



UNIVERSITY OF CALIFORNIA

Office of the Chief Investment Officer

UC Retirement Savings Program

Investment Performance and Program Review as of June 30, 2017

Growing Portfolios Building Partnerships

UC Investments

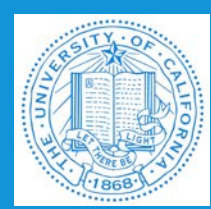


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Plan, People, Industry





UC Retirement Savings Program at a Glance

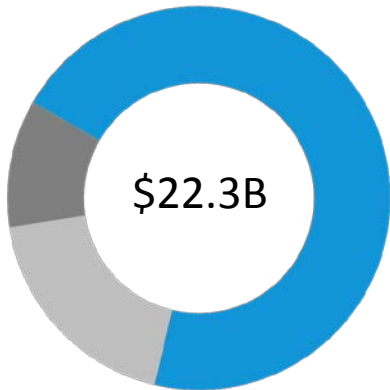
UC Retirement Savings Program

Deliver the best in class DC plan focused on participant outcomes through superior performance and cost management

UC Retirement Savings Program Facts

- ▶ **Established in 1967**
- ▶ Over 310,000 Participants
- ▶ **\$22.3 billion in assets**
- ▶ 3 Plans: 403(b), 457(b), DC Plan
- ▶ 2nd largest public DC plan in the US
- ▶ **Largest 403(b) plan in the US**
- ▶ Target Date Fund (Pathway) default since 2014
- ▶ **\$6.4 billion in Target Date Funds**
- ▶ UC Global Fund: \$4.5 billion; UC Savings Fund: \$4.1 billion

\$22.3 billion across 3 plans

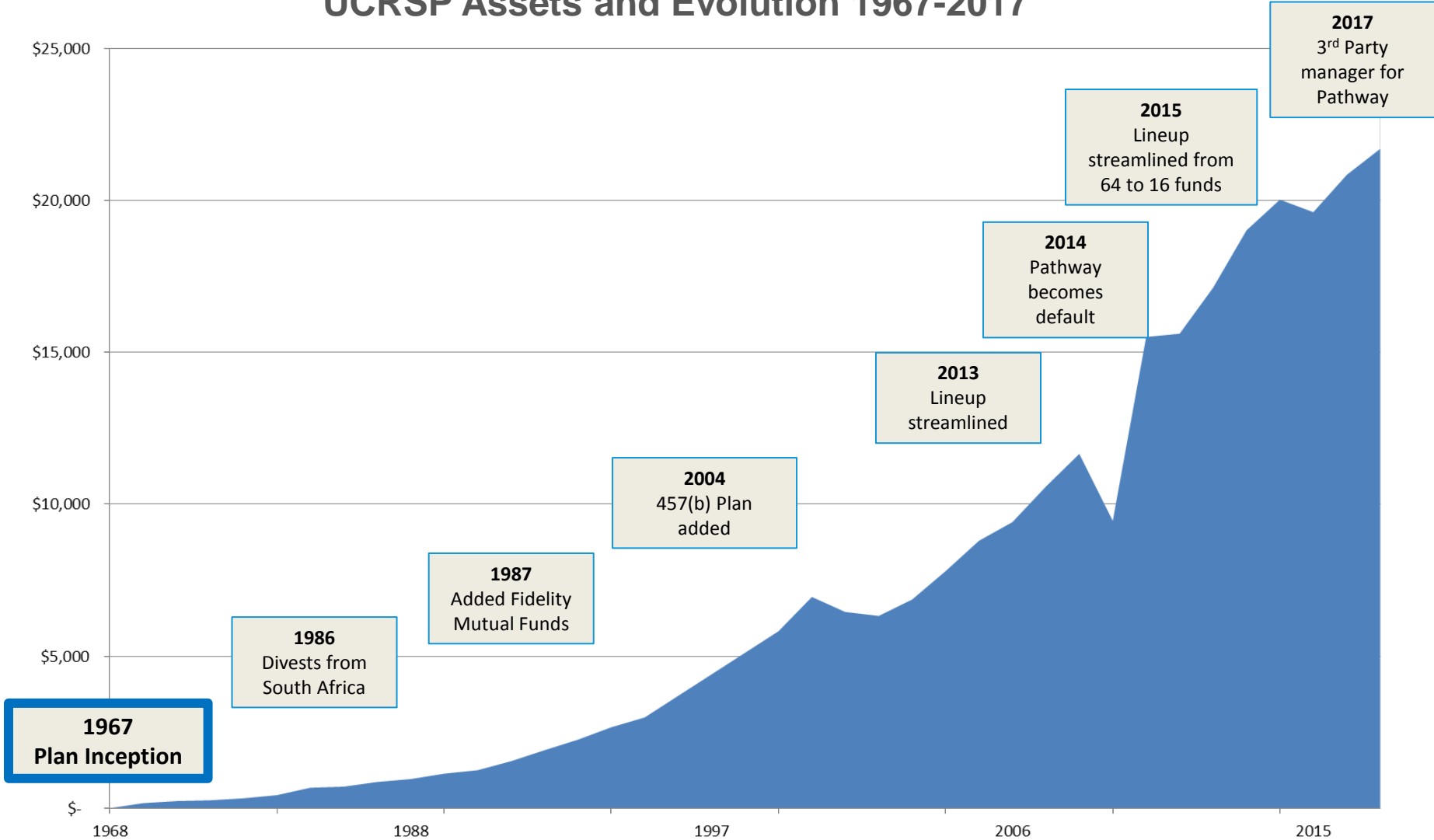


● Tax Deferred 403(b) Plan: \$15.7B	70%
● 457(b) Deferred Compensation Plan: \$2.4B	11%
● Defined Contribution Plan: \$4.2B	19%



