



# Endowment

June 30, 2020

UC INVESTMENTS

# UC Investments Way



# UC Endowment

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 the appropriate levels of risk.
- Maintain the liquidity necessary to meet the investment goals of the Endowment, which are to provide a stable and continuously growing stream of income, all while preserving the real (inflation-adjusted) purchasing power of assets.

# UC Investments

## INVESTMENT PRODUCTS

- Investing **Endowment** assets since 1933 (88 years)

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- Investing **Pension** assets since 1961 (60 years)
- Investing **Retirement Savings** assets since 1967 (54 years)

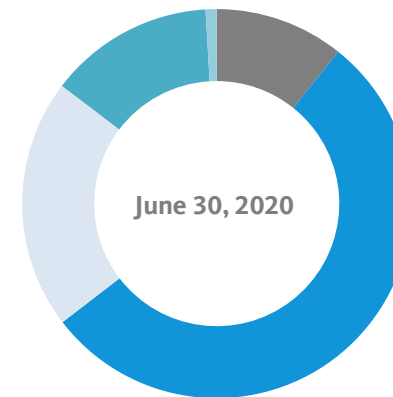
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- Investing **Working Capital** since 1976 (45 years)  
 Investing Total Return since 2008 (12 years)  
 Investing Short Term since 1976 (45 years)

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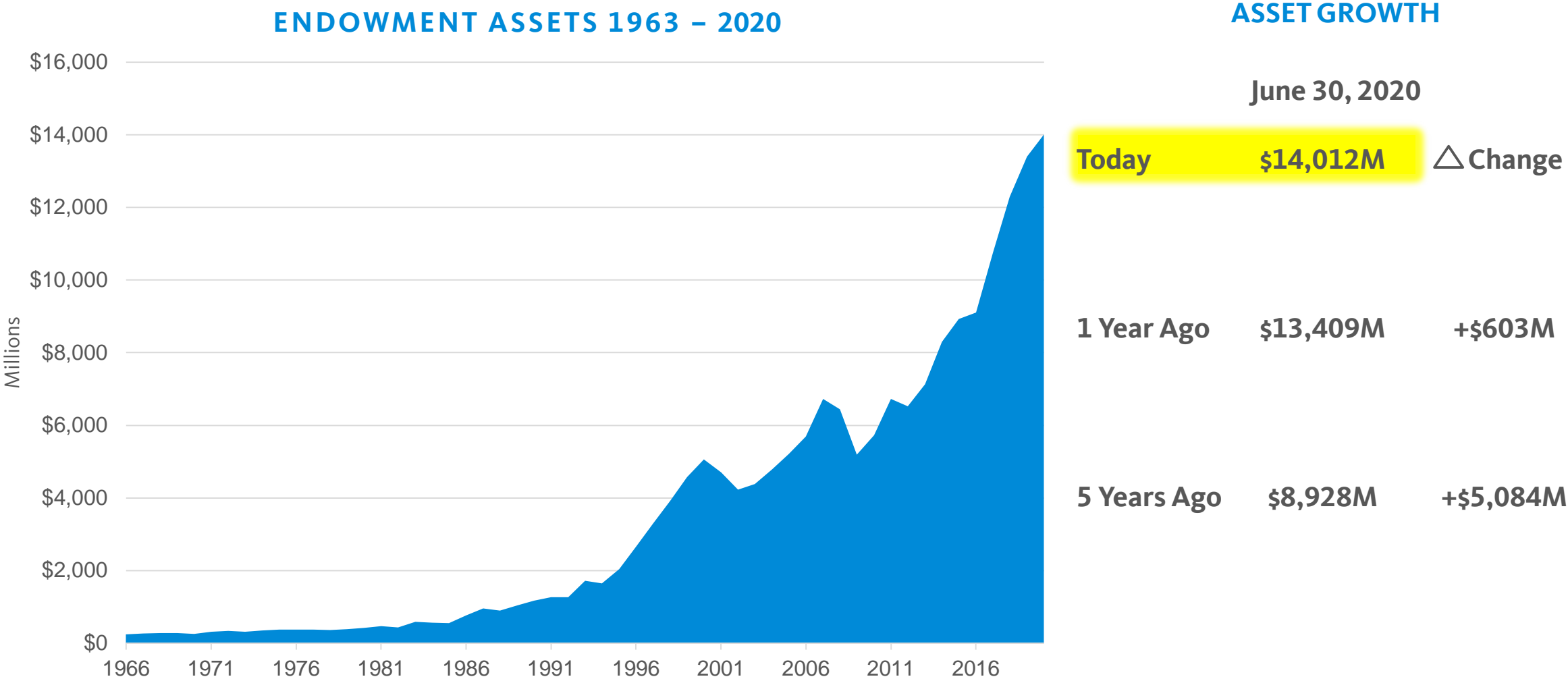
- Investing **Fiat Lux Insurance** assets since 2016 (4 years)

