UNIVERSITY OF CALIFORNIA

Office of the Chief Investment Officer

Endowment

Investment Review as of December 31, 2016

Growing Portfolios Building Partnerships

UC Investments

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Office of the Chief Investment Officer

Our Products: $9.9 Billion Endowment represents 10% of our $103 Billion of assets

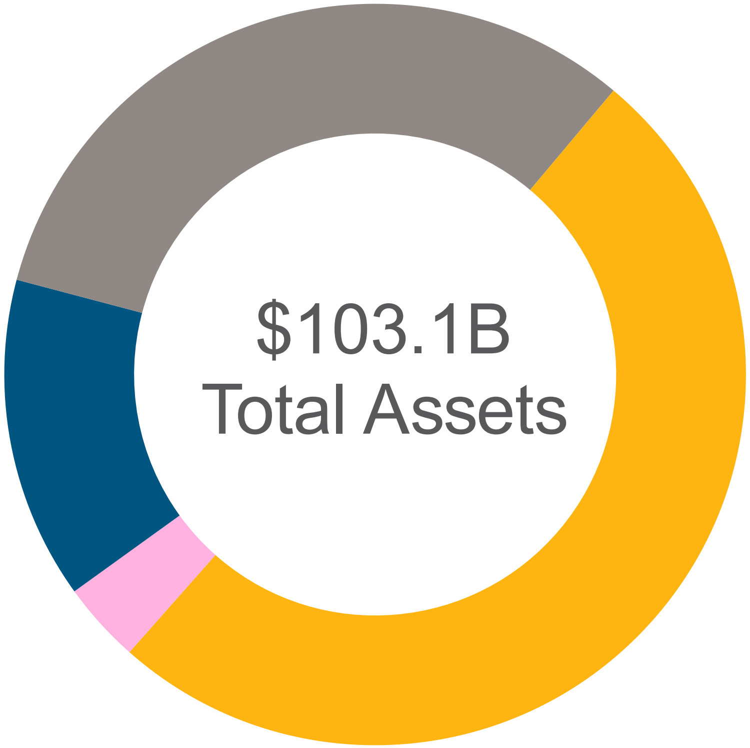
Market Value in Billions ($)

	December 31, 2016	1 Year Ago December 31, 2015	5 Years Ago December 31, 2011
Endowment	$9.9	$8.8	$6.3
Pension	$57.1	$53.6	$39.7
Retirement Savings	$20.8	$19.6	$15.6
Working Capital Total Return	$8.8	$8.6	$3.6
Short Term	$6.5	$5.1	$7.3
Total	**$103.1B**	**$95.7B**	**$72.5B**

How We Invest Our Assets

As of December 31, 2016

Public Equity: $52.1B	50%
Fixed Income: $33.0B	32%
Other Investments: $14.4B	14%
Absolute Return: $5.9B	6%
Private Equity: $3.9B	4%
Real Estate: $3.5B	3%
Real Asset: $1.1B	1%
Cash: $3.6B	4%
$103.1 Billion	**100%**



Investment Highlights

The **mission** of the General Endowment Pool ("GEP") is to provide a common investment vehicle, which will generate a stable and continuously growing income stream, for (most but not all of) the University's endowments and quasi-endowments, for which the University is both trustee and beneficiary.

The overall investment goal of the GEP is to preserve the purchasing power of the future stream of endowment payout for those funds and activities supported by the endowments, and to the extent this is achieved, cause the principal to grow in value over time.

Endowment Change in Assets

Assets Under Management Attribution

Assets Under Management June 30, 2016	$9.11 billion
Market Gains	$0.43 billion
Value Added	$0.21 billion
Net Cash Flow	$0.11 billion
Assets Under Management December 31, 2016	**$9.86 billion**

As of December 31, 2016

Endowment Asset Allocation

As of December 31, 2016	Market Value in $ Billions	Percentage	Over/Underweight Relative to Policy	Policy Weight
Public Equity	**4.6**	**46.5%**	**4.0%**	**42.5%**
Fixed Income	**1.0**	**10.5%**	**-2.0%**	**12.5%**
Core	0.4	3.7%	-1.3%	5.0%
High Yield	0.3	3.1%	0.6%	2.5%
Emerging Market Debt	0.1	1.3%	-1.2%	2.5%
TIPS	0.2	2.4%	-0.1%	2.5%
Other Investments	**3.6**	**36.9%**	**-8.1%**	**45.0%**
Absolute Return	1.8	18.2%	-4.8%	23.0%
Private Equity	1.1	11.1%	-0.4%	11.5%
Real Estate	0.5	5.4%	-2.1%	7.5%
Real Asset	0.2	2.2%	-0.8%	3.0%
Cash	**0.7**	**6.1%**	**6.1%**	**0.0%**
Total	**9.9**	**100.0%**	**0.0%**	**100.0%**

Endowment Performance

Net Returns (%)			Annualized Returns					
As of December 31, 2016	3 Month	Fiscal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	20 Year
UC Endowment	2.5	7.1	6.0	5.7	9.0	7.9	5.4	7.6
UC Endowment Benchmark	0.9	4.7	6.4	4.3	7.4	6.2	4.8	7.1
Value Added	1.6	2.4	(0.4)	1.4	1.6	1.7	0.6	0.5