UC Retirement Savings Program Evolution

UCRSP Assets and Evolution 1967-2017



As of June 30, 2017



UCRSP reflects industry best practices

	Industry Average	UCRSP	UC Alignment
Choice of Default	Target date fund (TDF): 75% ¹	Target Date Fund: Pathway	✓
Number of Investment Choices	10-19 options ²	16 Investment Choices	✓
Core options implementation preferences	Blend of active and index funds: 79%	Blend of active and passive	✓
Number of plans with a brokerage window	40% ³	BrokerageLink	✓
“All-In” Fees	Median Plan (asset weighted): 49bps ⁴	14 bps	✓

1. Defined Contribution Trends, Callan, 2016
 2. Ready, Set, Retire, Towers Watson, 2015
 3. Plan Sponsor Survey, AonHewitt, 2015
 4. Defined Contribution Survey, NEPC, 2016



Largest Investment Choices by AUM

	June 30, 2016	June 30, 2017
Target Date Fund Series 11 funds ranging from Pathway Income to Pathway 2060	\$5.5B	\$6.4B
UC Global Fund A short duration bond portfolio	\$4.1B	\$4.5B
UC Savings Fund A short duration bond portfolio	\$4.0B	\$4.1B
UC Balanced Growth Fund A fund with an equity and fixed income blend	\$1.5B	\$1.6B
UC Bond Fund A diversified core fixed income fund	\$1.2B	\$1.2B
Brokerage Window A platform allowing participants to choose their own funds	\$1.2B	\$1.4B



Investment Options at a Glance

TARGET DATE FUNDS - \$6.4 billion UC Pathway Funds

UC Pathway Income Fund	UC Pathway Fund 2030	UC Pathway Fund 2050
UC Pathway Fund 2015	UC Pathway Fund 2035	UC Pathway Fund 2055
UC Pathway Fund 2020	UC Pathway Fund 2040	UC Pathway Fund 2060
UC Pathway Fund 2025	UC Pathway Fund 2045	

CORE FUNDS - \$14.5 billion Bond and Stock Investments

<p>Bond Investments</p> <p><i>Short-Term</i></p> <p>UC Savings Fund</p> <p><i>Intermediate-Term</i></p> <p>UC Bond Fund</p> <p><i>Inflation-Protected</i></p> <p>UC Short Term TIPS Fund UC TIPS Fund</p>	<p>Domestic Stock</p> <p><i>Large Cap</i></p> <p>UC Domestic Equity Index Fund Fidelity Growth Company Fund</p> <p><i>Small Cap</i></p> <p>Vanguard Small Cap Equity Fund</p> <p>Balanced Funds</p> <p>UC Balanced Growth Fund</p>	<p>Foreign Stock</p> <p><i>Developed Markets</i></p> <p>UC International Equity Index Fund Fidelity Diversified International Fund UC Global Fund</p> <p><i>Emerging Markets</i></p> <p>DFA Emerging Markets Equity Fund</p> <p><i>Specialty Stock</i></p> <p>Vanguard REIT Fund Vanguard Social Equity Fund</p>
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BROKERAGE WINDOW - \$1.4 billion Fidelity BROKERAGELINK®