## \$130.4 BILLION ACROSS 6 PRODUCTS



	<u>\$ Billion</u>	<u>(%)</u>
● Endowment	14.0	11
● Pension	70.2	54
● Retirement Savings	27.1	21
● Working Capital	17.9	13
● Total Return	7.4	6
● Short Term	10.5	8
● Fiat Lux Insurance	1.2	1

# Endowment Assets Growth



# Endowment Assets Under Management

1 Year	Market Value (\$M)
June 30, 2019	13,409
Market Gains	12
Value Added	471
Net Cash Flow	120
June 30, 2020	14,012

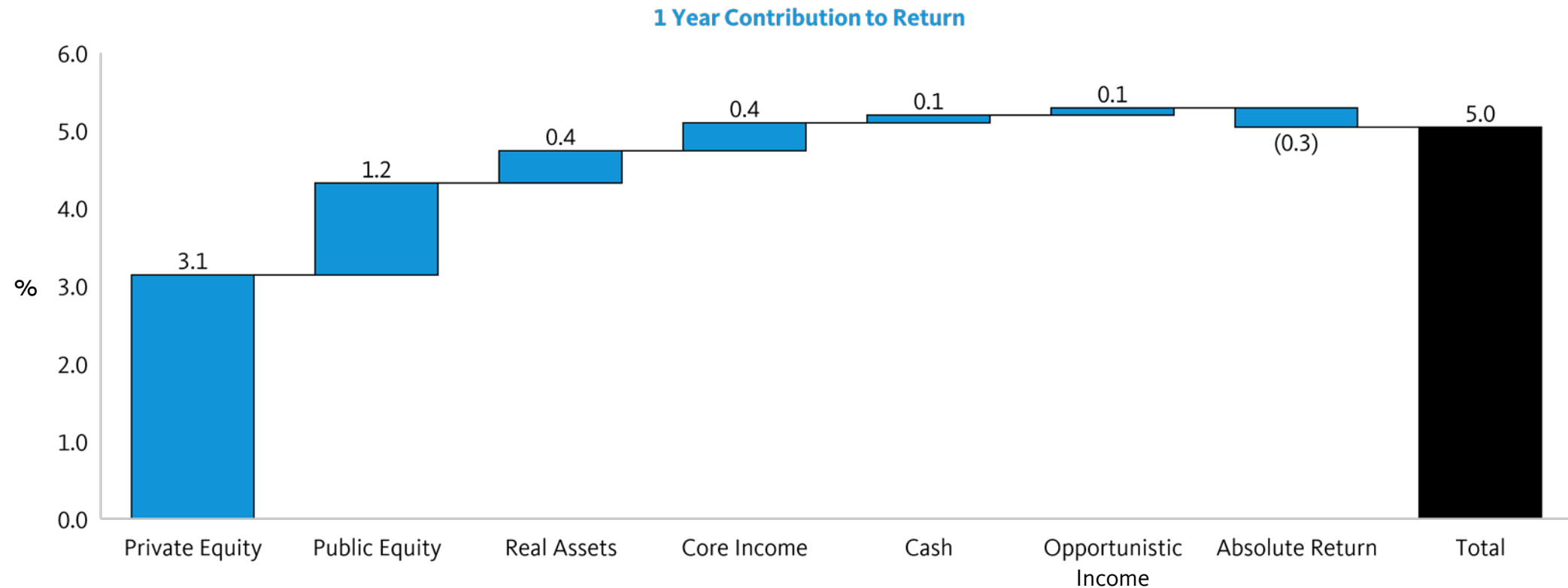
# Endowment Asset Allocation

As of June 30, 2020	Market Value (\$M)	Weight (%)	Over/Underweight to Interim Policy (%)	Interim Policy (%)	July 1 <sup>st</sup> , 2020	
					Long-Term Target (%)	Long-Term Target (%)
Public Equity	5,996	42.8	7.2	35.6	30	40
Fixed Income	557	4.0	(7.9)	11.9	10	8
Other Investments	7,157	51.1	3.6	47.5	60	50
Private Equity	2,365	16.9	2.3	14.6	23	24
Absolute Return	3,106	22.2	0.4	21.8	25	10
Private Credit	0	0.0	0.0	0.0	0	4
Real Estate	984	7.0	0.0	7.0	9	8
Real Assets	702	5.0	0.9	4.1	4	4
Cash	302	2.1	(2.9)	5.0	0	2
<b>Total</b>	<b>\$14,012M</b>	<b>100.0%</b>		<b>100.0%</b>	<b>100%</b>	<b>100%</b>

# Endowment Performance

As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
UC Endowment	14,012	100	5.0	7.4	6.5	8.8	7.1	5.9	8.5
Policy Benchmark*			3.0	5.7	5.5	7.2	6.2	5.3	7.7
Value Added			2.0	1.7	1.0	1.6	0.9	0.6	0.8

\*The UC Endowment Benchmark is a weighted average of investment policy targets.