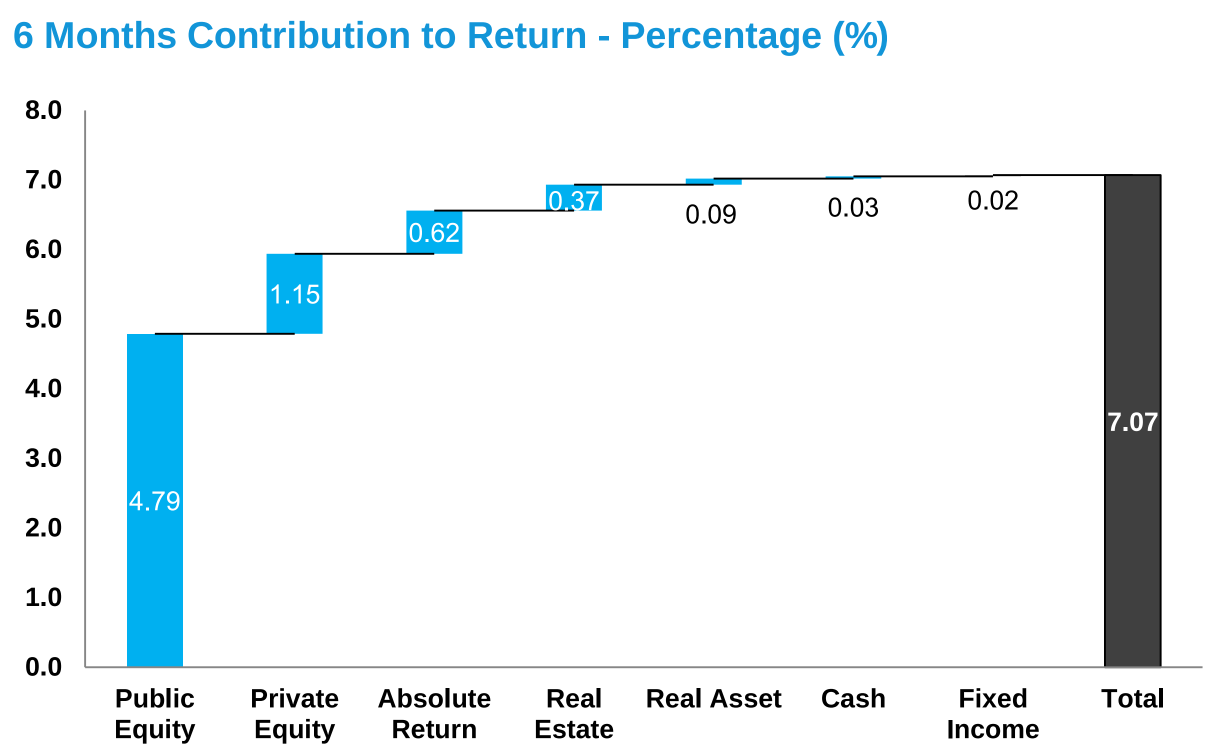
The UC Endowment Benchmark is a weighted average of investment policy targets

Net Returns (%)				One Year Returns				
As of December 31	2016	2015	2014	2013	2012	2011	2010	2009
UC Endowment	6.0	2.2	9.0	16.0	12.2	(0.3)	11.4	17.9
UC Endowment Benchmark	6.4	(0.2)	6.7	13.3	11.0	(3.1)	10.5	18.3
Value Added	(0.4)	2.4	2.3	2.7	1.2	2.8	0.9	(0.4)

Endowment Policy Benchmark

Asset Class	Benchmark Component	Target
Total Public Equity		**42.5%**
U.S. Equity	Russell 3000 Tobacco Free Index	21.0%
Developed Equity	MSCI World ex-U.S. (net dividends) Tobacco Free	14.0%
Emerging Market Equity	MSCI Emerging Market (net dividends)	7.5%
Global Equity	MSCI All Country World Index (net dividends)	0.0%
Total Fixed Income		**12.5%**
U.S. Core Fixed Income	Barclays U.S. Government Index	5.0%
High Yield Debt	Merrill Lynch High Yield Cash Pay Index	2.5%
Emerging Market Debt	JP Morgan Emerging Markets Bond Index Global Diversified	2.5%
TIPS	Barclays U.S. TIPS	2.5%
Total Other Investments		**45.0%**
Absolute Return	HFRX Absolute Return Index (Prior to February 2016 blended weighted composite)	23.0%
Private Equity	Actual Private Equity Returns	11.5%
Real Estate	NCREIF Funds Index-Open End Diversified Core Equity Index	7.5%
Real Assets	Actual Real Assets Portfolio Returns	3.0%

Contribution to Endowment Return



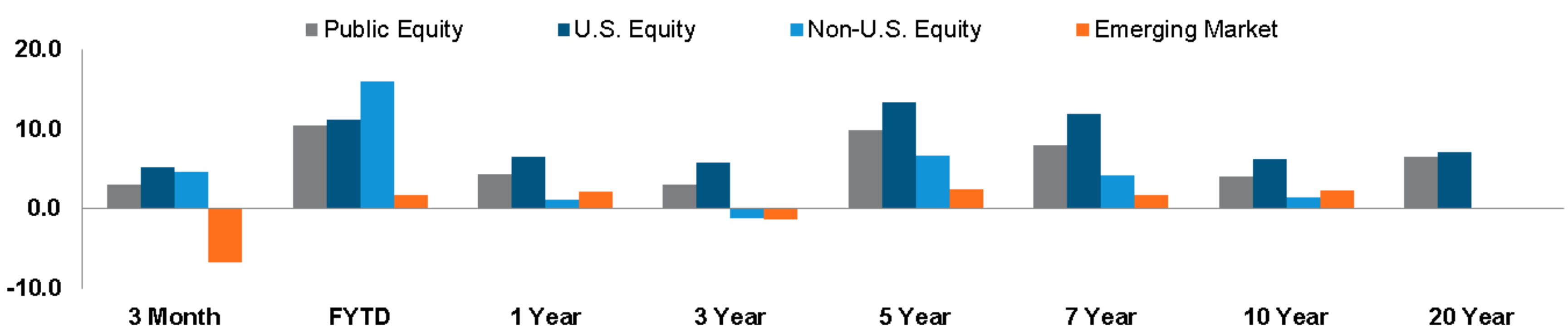
As of December 31, 2016

Endowment Attribution – Fiscal Year-to-Date (6 Month)