Defined Contribution Team

**Chief Operating Officer &
DC Product Manager**



Arthur Guimaraes, CPA, CBV

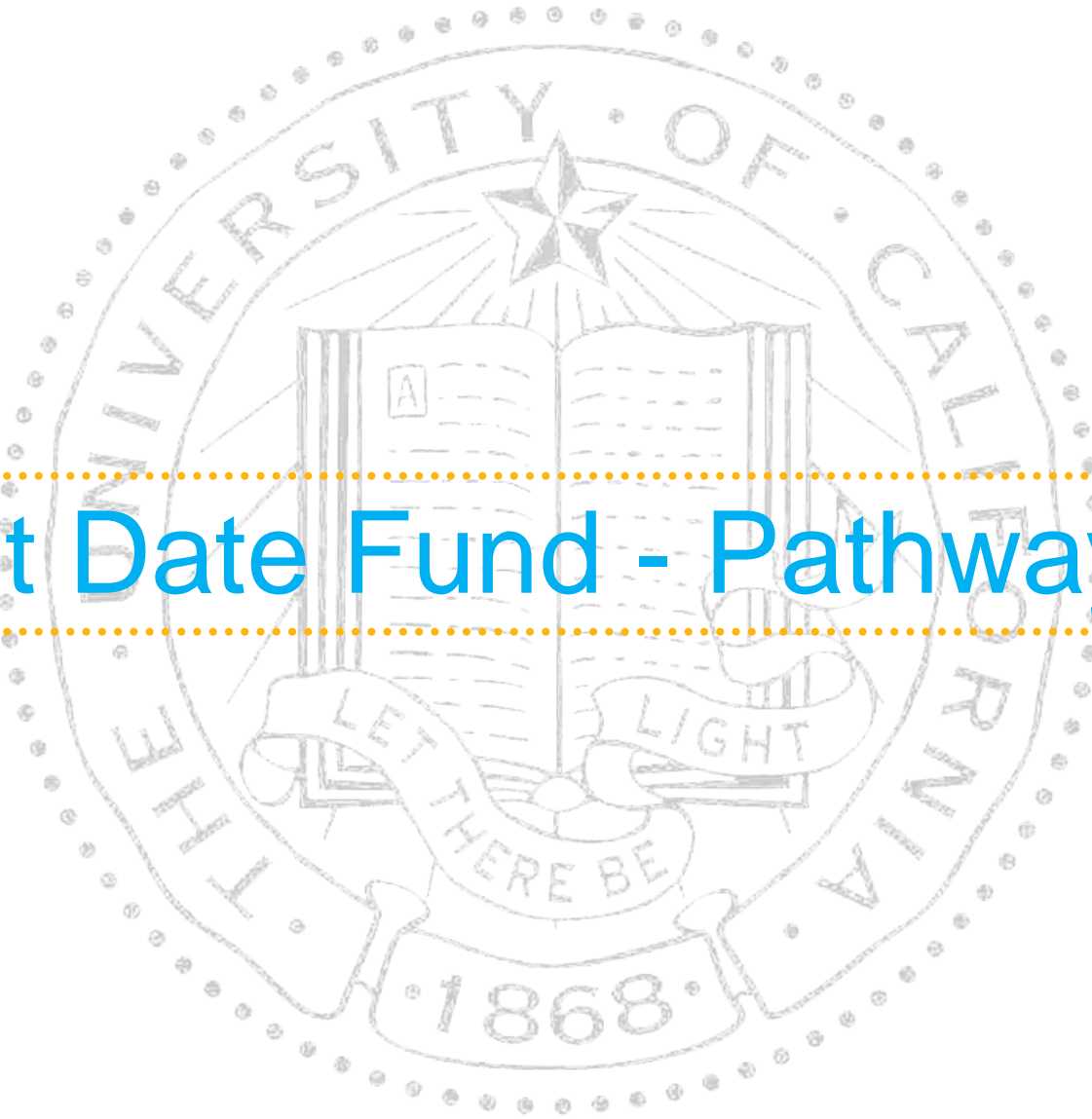
- Joined University of California in 2014
- Led UC glide path review and fund rationalization in 2015
- 10 year career in pension management in the US and Canada
- Most recently, Vice President, Alberta Investment Management Co.
- Previously, senior member of Group Savings & Retirement team at Manulife

**Director of Defined
Contribution**



Marco Merz, CFA

- Joined University of California in 2016
- 10 year career at BlackRock
- Most recently Senior Strategist for Defined Contribution
- Focus on Target Date Fund & Core lineup implementation
- Frequent speaker at DC Industry conferences including P&I, II and IMCA

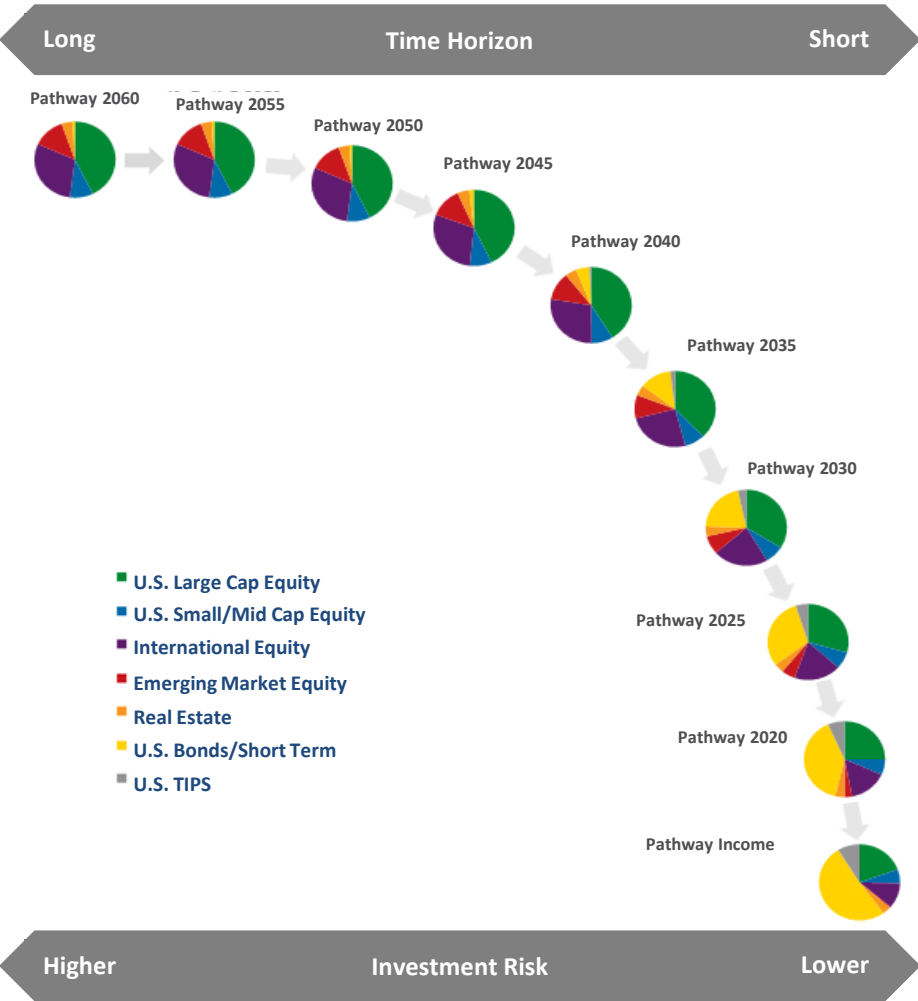


Target Date Fund - Pathway



Pathway – Our Target Date Fund

Designed to support participants' spending throughout retirement



Pathway Key Features

- An **equity landing point of 30%** with static allocations at and through retirement
- **Focus on diversification** with **broad asset class** exposures
- Utilizes a **strategic glidepath** to help mitigate the risks associated with market timing