# Endowment Attribution – Fiscal Year to Date

As of June 30, 2020	Portfolio Return	Benchmark Return	Allocation Attribution	Selection Attribution	Total Attribution
<b>Public Equity</b>	5.7	1.2	(0.2)	1.5	1.3
<b>Liquidity</b>	5.4	8.7	0.5	(0.5)	0.0
Core Income*	6.0	8.7	0.3	(0.2)	0.1
Opportunistic Income	3.2	8.7	0.2	(0.2)	0.0
<b>Other Investments</b>	6.7	4.3	2.6	(1.6)	1.0
Absolute Return	(1.2)	(0.1)	0.2	(0.2)	(0.1)
Private Equity	21.9	8.5	2.5	(1.1)	1.3
Real Estate	0.0	3.9	(0.1)	(0.3)	(0.4)
Real Assets	9.2	9.2	0.1	0.0	0.1
<b>Cash</b>	1.1	1.1	(0.3)	0.0	(0.3)
<b>Total</b>	<b>5.0</b>	<b>3.0</b>	<b>2.7</b>	<b>(0.7)</b>	<b>2.0</b>

\*Invested in U.S. Treasuries in Quarter 1 -2020.

# Endowment Policy Benchmark

Asset Class	Policy Benchmark Component	Interim Policy (%)	Allowable Ranges		Long-Term Target (%)	Allowable Ranges	
			Min (%)	Max (%)		Min (%)	(%)Max
<b>Total Public Equity</b>	MSCI All Country World Index Net IMI (Tobacco Free)	35.6	25.6	58.1	30.0	20.0	52.5
<b>Liquidity (Income)</b>	Barclays US Aggregate Bond Index	11.9	1.9	19.4	10.0	0.0	17.5
<b>Total Other Investments</b>							
Private Equity	Russell 3000 + 2.0%	14.6	2.1	24.6	22.5	10.0	32.5
Absolute Return	HFRI Fund of Funds Composite	21.8	11.8	28.8	25.0	15.0	32.0
Real Estate	NCREIF ODCE Index (lagged 3 months)	7.0	1.7	9.8	8.8	-	-
Real Assets	Actual Real Asset Portfolio Returns	4.1	1.0	5.7	3.8	-	-
<b>Cash</b>		5.0	0.0	15.0	-	-	-

# Endowment Policy Benchmark

As of July 1<sup>st</sup>, 2020

Asset Class	Policy Benchmark Component	Long-Term Target (%)	Allowable Ranges Min (%)    Max (%)	
<b>Global Equity</b>	MSCI All Country World Index Net IMI (Tobacco and Fossil Fuel Free)	40	30	50
<b>Fixed Income</b>	Bloomberg Barclays US 1-5 Year Government / Credit Index	8	5	15
<b>Total Other Investments</b>				
Private Equity	Russell 3000 + 2.5%	24	10	30
Absolute Return	HFRI Fund of Funds Composite	10	5	15
Private Credit	Actual Private Credit Portfolio Returns	4	0	6
Real Estate	NCREIF ODCE Index	8	4	12
Real Assets	Actual Real Asset Portfolio Returns	4	0	8
<b>Cash</b>	BofA 3-Month US Treasury Bill Index	2	1	5

# Public Equity

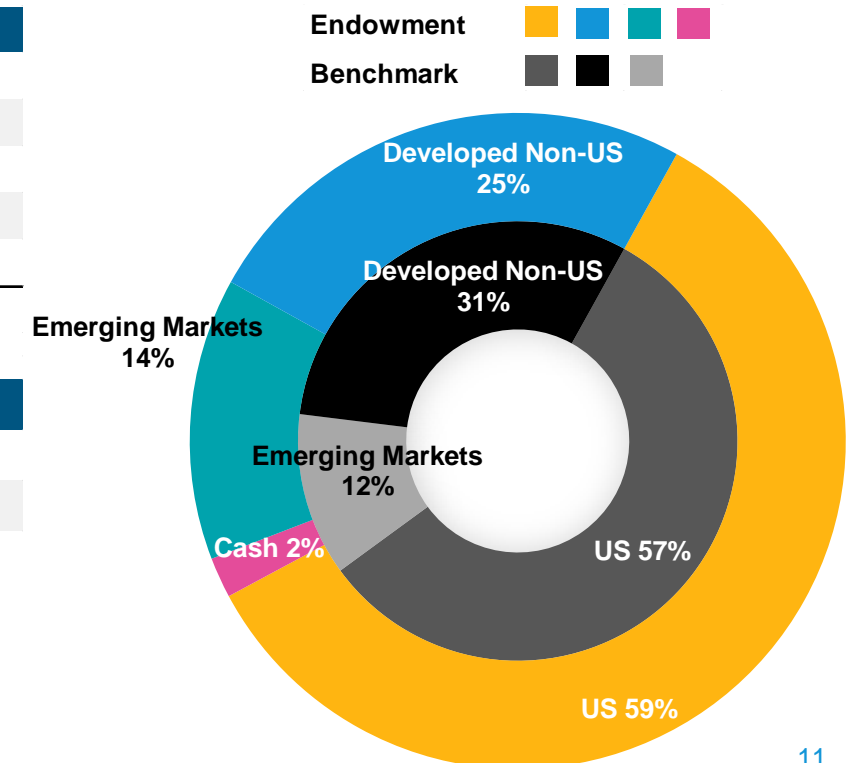
As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
Public Equity	5,996	100	6.0	7.3	6.4	9.9	6.9	4.5	7.8
Policy Benchmark*			1.2	5.7	6.3	9.1	6.8	5.2	8.7
Value Added			4.8	1.6	0.1	0.8	0.1	(0.7)	(0.9)
Active	2,697	45	6.7						
Passive	3,298	55	5.7						

