	549	17	1.8	10.0	7.9	7.7	5.2	5.3
Natural Resources	451	15	1.0	(0.3)	(1.0)	(1.4)	(4.7)	(3.5)

\* Inception date for Real Assets is April 1, 2010. The Real Assets policy benchmark is itself, the Real Assets portfolio.



# **Private Credit**



## **Private Credit**

As of March 31, 2022 Net Returns (%)	Market Value (\$M)	Weight (%)	Fiscal YTD 9 Months	1 Year
Private Credit	2,512	100	5.8	10.1
Policy Benchmark			1.6	3.6
Value Added			4.2	6.5

<sup>\*</sup> Inception date for Private Credit is July 1, 2020.

### Cash

As of March 31, 2022 Net Returns (%)	Market Value (\$M)	Weight (%)	Fiscal YTD 9 Months	1 Year
Cash	690	100	0.8	0.8
Policy Benchmark*			0.1	0.1
Value Added			0.7	0.7

<sup>\*</sup> As of July 1, 2020, the Cash policy benchmark is the Bank of America 3-Month US Treasury Bill Index. Table showing cash returns since establishment of the formal policy benchmark.

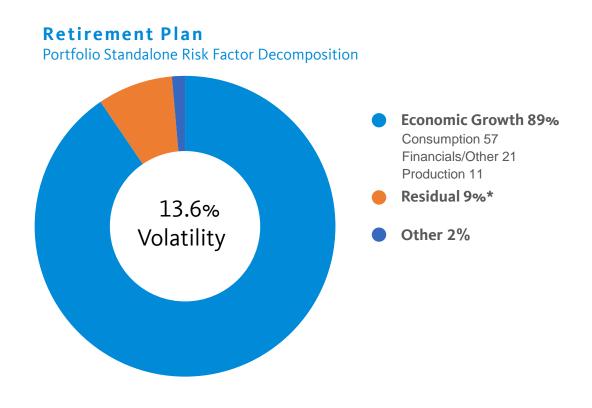
### Risk 1.0: Risk Measurement

Portfolio and benchmark volatility continue to see QoQ drops, mainly on the back of decreases in policy benchmark risk, but still remains relatively high. Total product tracking error decreases slightly as well. Fixed income volatility bucks trend and increases QoQ.

			Portfolio Risk (%)		Benchmark F	Risk (%)	Active Ri	sk (%)
<u>Portfolio</u>	Benchmark	Weight (%)	Standalone Volatility	QoQ Change	Standalone Volatility	QoQ Change	Tracking Error	QoQ Change
Pension	Policy (Blend)	100	13.6	(0.3)	12.0	(0.5)	2.0	0.1
<b>Public Equity</b>	MSCI ACWI IMI TF FF	55	15.5	(0.3)	15.4	(0.3)	0.6	(0.1)
Fixed Income	Policy (Blend)	14	2.2	0.5	2.0	0.4	0.5	0.1
Absolute Return	HFRI FOF	3	5.8	(1.1)	4.9	0.0	6.4	(0.5)
<b>Private Equity</b>	Russell 3000	14	24.4	(0.7)	18.1	0.5	9.7	(0.7)
Real Estate	NFI-ODCE	6	16.6	(4.5)	12.8	(2.7)	4.9	(1.5)
Real Assets	Real Assets	4	20.6	(2.1)	20.6	(2.1)	0.0	0.0
Private Credit	CS LL / ML HY BB-B	3	4.8	(2.2)	2.3	(1.8)	3.5	(0.4)
Cash	BofA 3mo Treasury Bill	1	0.0	(0.0)	0.1	(0.0)	0.1	(0.0)

### Macroeconomic Risk Factors

Portfolio systematic risk generally dominated by "Economic Growth" risk. Within Economic Growth, "Consumption" dominates.



Factor Name	<b>Factor Description</b>
<b>Economic Growth</b>	Proxied by broad, developed market equity index returns
Real Rates	Inflation-linked bond returns
Inflation	Return of long nominal bonds, short inflation-linked bonds portfolio
Credit	Return of long corporate bonds, short nominal bonds portfolio
Commodity	Weighted GSCI Commodity index returns
Emerging Markets (EM)	Equally weighted basket of EM Assets

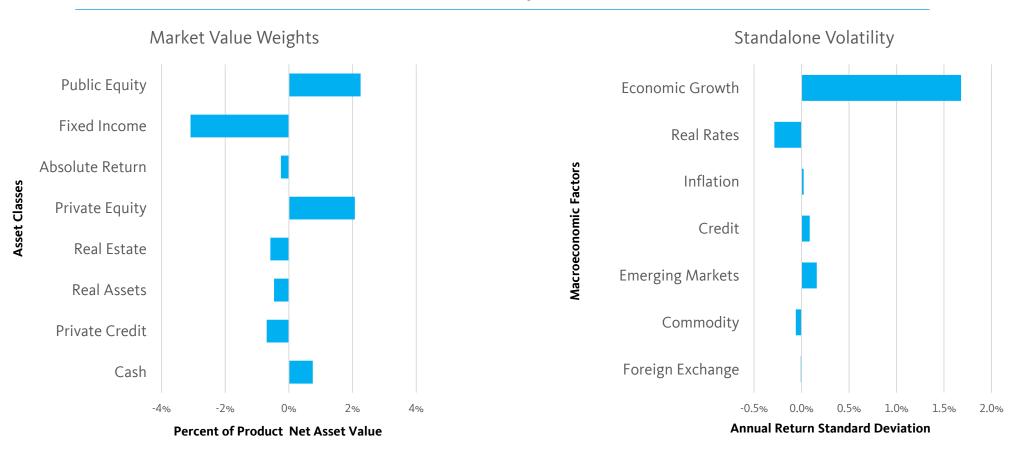
<sup>\*</sup> Residual Risk is any risk which is not one of the six macro economic factors or FX risk

# Risk 1.0: Two Views of Risk Asset Classes versus Macroeconomic Factors

From a factor perspective, portfolio is mainly actively overweight Economic Growth driven by public and private equity overweights.

#### Retirement Plan Active Exposures

Reference scale: active risk (tracking error): 2.0%



# Risk 2.0: Scenario Analysis

#### **US Scenarios**

Federal Reserve Rate Regimes
Fiscal Policy Stance
Tax Reform

#### **European Scenarios**

Brexit Negotiations
Europe Fragmentation/Breakup
Eurozone Populist Elections

#### **Emerging Markets / Asia Scenarios**

US-China Trade Relations
Abenomics- Helicopter Money
North Korea Tensions

#### **Global Scenarios**

Central Bank Policy
Pandemic Recession
Fall 2008 Crash

#### **Interest Rate Scenarios**

US Rates Paradigm Shift Reflation – Deflation Inflation Overshoot

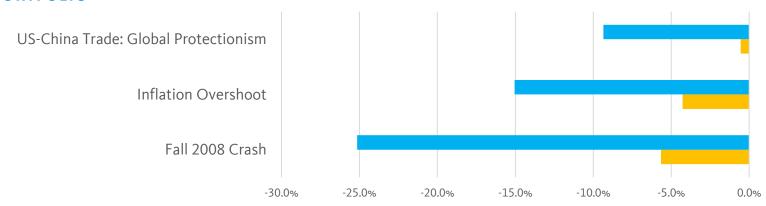
#### **Market Technical Scenarios**

Volatility Regime Change Tech Calamity Value Reversal

# Risk 2.0: Scenario Analysis

Indicative stressed P&L for public markets investments

#### **PORTFOLIO**



Public Equity

Fixed Income