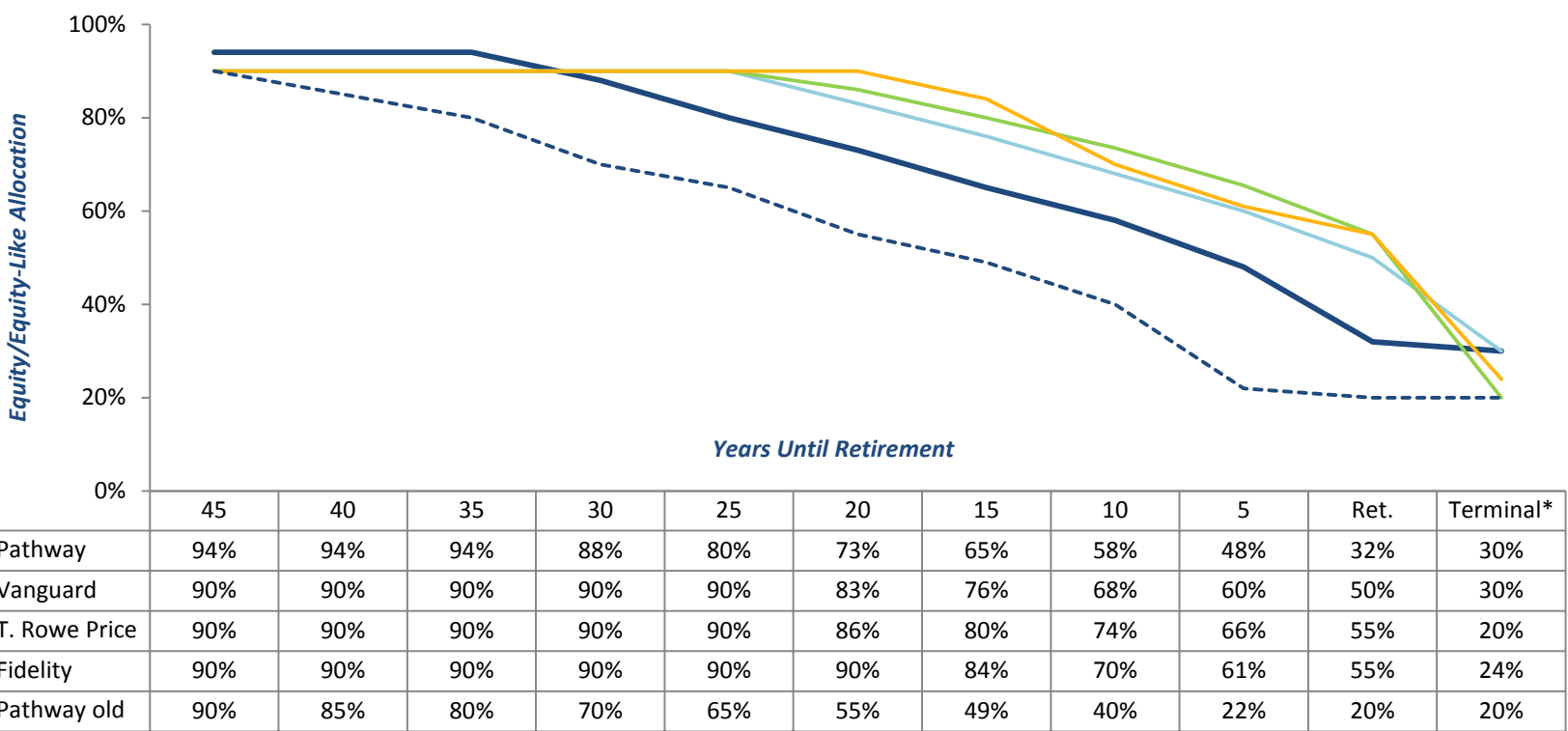
Key Benefits for Participants

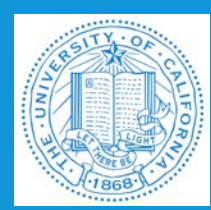
- Constructed to **navigate the major sources of uncertainty** participants face
- Seeks to reduce volatility in an effort to keep participants **saving and investing across market cycles**
- **Continuous research** to anticipate, assess and adapt ahead of evolving conditions to help meet participant needs **now and in the future**



Pathway Glidepath

Pathway Target Date Fund vs. Top 3 TDF providers





Pathway Performance - Summary

Q2 2017 performance relative to policy benchmarks

Net of fee returns (%)

	Pathway Income	Pathway 2015	Pathway 2020	Pathway 2025	Pathway 2030	Pathway 2035	Pathway 2040	Pathway 2045	Pathway 2050	Pathway 2055	Pathway 2060
Fund Return	1.82	1.81	2.80	3.09	3.29	3.49	3.69	3.88	4.07	4.13	4.12
Policy Benchmark Return	1.72	1.72	2.76	3.04	3.25	3.46	3.67	3.88	4.06	4.10	4.10
Value Added	0.10	0.09	0.04	0.05	0.04	0.03	0.02	0.00	0.01	0.03	0.02