\* Prior to July 1, 2017, the total public equity benchmark was an aggregate of benchmarks for underlying equity portfolios.

Active Managers	# of funds	Weight
Global Generalist	3	16.1%
USA	1	6.0%
Developed Non-USA	2	10.1%
Global Sector Specialist	1	1.9%
Emerging Markets	2	10.5%
	<b>9</b>	<b>44.6%</b>

Passive Index Exposure	Strategy	Weight
S&P 500 Tobacco Free	US Passive	27.0%
MSCI ACWI IMI Tobacco Free	Global Passive	27.9%

## Regional Look through Exposure



# Public Equity

## Attribution:

GEP outperformance FYTD 2019/20 driven by positive value added from manager stock selection, as well as over weights to healthcare and China.

Top 3 Absolute Performers FYTD	FYTD return	Weight
1. Global Sector Specialist	43.6%	1.9%
2. Emerging Markets Manager	14.0%	6.3%
3. US Manager	11.9%	6.0%

Bottom 3 Absolute Performers FYTD	FYTD return	Weight
1. Emerging Markets Manager	-4.8%	4.2%
2. Developed Non-US Manager	-0.5%	4.2%
3. Global Generalist Manager	0.6%	5.3%
GEP Benchmark (MSCI ACWI IMI TF)	1.2%	

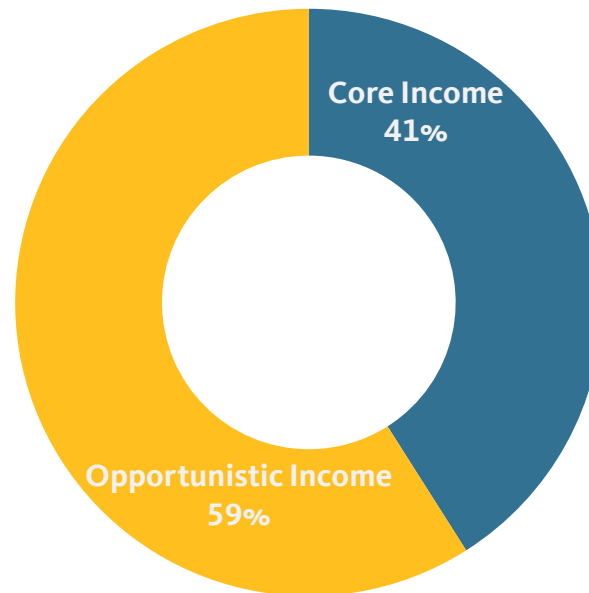
Geographic Exposures	Portfolio	Benchmark
US Equity	59.1%	56.9%
Developed Non-US Equity	25.0%	31.1%
Emerging Market Equity	13.9%	12.0%
Cash	2.0%	0.0%

# Fixed Income

As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
Fixed Income	557	100	5.9	4.7	3.7	4.3	4.8	5.9	6.6
Policy Benchmark*			8.7	5.3	4.8	4.8	5.2	6.1	6.2
Value Added			(2.8)	(0.6)	(1.1)	(0.5)	(0.4)	(0.2)	0.4
Core Income	225	41	6.2	4.0	3.0	3.4			
Opportunistic Income	332	59	2.7	4.2	5.0	6.1			

\* Starting July 1, 2017, the benchmark is the Barclay's US Aggregate Bond Index.

Policy benchmark for Liquidity (Income) prior to July 1, 2017 was a weighted average composite of the historical policy benchmarks and targets.