As of December 31, 2016	Average Weight	Active Weight	Allocation Attribution	Selection Attribution	Total Attribution
Public Equity	47.6	+5.1	+0.5	+0.6	+1.1
Fixed Income					
Core	3.1	-1.9	+0.2	+0.0	+0.2
High Yield	3.2	+0.7	+0.1	+0.0	+0.1
Emerging Market Debt	1.3	-1.2	+0.1	+0.0	+0.1
TIPS	2.3	-0.2	+0.0	+0.0	+0.0
Other Investments					
Absolute Return	18.9	-4.1	+0.2	+0.4	+0.6
Private Equity	11.7	+0.2	+0.1	+0.0	+0.1
Real Estate	5.6	-1.9	-0.1	+0.5	+0.4
Real Asset	1.9	-1.1	+0.0	+0.0	+0.0
Cash	4.4	4.4	-0.2	+0.0	-0.2
Total GEP	**100.0%**	**+0.0%**	**+0.9%**	**+1.5%**	**+2.4%**

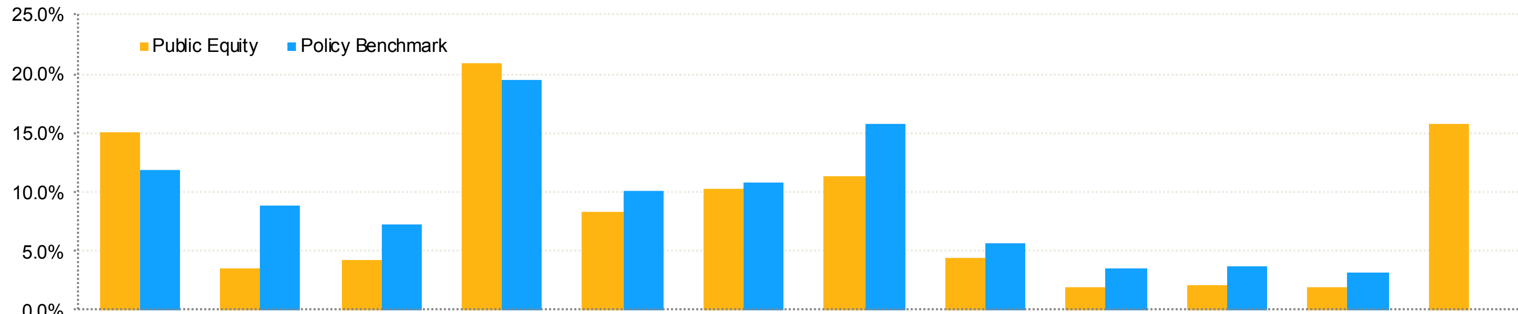
Endowment Public Equity Performance

Net Returns (%) As of December 31, 2016	Market Value ($ Million)	% Allocation	3 Month	Fiscal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	20 Year
					Annualized Returns					
Public Equity	**4,585**	**100%**	**3.1**	**10.5**	**4.4**	**3.1**	**9.9**	**7.9**	**4.0**	**6.5**
GEP Public Equity Policy Benchmark			1.3	7.3	9.2	3.2	9.4	7.5	4.0	6.7
Value Added			*1.8*	*3.2*	*(4.8)*	*(0.1)*	*0.5*	*0.4*	*0.0*	*(0.2)*
U.S. Equity	2,107	46%	5.3	11.2	6.6	5.8	13.3	12.0	6.2	7.1
Russell 3000 Tobacco Free Index			4.2	9.0	12.7	8.3	14.7	12.8	7.0	7.9
Value Added			*1.1*	*2.2*	*(6.1)*	*(2.5)*	*(1.4)*	*(0.8)*	*(0.8)*	*(0.8)*
Non-U.S. Equity	1,437	31%	4.7	16.0	1.1	(1.2)	6.7	4.1	1.4	-
MSCI World ex-U.S. (net dividends) Tobacco Free			(0.2)	6.2	2.8	(1.7)	6.1	3.5	0.8	-
Value Added			*4.9*	*9.8*	*(1.7)*	*0.5*	*0.6*	*0.6*	*0.6*	*-*
Emerging Market	1,041	23%	(6.7)	1.8	2.2	(1.3)	2.4	1.7	2.3	-
MSCI Emerging Market (net dividends)			(4.2)	4.5	11.2	(2.6)	1.3	0.5	1.8	-
Value Added			*(2.5)*	*(2.7)*	*(9.0)*	*1.3*	*1.1*	*1.2*	*0.5*	*-*



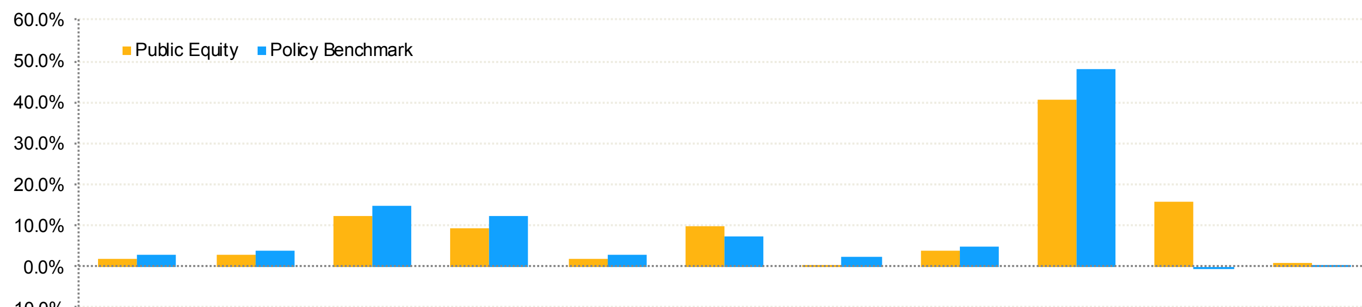
Endowment Public Equity Sector and Regional Allocation

Sector Exposure:



	Cons Disc	Cons Staples	Energy	Financials	Health Care	Industrials	Info Tech	Materials	Real Estate	Telecom	Utilities	Cash
Public Equity	15.0%	3.5%	4.3%	21.0%	8.4%	10.3%	11.3%	4.4%	1.9%	2.1%	2.0%	15.8%
Policy Benchmark	11.9%	8.8%	7.2%	19.5%	10.1%	10.8%	15.7%	5.6%	3.6%	3.7%	3.1%	0.0%
Active	*3.1%*	*-5.3%*	*-2.9%*	*15%*	*-17%*	*-0.5%*	*-4.4%*	*-12%*	*-17%*	*-16%*	*-1.1%*	*15.8%*

Regional Exposure:



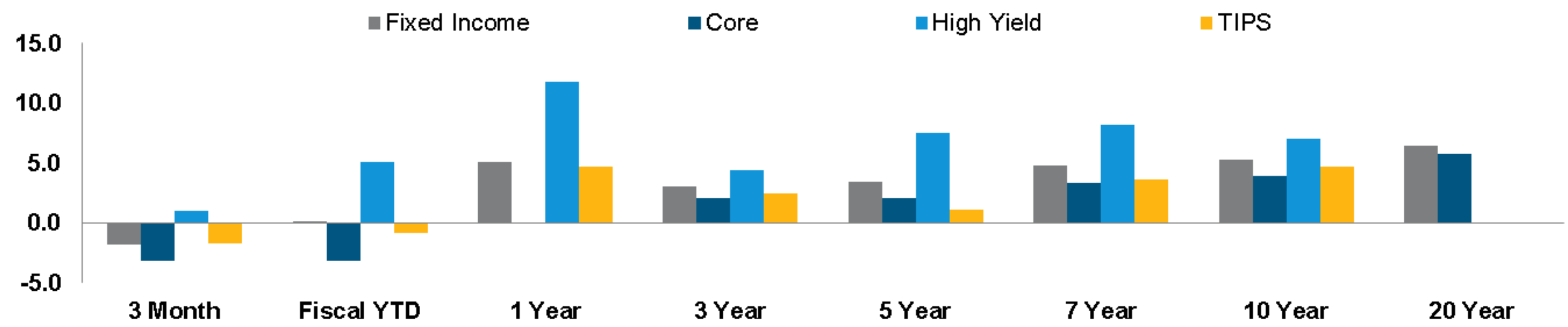
	Canada	Asia ex-JP	Europe ex-UK	Emerg Asia	Emerg EU	Japan	Latin Amer	UK	US	Cash	Rest of World
Public Equity	1.8%	3.0%	12.5%	9.4%	1.7%	9.7%	0.6%	4.0%	40.5%	15.8%	1.0%
Policy Benchmark	3.0%	4.1%	14.9%	12.3%	3.0%	7.2%	2.4%	4.8%	48.1%	-0.1%	0.3%
Active	*-12%*	*-1.1%*	*-2.4%*	*-2.9%*	*-13%*	*2.5%*	*-18%*	*-0.8%*	*-7.6%*	*15.9%*	*0.7%*

As of December 31, 2016

Endowment Fixed Income Performance

Net Returns (%) As of December 31, 2016	Market Value ($ Million)	% Allocation	3 Month	Fiscal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	20 Year
					Annualized Returns					
Fixed Income	**1,038**	**100%**	**-1.8**	**0.0**	**5.1**	**3.0**	**3.4**	**4.8**	**5.3**	**6.4**
Policy Benchmark			-2.4	-0.5	6.8	3.7	3.5	4.9	5.5	6.4
Value Added			*0.6*	*0.5*	*-1.7*	*-0.7*	*-0.1*	*-0.1*	*-0.2*	*0.0*
Core	366	35%	-3.2	-3.2	-0.1	2.0	2.1	3.3	3.9	5.7
Barclays US Government Bond Index			-3.7	-4.0	1.1	2.5	1.9	3.4	4.2	5.7
Value Added			*0.5*	*0.8*	*-1.2*	*-0.5*	*0.2*	*-0.1*	*-0.3*	*0.0*
High Yield	301	29%	1.0	5.1	11.8	4.4	7.4	8.1	7.0	-
Merrill Lynch High Yield Cash Pay Index			1.9	7.5	17.3	4.7	7.3	8.0	7.3	-
Value Added			*-0.9*	*-2.4*	*-5.5*	*-0.3*	*0.1*	*0.1*	*-0.3*	-
Emerging Market Debt	130	13%	-4.5	-1.6	-	-	-	-	-	-
JP Morgan Emerging Markets Bond Index Global Diversified			-4.0	-0.1	-	-	-	-	-	-
Value Added			*-0.5*	*-1.5*	-	-	-	-	-	-
TIPS	241	23%	-1.8	-0.9	4.7	2.4	1.0	3.6	4.7	-
Barclays U.S. TIPS			-2.4	-1.5	4.7	2.3	0.9	3.4	4.4	-
Value Added			*0.6*	*0.6*	*0.0*	*0.1*	*0.1*	*0.2*	*0.3*	-

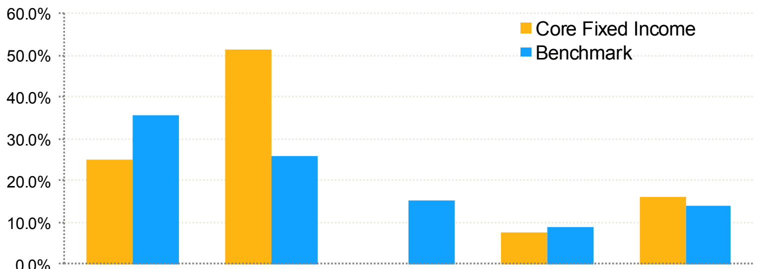
Policy benchmark for Core Fixed Income prior to July 1, 2016 was the Barclay's US Aggregate Bond Index. Policy would be a weighted average composite of the historical policy benchmarks and targets.