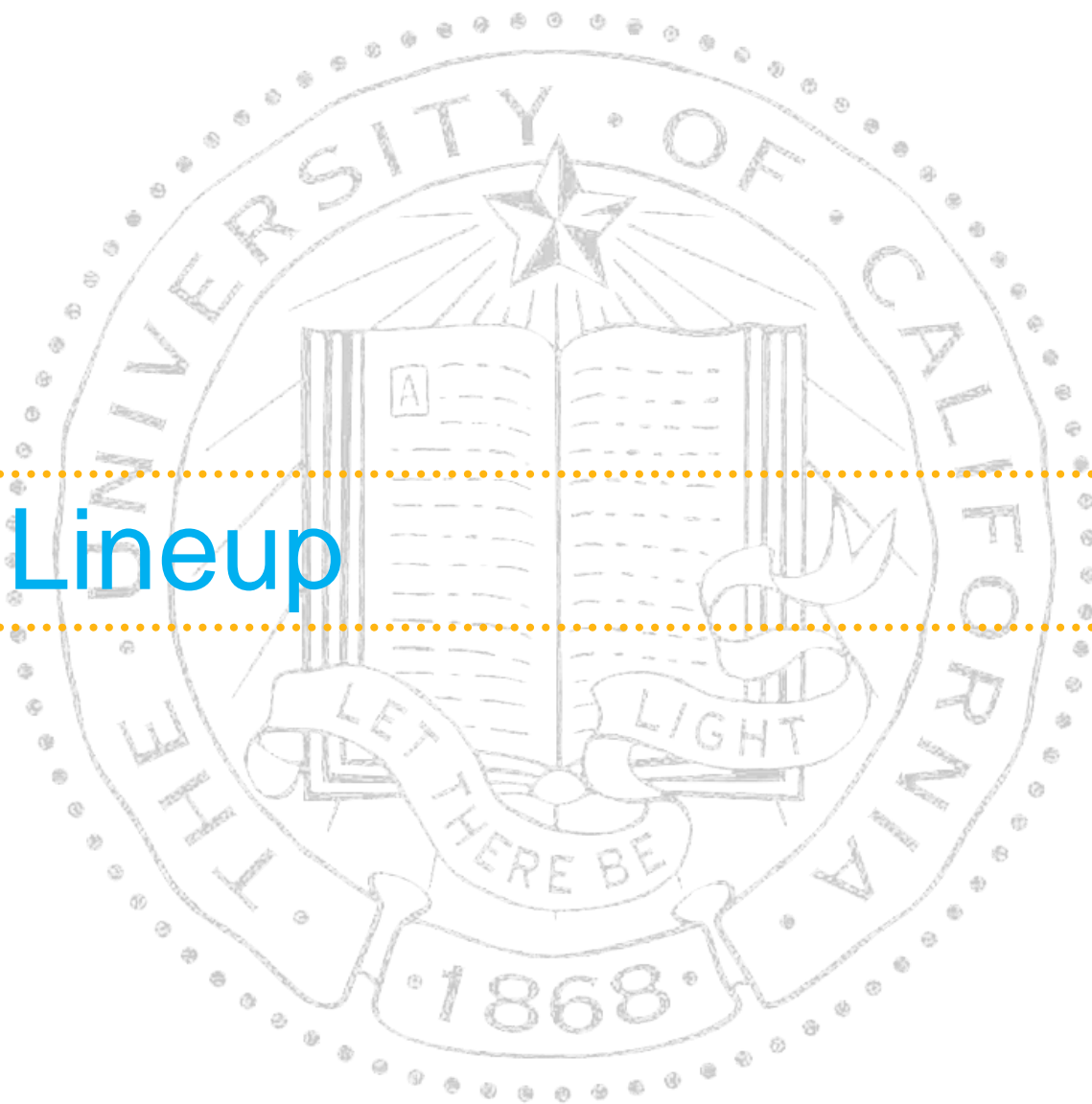
One year performance relative to policy benchmarks

Net of fee returns (%) - 6/30/2016-6/30/2017

	Pathway Income	Pathway 2015	Pathway 2020	Pathway 2025	Pathway 2030	Pathway 2035	Pathway 2040	Pathway 2045	Pathway 2050	Pathway 2055	Pathway 2060
Fund Return	6.21	6.19	8.81	10.39	11.91	13.30	14.73	16.20	17.50	17.86	17.82
Policy Benchmark Return	5.82	5.82	8.49	10.22	11.79	13.26	14.77	16.34	17.67	17.92	17.92
Value Added	0.39	0.37	0.32	0.17	0.12	0.04	-0.04	-0.14	-0.17	-0.06	-0.10