# Cash

As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
Cash	303	100	1.9	2.0	1.7	1.8	2.6	3.0	3.7

# Absolute Return

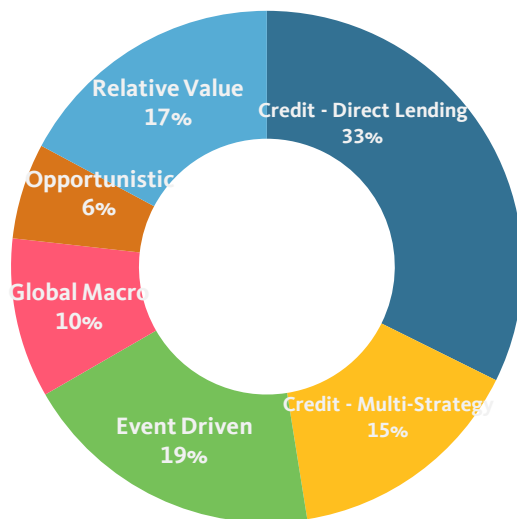
As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
Absolute Return	3,106	100	(1.4)	4.0	2.3	5.1	5.0	-	-
Policy Benchmark*			(0.1)	2.1	(0.3)	0.5	2.8	-	-
Value Added			(1.3)	1.9	2.6	4.6	2.2	-	-
Credit – Direct Lending	989	33	4.9	8.0	-	-			
Credit – Multi-Strategy	452	15	(22.4)	(3.6)	(0.6)	-			
Relative Value	536	17	4.8	7.8	7.2	6.5			
Event Driven	605	19	13.2	9.4	6.4	7.6			
Global Macro	320	10	(6.1)	(0.1)	-	1.4			
Opportunistic	193	6	(14.6)	2.7	-	-			

\* As of July 2017, the benchmark is HFRI Fund of Funds Composite.

From February 2016 to June 2017, the benchmark was the HFRX Absolute Return.

From March 2009 to January 2016, the benchmark was 50% HFRX Absolute Return/50% HFRX Market Directional.

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



External Manager	Credit Strategies	Investment Strategy	NAV (\$M)
Manager 1	Direct Lending	European corporate lending.	\$126
Manager 2	Direct Lending	Consumer and small business specialty finance lending.	\$220
Manager 3	Direct Lending	U.S. residential real estate credit lending.	\$280
Manager 4	Direct Lending	U.S. upper middle market corporate direct lending. Vehicle is publicly traded.	\$363
Manager 5	Multi-Strategy	Structured credit, asset backed and mortgage securities.	\$277
Manager 6	Multi-Strategy	Structured credit, asset backed and mortgage securities.	\$176
<b>Total</b>			<b>\$1,442</b>



# Private Equity

As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
Private Equity	2,365	100	21.9	24.0	21.4	19.4	14.9	10.5	20.4
Policy Benchmark*			8.5	11.7	14.1	15.8	12.6	8.8	12.7
Value Added			13.4	12.3	7.3	3.6	2.3	1.7	7.7
Co-Invest	730	31	33.7	36.1	26.9	27.5			
Buyout	593	26	4.6	14.3	20.1	15.8			
Venture Capital	543	23	30.3	27.2	20.3	18.4			
Growth	431	18	18.4	10.0	11.4	14.3			
Opportunistic	56	2	26.7	20.8	13.5	19.1			

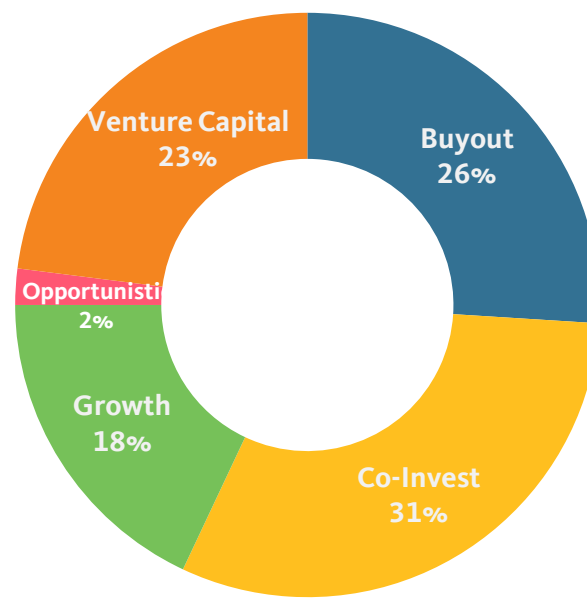
\* As of July 1, 2019, the Private Equity policy benchmark is the Russell 3000 +2.0%.

From July 1, 2017 to June 30, 2019, the Private Equity policy benchmark is the Russell 3000 +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 + 3% lagged one quarter.