Endowment Fixed Income Exposures

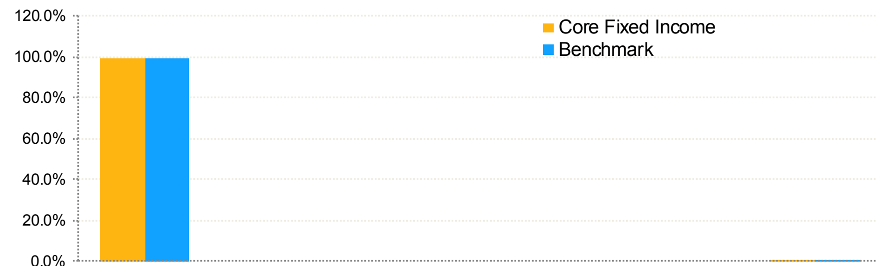
Core Fixed Income – $366M

Summary of Duration Buckets:



	0 to 3	3 to 5	5 to 7	7 to 10	10 +
Core Fixed Income	24.9%	51.3%	0.0%	7.8%	16.0%
Benchmark	35.8%	25.8%	15.2%	9.1%	14.1%
Active	*-10.9%*	*25.5%*	*-15.2%*	*-1.3%*	*1.9%*

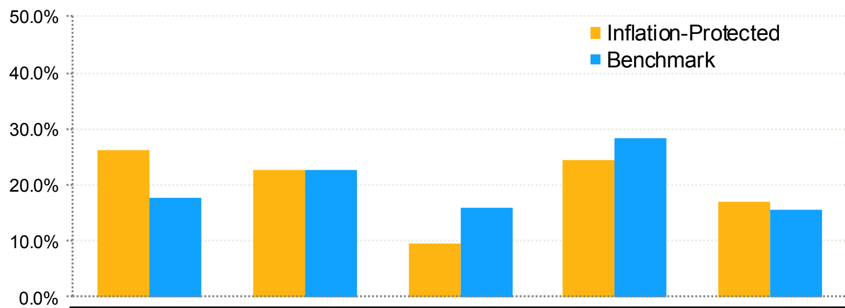
Summary of Credit Rating



	AAA to A	BBB	BB	B	CCC lower	NR
Core Fixed Income	99.8%	0.0%	0.0%	0.0%	0.0%	0.2%
Benchmark	99.9%	0.0%	0.0%	0.0%	0.0%	0.1%
Active	*-0.1%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.1%*

Treasury Inflation-Protected Securities – $241M

Summary of Duration Buckets:



	0 to 3	3 to 5	5 to 7	7 to 10	10 +
Inflation-Protected	26.4%	22.6%	9.6%	24.4%	17.0%
Benchmark	17.7%	22.8%	15.8%	28.2%	15.5%
Active	*8.7%*	*-0.2%*	*-6.2%*	*-3.8%*	*1.5%*

As of December 31, 2016

Endowment Fixed Income Exposures

Emerging Market Debt – $130M

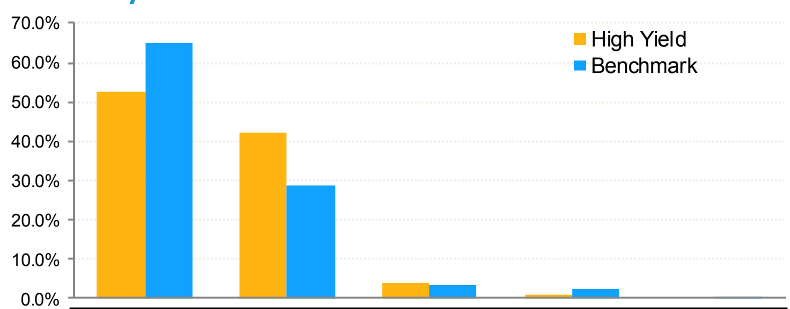
Top 10 Country Active Weight vs the Benchmark	
China	2.0%
Mexico	0.9%
Ukraine	0.9%
Russian Federation	0.8%
Malaysia	0.7%
Philippines	0.7%
Argentina	0.7%
Indonesia	0.7%
Turkey	0.7%
Poland	0.6%

Bottom 10 Country Weight vs the Benchmark	
Virgin Islands, British	-2.1%
Chile	-1.1%
El Salvador	-0.9%
Panama	-0.9%
Costa Rica	-0.7%
India	-0.7%
Guatemala	-0.5%
Trinidad and Tobago	-0.5%
United Kingdom	-0.5%
Sri Lanka	-0.4%

- The Benchmark for Emerging Market Debt is the JP Morgan EMBI Global Diversified

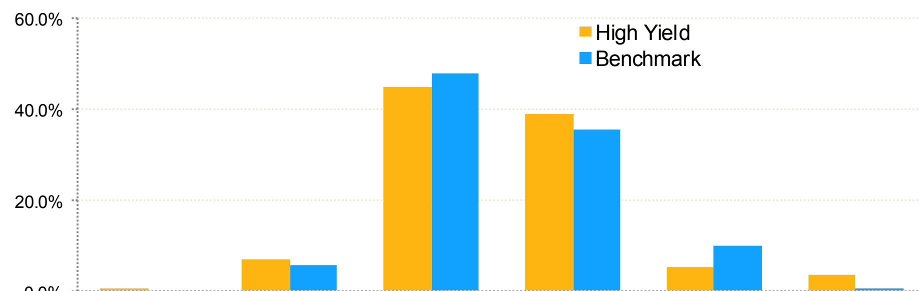
High Yield – $301M

Summary of Duration Buckets:



	0 to 3	3 to 5	5 to 7	7 to 10	10 +
High Yield	52.7%	42.2%	4.2%	0.9%	0.0%
Benchmark	64.9%	28.6%	3.6%	2.6%	0.3%
Active	*-12.2%*	*13.6%*	*0.6%*	*-1.7%*	*-0.3%*