Core Lineup





Core Lineup Assets - Details

CORE FUNDS - \$14,480

Bond and Stock Investments

Bond Investments - \$5,546

Short-Term

UC Savings Fund - \$4,122

Intermediate-Term

UC Bond Fund - \$1,169

Inflation-Protected

UC Short Term TIPS Fund - \$34

UC TIPS Fund - \$221

Domestic Stock - \$1,737

Large Cap

UC Domestic Equity Index Fund - \$639

Fidelity Growth Company Fund - \$647

Small Cap

Vanguard Small Cap Equity Fund - \$451

Balanced Funds - \$1,632

UC Balanced Growth Fund - \$1,632

Foreign/Global Stock - \$5,019

Developed Markets

UC International Equity Index Fund - \$251

Fidelity Diversified International Fund - \$125

Global Markets

UC Global Fund - \$4,460

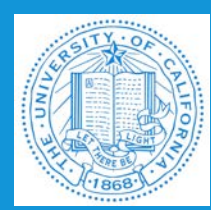
Emerging Markets

DFA Emerging Markets Equity Fund - \$183

Specialty Stock - \$546

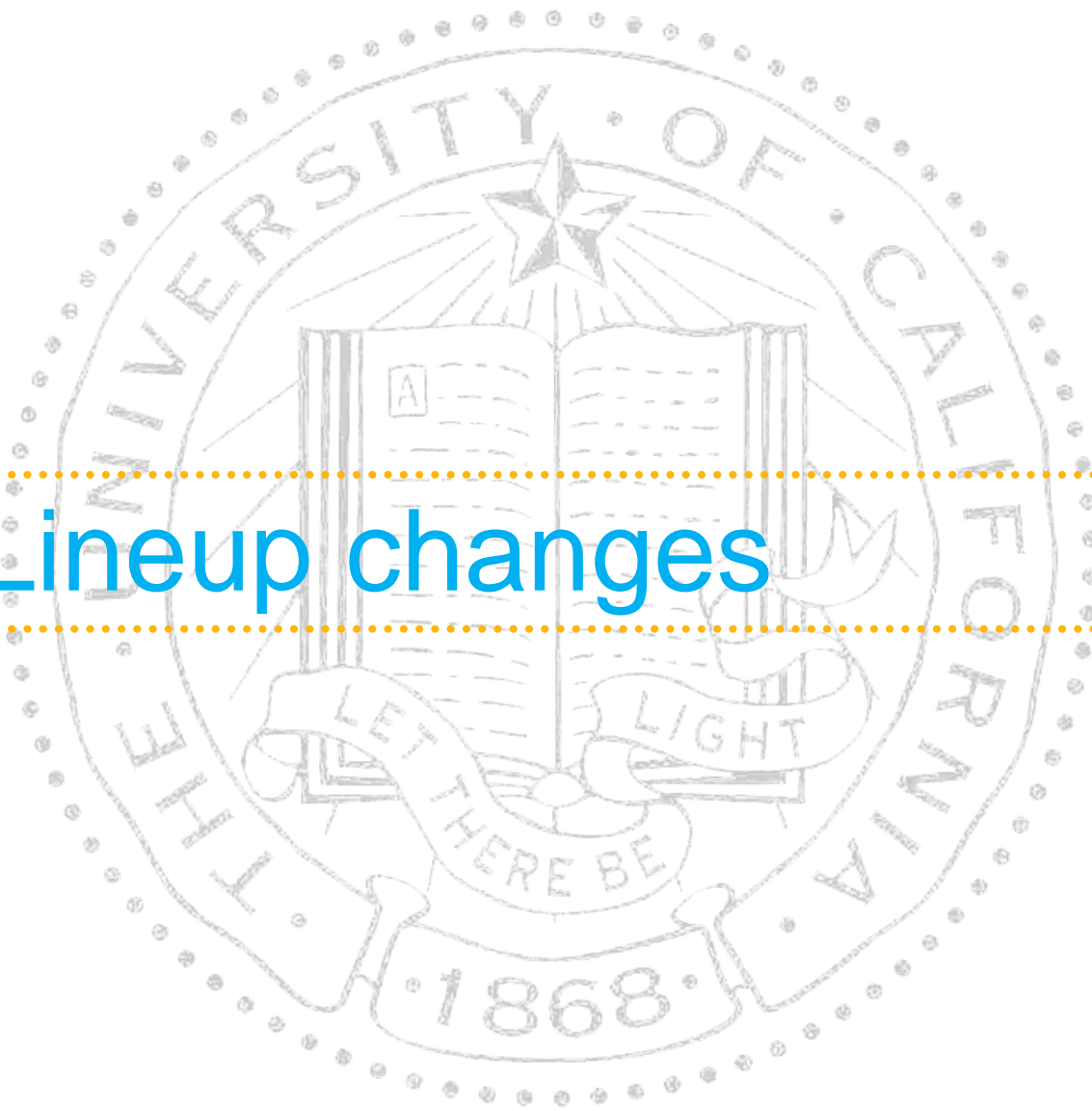
Vanguard REIT Fund - \$228

Vanguard Social Equity Fund - \$318

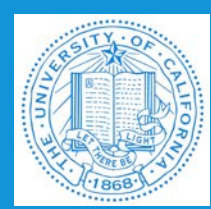


Core Line-Up Performance - Summary

Balanced Fund	Market Value (\$M)	% of Plan	3 Months	One Year	Annualized Total Return (%)		
					Three Year	Five Year	Ten Year
UC Balanced Growth Fund	\$1,632	7.31%	3.66	12.72	4.29	8.42	5.38
US Large Equity							
UC Domestic Equity Index Fund	\$639	2.86%	3.06	18.70	9.12	14.73	7.33
Vanguard FTSE Social Index Fund	\$318	1.42%	4.67	22.75	10.70	16.75	6.86
US Small/Mid Cap Equity							
Vanguard Small Cap Index Fund	\$451	2.02%	5.11	22.84	7.90	14.85	
Global/World ex-US Equity							
UC Global Equity Fund	\$4,460	19.98%	3.39	18.70	7.78	13.70	6.40
UC International Equity Index Fund	\$251	1.12%	5.96	20.30	0.95	8.52	1.33
Capital Preservation							
UC Savings Fund	\$4,122	18.46%	0.36	1.34	1.24	1.16	2.03
Inflation Sensitive							
UC Short Term TIPS Fund	\$34	0.15%	-0.47	0.45	0.12		
UC TIPS Fund	\$221	0.99%	-0.37	0.04	1.01	0.57	4.68
Diversified Fixed Income							
UC Bond Fund	\$1,169	5.24%	1.62	0.45	2.77	2.76	4.76
New Large Equity							
Fidelity Growth Company Fund	\$647	2.90%	7.85	32.57	13.48	17.52	10.94
World ex-US Equity							
Fidelity Diversified Intl. Fund	\$125	0.56%	7.71	18.00	2.73	9.54	1.76
DFA Emerging Markets Portfolio	\$183	0.82%	5.92	22.45	1.38	4.19	
Real Estate							
Vanguard REITS Index Fund	\$228	1.02%	1.63	-1.88	8.09	9.30	
Total	\$14,480	65%					