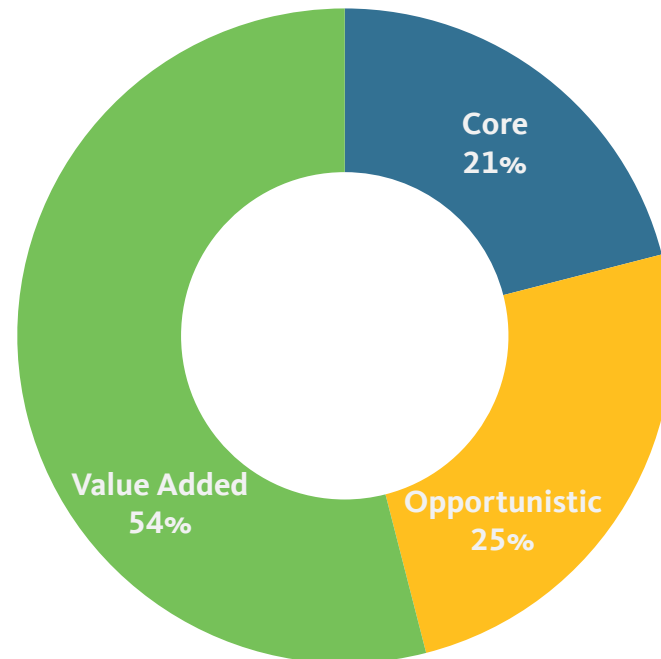
Prior to that, it was the S&P 500 + 5% lagged by a quarter.



# Real Estate

As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
Real Estate	984	100	(0.0)	5.5	7.2	11.3	5.1	-	-
Policy Benchmark*			3.9	5.9	7.5	10.8	5.0	-	-
Value Added			(3.9)	(0.4)	(0.3)	0.5	0.1	-	-
Value-Added	546	54	1.1	4.4	7.4	9.3			
Opportunistic	253	25	(5.5)	4.7	3.1	10.6			
Core	208	21	5.9	8.8	9.1	14.3			

\* As of April 1, 2011, the Real Estate policy benchmark is the NCREIF ODCE Index (lagged 3 months).

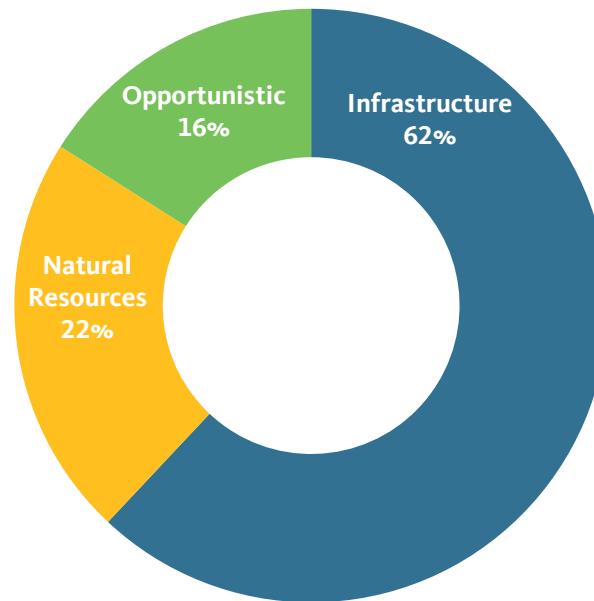


# Real Assets

As of June 30, 2020 Net Returns (%)	Market Value (\$M)	Weight (%)	Annualized Returns						
			1 Year	3 Year	5 Year	10 Year	15 Year	20 Year	25 Year
Real Assets	702	100	9.3	7.0	2.3	2.7	-	-	-
Infrastructure	437	62	13.2	13.2	10.3				
Natural Resources	155	22	8.2	3.1	(2.4)				
Opportunistic	109	16	1.3	7.0	3.3				

\* Inception date for Real Assets is April 1, 2010.

The Real Assets Policy Benchmark is itself, the Real Assets Portfolio



# Risk 1.0 : Risk Measurement

Very large product volatility/risk, and quarter on quarter changes. Large product tracking error in part due to impending change in benchmark weighting.