Summary of Credit Rating

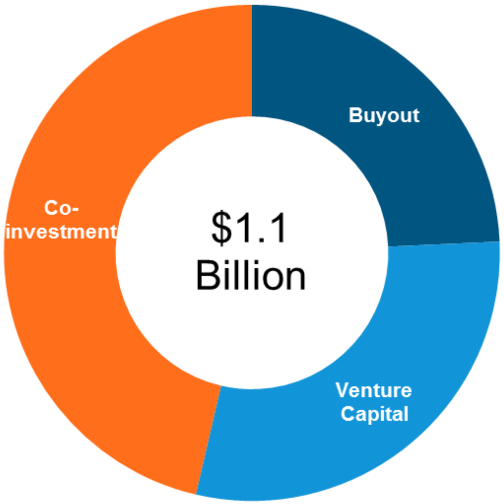


	AAA to A	BBB	BB	B	CCC or lower	NR
High Yield	0.1%	7.1%	45.1%	38.9%	5.4%	3.4%
Benchmark	0.0%	5.7%	48.2%	35.5%	9.9%	0.7%
Active	*0.1%*	*1.4%*	*-3.1%*	*3.4%*	*-4.5%*	*2.7%*

As of December 31, 2016

Endowment Other Investments: Private Equity

Net Returns (%) As of December 31, 2016	Market Value ($ Million)		3 Month	Fiscal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	20 Year
						Annualized Returns				
Private Equity	**1,097**	**100%**	**4.7**	**10.0**	**20.8**	**21.2**	**19.0**	**17.7**	**12.9**	**18.0**
Actual Private Equity Returns			4.7	10.0	20.8	21.2	19.0	17.7	12.9	18.0
Value Added			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buyout	352	32%	12.1	21.3	45.0	24.2	18.8	17.8	13.1	13.3
Venture Capital	322	29%	2.7	1.6	5.2	13.6	14.4	14.3	10.5	24.2
Co-investment	423	39%	0.7	7.5	15.1	28.3	35.8	28.8	-	-



Buyout: 32%
$0.4B

Venture Capital: 29%
$0.3B

Co-investment: 39%
$0.4B

Endowment Other Investments: Absolute Return

Net Returns (%) As of December 31, 2016	Market Value ($ Million)		3 Month	Fiscal YTD	1 Year	3 Year	5 Year	7 Year	10 Year
						Annualized Returns			
Absolute Return	**1,797**	**100%**	**1.3**	**3.4**	**1.8**	**3.5**	**6.1**	**5.4**	**4.3**
Custom Absolute Return Index			(0.3)	0.5	(4.0)	(1.3)	0.9	(0.5)	2.2
Value Added			*1.6*	*2.9*	*5.8*	*4.8*	*5.2*	*5.9*	*2.1*
Relative Value Arbitrage	492	27%	2.7	6.5	9.5	6.0	7.1	6.2	-
Event-Driven	208	12%	0.0	4.1	-3.0	-0.5	6.3	5.6	4.8
Multi-Strategy	647	36%	0.6	3.7	6.6	3.2	1.5	-	-
Global Macro	394	22%	2.3	0.9	-2.2	3.1	3.0	3.5	-
Opportunistic	30	2%	0.2	-	-	-	-	-	-
Distressed	26	1%	7.7	3.2	1.9	-0.5	4.2	4.6	1.2

Relative Value Arbitrage: 27%
$0.5B

Event-Driven: 12%
$0.2B

Multi-Strategy: 36%
$0.7B

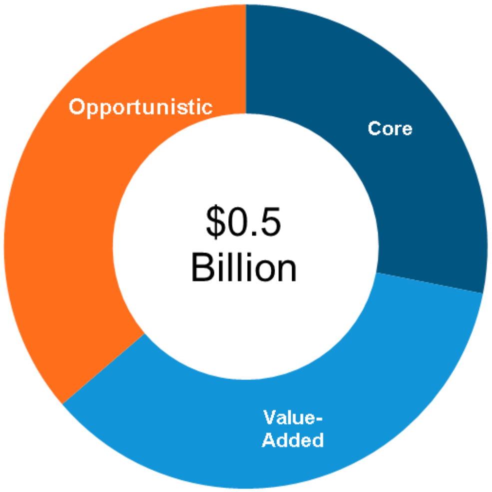
Global Macro: 22%
$0.4B

Distressed: 1%
$0.0B

Opportunistic: 2%

Endowment Other Investments: Real Estate

Net Returns (%) As of December 31, 2016	Market Value ($ Million)		3 Month	Fiscal YTD	1 Year	3 Year	5 Year	7 Year	10 Year
						Annualized Returns			
Real Estate	**534**	**100%**	**8.7**	**6.6**	**12.3**	**14.1**	**13.1**	**11.6**	**3.3**
NCREIF Funds Index-Open End Diversified Core Equity Index (lagged 3 months)			1.8	3.8	9.1	11.6	11.4	10.6	2.8
Value Added			*6.9*	*2.8*	*3.2*	*2.5*	*1.7*	*1.0*	*0.5*
Core	143	27%	2.6	(0.2)	6.5	11.6	12.3	-	-
Value-Added	192	36%	0.8	1.1	9.4	11.8	11.7	-	-
Opportunistic	199	37%	3.0	7.6	6.0	13.2	12.2	-	-