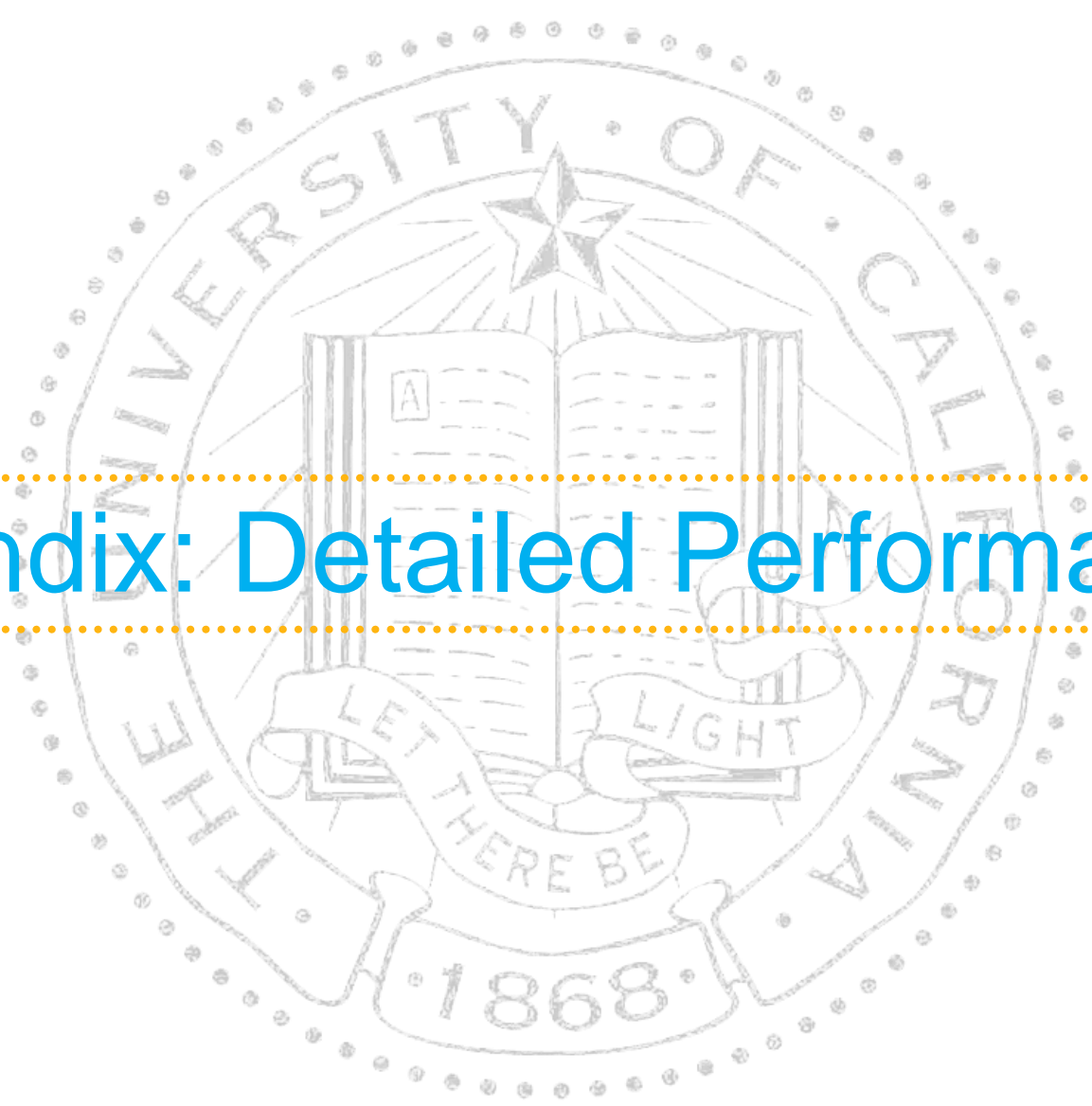


2017 Lineup changes

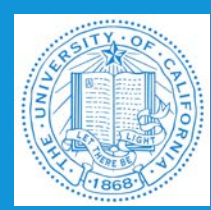


2017 lineup changes

	Overview of Changes	Implementation Date
I.	Eliminated Calvert Fund – moved assets to Vanguard Social Fund	2/28/2017
II.	Repackaging of Fidelity and DFA funds	9/30/2017
III.	Renaming of 3 Vanguard funds	9/30/2017
IV.	Eliminating the UC Balanced Growth and UC Global funds	9/30/2017
V.	Hire 3 rd party manager for Pathway	12/31/2017