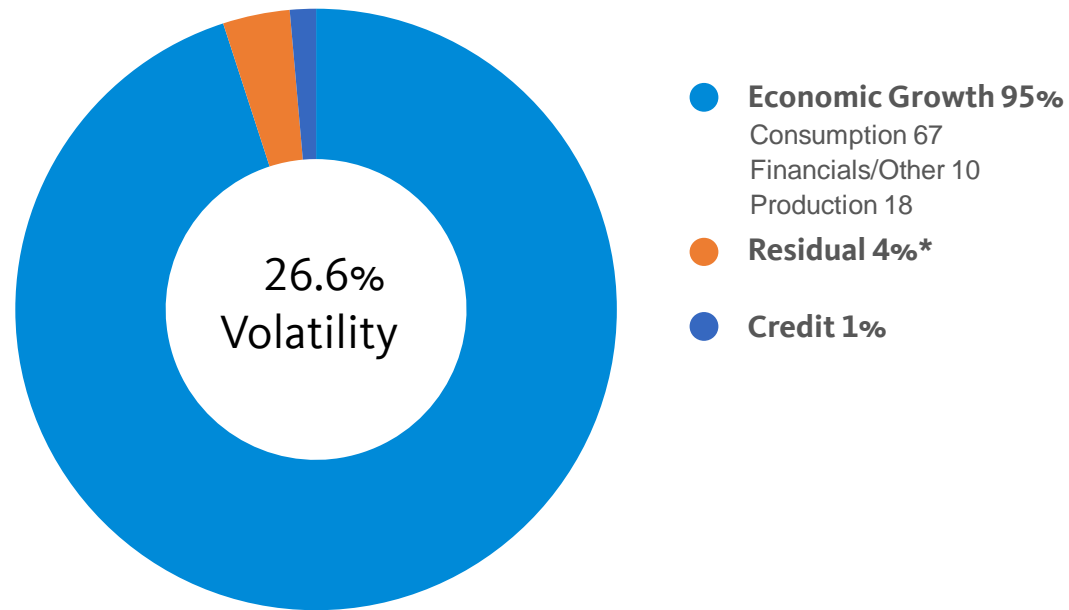
Portfolio	Benchmark	Weight (%)	Portfolio Risk (%)		Benchmark Risk (%)		Active Risk (%)	
			Standalone Volatility	QoQ Change	Standalone Volatility	QoQ Change	Tracking Error	QoQ Change
<b>Endowment</b>	Policy (Blend)	100	26.6	18.1	20.7	13.1	6.3	4.4
<b>Public Equity</b>	MSCI ACWI ex Tobacco	43	27.7	15.4	29.9	17.7	3.1	1.3
<b>Liquidity</b>	Barclays Aggregate	4	13.5	10.7	6.2	2.9	12.6	10.2
<b>Absolute Return</b>	HFRI FOF	22	10.2	5.5	7.7	5.5	5.3	1.7
<b>Private Equity</b>	Russell 3000	17	48.3	29.1	32.0	18.4	19.1	10.1
<b>Real Estate</b>	NFI-ODCE	7	37.9	28.9	29.3	19.7	9.5	1.4
<b>Real Assets</b>	Real Assets	5	40.8	25.1	40.8	25.1	0.0	0.0
<b>Cash</b>	Cash	2	0.2	0.0	0.2	0.0	0.0	0.0

# Macroeconomic Risk Factors

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

## Endowment

Portfolio Standalone Risk Factor Decomposition



Factor Name	Factor Description
Economic Growth	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