Core: 28% $0.1B

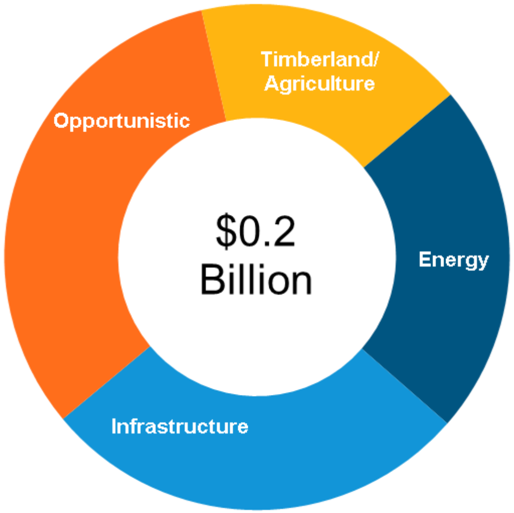
Value-Added: 36% $0.2B

Opportunistic: 36% $0.2B

Endowment Other Investments: Real Assets

Net Returns (%) As of December 31, 2016	Market Value ($ Million)		3 Month	Fiscal YTD	1 Year	3 Year	5 Year	Since Inception
					Annualized Returns			
Real Asset	**213**	**100.0%**	**2.0**	**4.4**	**(6.7)**	**(2.7)**	**-**	**3.9**
Actual Portfolio Returns for Others			2.0	4.4	(6.7)	(2.7)	0.0	3.9
Energy	49	23%	8.8	18.8	(25.6)	(20.1)	(12.0)	(2.7)
Infrastructure	58	27%	0.9	3.6	0.9	10.6	10.6	8.5
Opportunistic	71	33%	2.3	4.2	5.5	5.5	6.7	6.6
Timberland/Agriculture	35	17%	(0.4)	(1.3)	5.3	3.8	3.2	5.0

Inception Date for Real Assets is April 1, 2010.



Energy: 23%
$0.05B

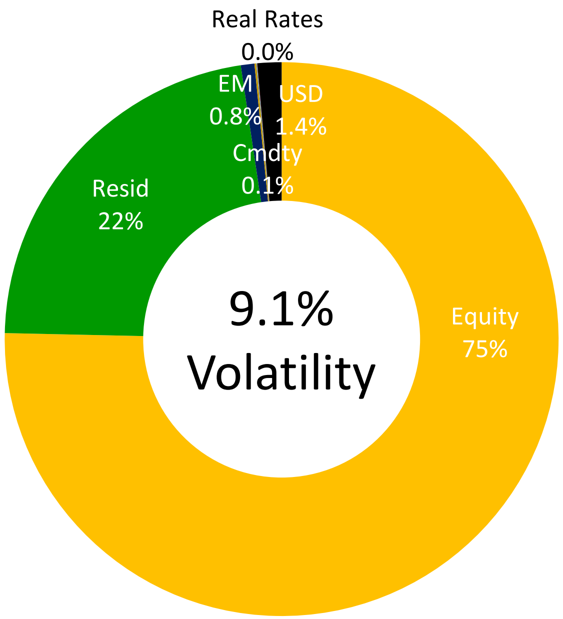
Infrastructure: 27%
$0.06B

Opportunistic: 33%
$0.07B

Timberland/Agriculture: 17%
$0.03B

Risk Management

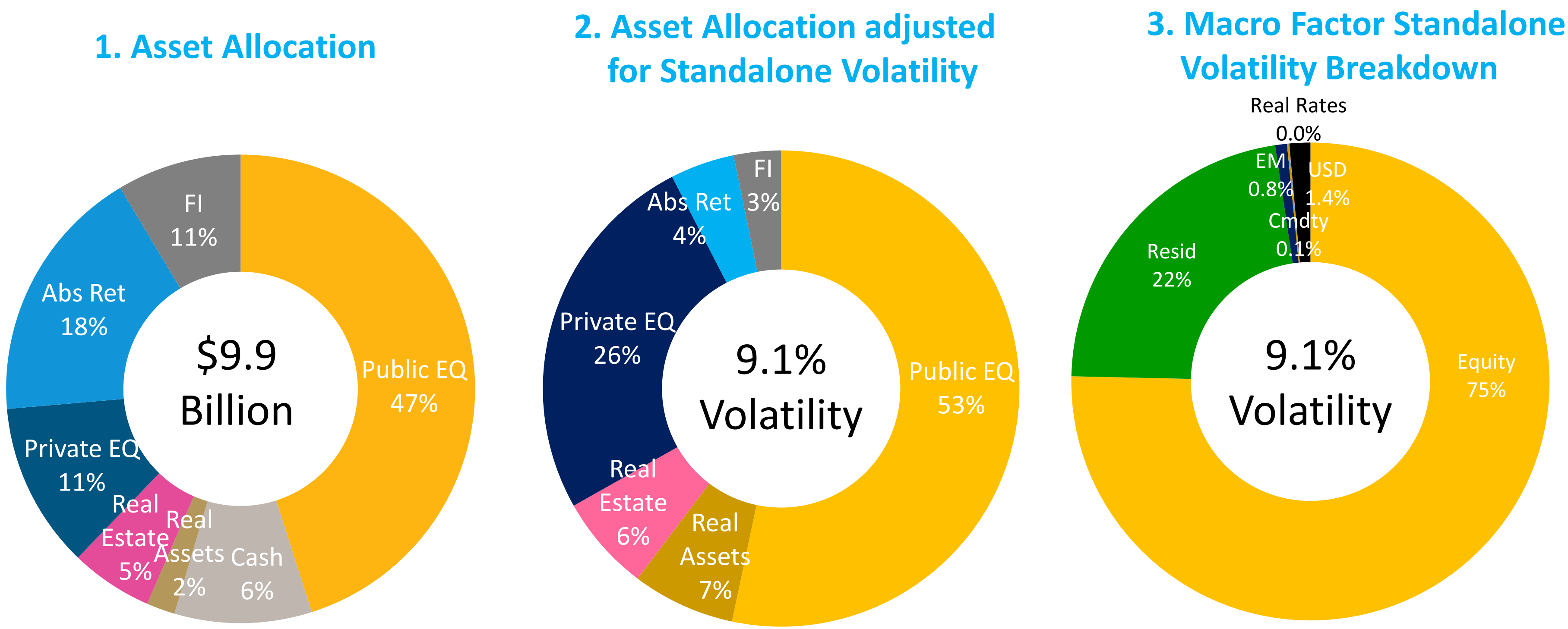
Describing the Macroeconomic Factors



Factor Name	***Factor Description***
Equity	Broad-market equity index returns- a proxy for general economic growth
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	Equally weighted basket of EM Assets