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

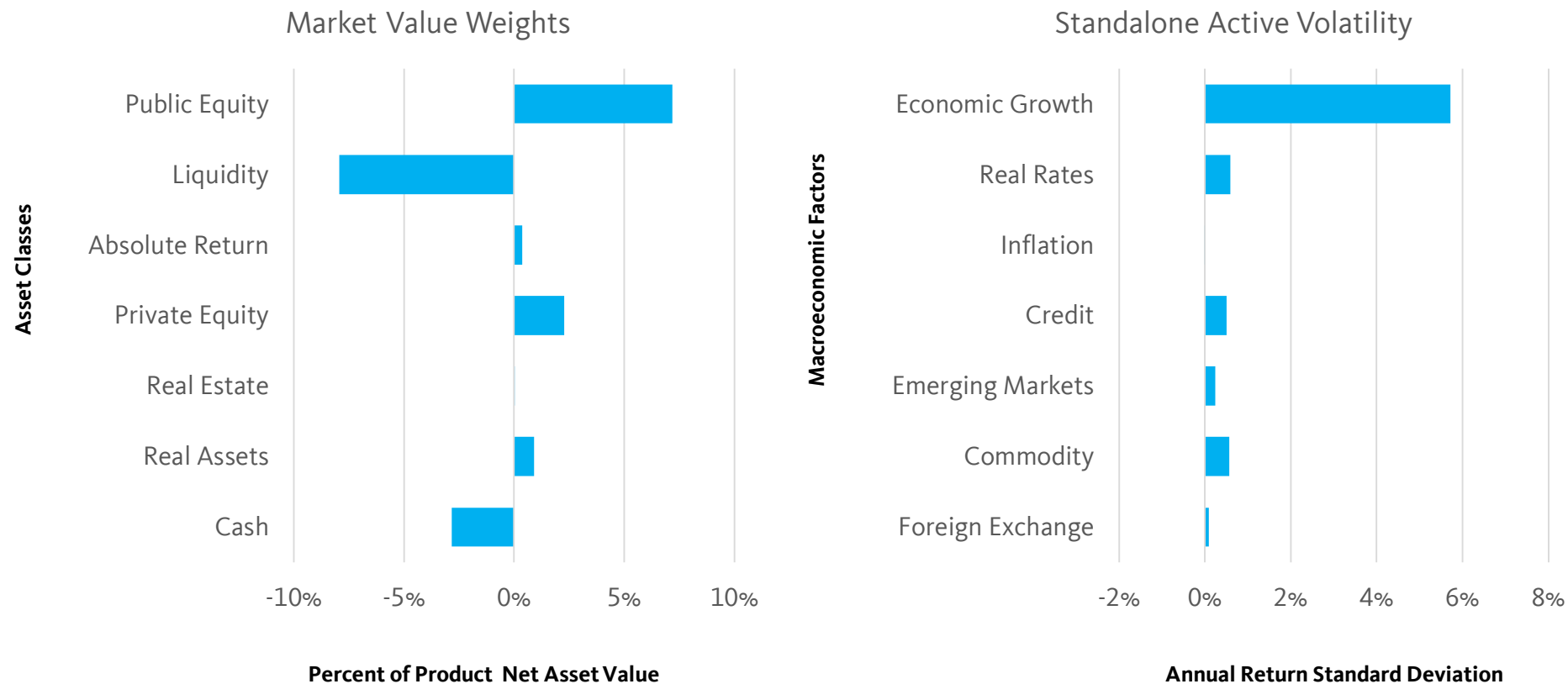
# Risk 1.0: Two Views of Risk

## Asset Classes versus Macroeconomic Factors

Large asset allocation over/underweights a function of impending asset allocation benchmark changes (expect both Public Equity and Liquidity market value weights to change). Large overweight to Economic Growth similarly results.

### Endowment Active Exposures

Reference scale: active risk (tracking error) : 6.3%



# 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

- Pandemic Recession
- Peak Oil
- Gulf Tensions

## Interest Rate Scenarios

- US Rates Paradigm Shift
- Reflation – Deflation
- Rising Inflation – Global Rate Hikes

## Market Technical Scenarios

- Tech Calamity
- Volatility Regime Change
- Value Reversal

Source: BlackRock

# Risk 2.0: Scenario Analysis

Indicative stressed P&L for public markets investments

## PORTFOLIO

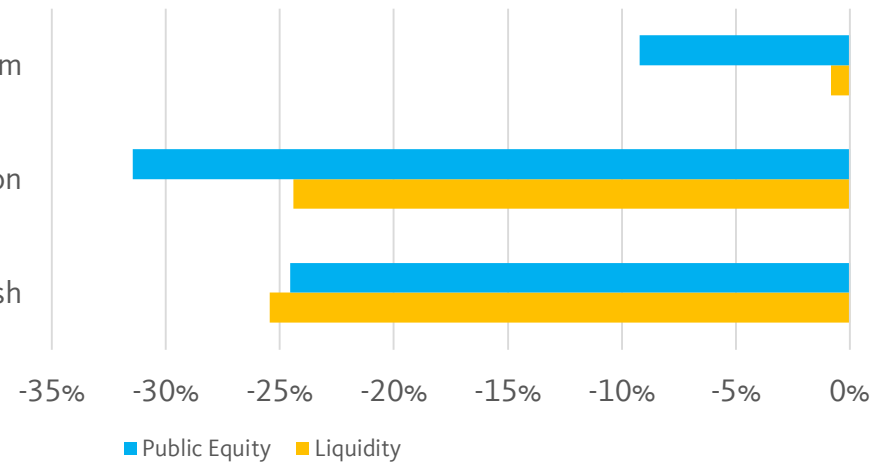
US-China Trade: Global Protectionism

Pandemic Recession

Fall 2008 Crash

Public Equity

Liquidity

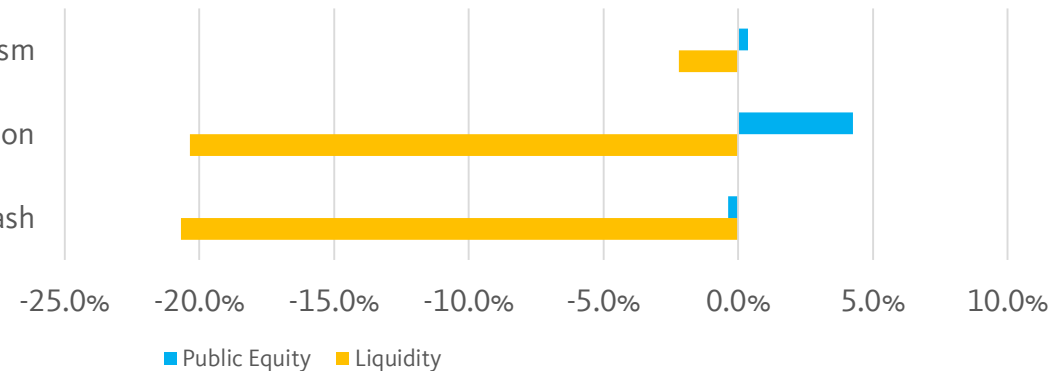


## ACTIVE

US-China Trade: Global Protectionism

Pandemic Recession

Fall 2008 Crash



As of June, 2020 Reference scale: volatility = 26.6%, tracking error 6.3%