As of December 31, 2016

GEP Risk Exposure and Macro Factors : dominant contribution from equity risk



1. **The Asset allocation mix provides the lowest order view of risk of GEP**

2. **Adjusting the asset allocation for the standalone volatility of each asset class shows the dominance of both Public and Private Equity risk.**

3. **Decomposing the risk of the portfolio into seven fundamental “macroeconomic factors”, with “Equity” interpreted as proxy for general economic growth, demonstrates how this particular factor weaves across the different asset classes and comes to dominate the risk of the portfolio. The contributions from credit and inflation factors is negligible. In this simple heuristic, no correlations are assumed between factors.**

As of December 31, 2016

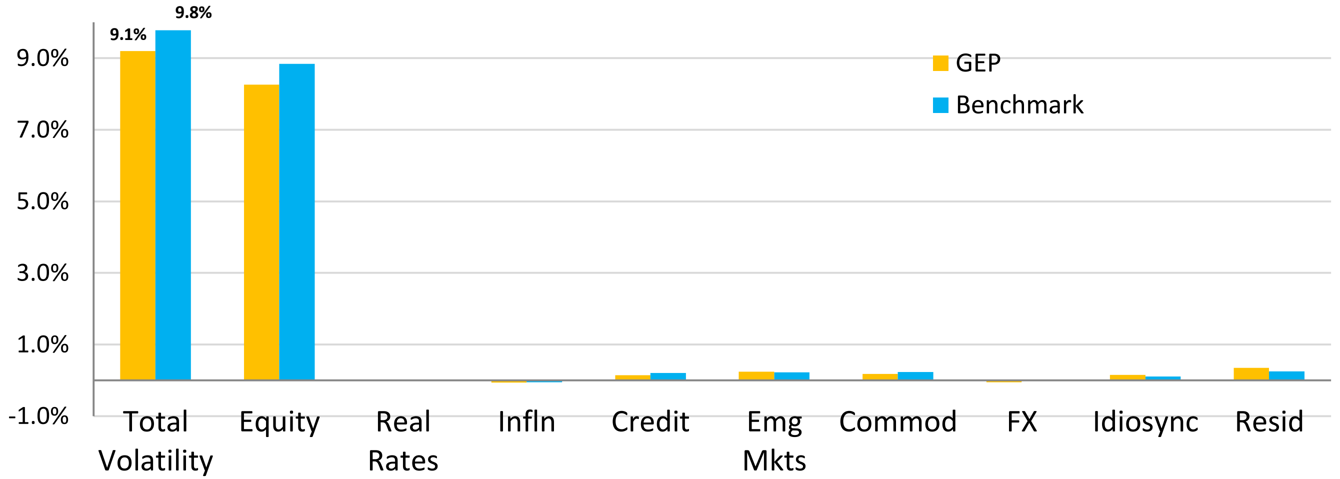
Endowment Risk Measurement

Name	Beta vs Benchmark	Bench Risk (%)	Portfolio Risk (%)		Active Risk (%)	
		Standalone Volatility	Standalone Volatility	Volatility Contributions*	Tracking Error TE	TE Contributions*
GEP Total	**0.92**	**9.8**	**9.1**	**9.1**	**1.1**	**1.1**
Public Equity	0.90	13.4	12.4	5.4	2.3	0.9
Fixed Income	1.1	3.3	3.2	0.1	0.3	0.0
Absolute Return	0.49	1.4	2.5	0.4	2.5	0.2
Private Equity	1.0	24.0	24.0	2.2	0.0	0.0
Private Real Estate	1.15	10.3	12.5	0.4	4.4	0.0
Real Assets	1.0	33.7	33.7	0.6	0.0	0.0
Cash	0	0	0.4	0.0	0.4	0.0

** Additive to Total* *** Private Equity and Real Assets do not contribute to total Tracking Error as per Policy*

Endowment Risk Factors and Stress Tests

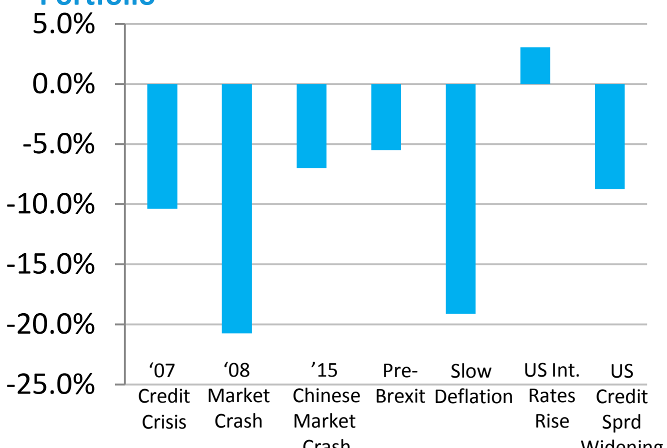
Macro Factor Volatility Contributions



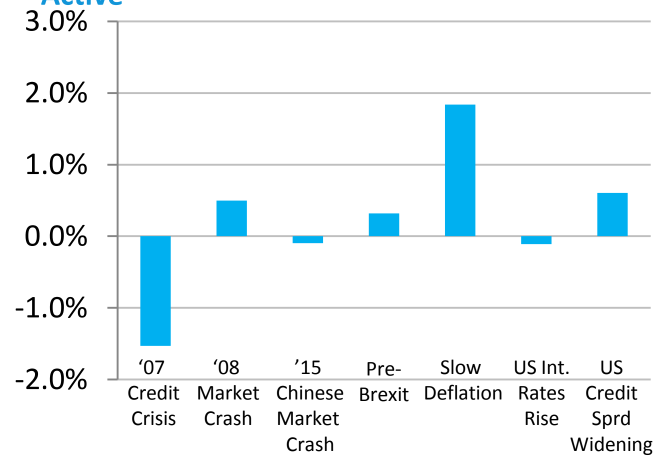
*Each color additive to Total Volatility

Historical Stress Tests and Scenario Analysis

Portfolio



Active



As of December 31, 2016