Appendix: Detailed Performance



Target Date Funds Performance - Details

Target Date Funds	Market Value (\$M)	% of Plan	Annualized Total Return (%)				
			3 Months	One Year	Three Year	Five Year	Ten Year
UC Pathway Income Fund	\$584	2.61%	1.82	6.21	2.74	2.07	3.84
Policy Benchmark			1.72	5.82	2.41	1.66	3.18
<i>Value Added</i>			<i>0.10</i>	<i>0.39</i>	<i>0.33</i>	<i>0.41</i>	<i>0.66</i>
UC Pathway Fund 2015	\$513	2.30%	1.81	6.19	2.82	2.83	
Policy Benchmark			1.72	5.82	2.51	2.42	-
<i>Value Added</i>			<i>0.09</i>	<i>0.37</i>	<i>0.31</i>	<i>0.41</i>	-
UC Pathway Fund 2020	\$1,127	5.05%	2.80	8.81	3.90	4.55	3.73
Policy Benchmark			2.76	8.49	3.62	4.19	3.32
<i>Value Added</i>			<i>0.04</i>	<i>0.32</i>	<i>0.28</i>	<i>0.36</i>	<i>0.41</i>
UC Pathway Fund 2025	\$983	4.40%	3.09	10.39	4.10	5.28	
Policy Benchmark			3.04	10.22	3.88	4.96	-
<i>Value Added</i>			<i>0.05</i>	<i>0.17</i>	<i>0.22</i>	<i>0.32</i>	-
UC Pathway Fund 2030	\$1,014	4.54%	3.29	11.91	4.36	6.00	3.62
Policy Benchmark			3.25	11.79	4.15	5.69	3.25
<i>Value Added</i>			<i>0.04</i>	<i>0.12</i>	<i>0.21</i>	<i>0.31</i>	<i>0.37</i>
UC Pathway Fund 2035	\$686	3.07%	3.49	13.30	4.58	6.70	
Policy Benchmark			3.46	13.26	4.38	6.40	-
<i>Value Added</i>			<i>0.03</i>	<i>0.04</i>	<i>0.20</i>	<i>0.30</i>	-



Target Date Funds Performance - Details

Target Date Funds	Market Value (\$M)	% of Plan	Annualized Total Return (%)				
			3 Months	One Year	Three Year	Five Year	Ten Year
UC Pathway Fund 2040	\$616	2.76%	3.69	14.73	4.79	7.40	3.86
Policy Benchmark			3.67	14.77	4.61	7.12	3.50
<i>Value Added</i>			<i>0.02</i>	<i>-0.04</i>	<i>0.18</i>	<i>0.28</i>	<i>0.36</i>
UC Pathway Fund 2045	\$374	1.68%	3.88	16.20	4.97	8.09	
Policy Benchmark			3.88	16.34	4.81	7.82	-
<i>Value Added</i>			<i>0.00</i>	<i>-0.14</i>	<i>0.16</i>	<i>0.27</i>	<i>-</i>
UC Pathway Fund 2050	\$279	1.25%	4.07	17.50	5.14	8.71	4.03
Policy Benchmark			4.06	17.67	4.97	8.46	3.71
<i>Value Added</i>			<i>0.01</i>	<i>-0.17</i>	<i>0.17</i>	<i>0.25</i>	<i>0.32</i>
UC Pathway Fund 2055	\$112	0.50%	4.13	17.86	5.24	9.23	
Policy Benchmark			4.10	17.92	5.03	8.98	-
<i>Value Added</i>			<i>0.03</i>	<i>-0.06</i>	<i>0.21</i>	<i>0.25</i>	<i>-</i>
UC Pathway Fund 2060	\$155	0.69%	4.12	17.82	5.24	9.67	
Policy Benchmark			4.10	17.92	5.03	9.45	-
<i>Value Added</i>			<i>0.02</i>	<i>-0.10</i>	<i>0.21</i>	<i>0.22</i>	<i>-</i>



Core Lineup Performance - Details

Balanced Fund	Market Value (\$M)	% of Plan	Annualized Total Return (%)				
			3 Months	One Year	Three Year	Five Year	Ten Year
UC Balanced Growth Fund	\$1,632	7.31%	3.66	12.72	4.29	8.42	5.38
Policy Benchmark			3.52	12.60	4.17	8.24	4.95
<i>Value Added</i>			<i>0.14</i>	<i>0.12</i>	<i>0.12</i>	<i>0.18</i>	<i>0.43</i>
US Large Equity							
UC Domestic Equity Index Fund	\$639	2.86%	3.06	18.70	9.12	14.73	7.33
Russell 3000 TF Index			2.99	18.53	8.94	14.57	7.13
<i>Value Added</i>			<i>0.07</i>	<i>0.17</i>	<i>0.18</i>	<i>0.16</i>	<i>0.20</i>
Vanguard FTSE Social Index Fund	\$318	1.42%	4.67	22.75	10.70	16.75	6.86
Spliced Social Index			4.75	22.92	10.85	16.88	6.97
<i>Value Added</i>			<i>-0.08</i>	<i>-0.17</i>	<i>-0.15</i>	<i>-0.13</i>	<i>-0.11</i>
US Small/Mid Cap Equity							
Vanguard Small Cap Index Fund	\$451	2.02%	5.11	22.84	7.90	14.85	
CRSP Small Cap Index			5.09	22.78	7.84	14.80	
<i>Value Added</i>			<i>0.02</i>	<i>0.06</i>	<i>0.06</i>	<i>0.05</i>	<i>-</i>
Global/World ex-US Equity							
UC Global Equity Fund	\$4,460	19.98%	3.39	18.70	7.78	13.70	6.40
Policy Benchmark			3.35	18.25	7.55	13.39	6.16
<i>Value Added</i>			<i>0.04</i>	<i>0.45</i>	<i>0.23</i>	<i>0.31</i>	<i>0.24</i>
UC International Equity Index Fund	\$251	1.12%	5.96	20.30	0.95	8.52	1.33
MSCI World ex-US TF Index			5.63	19.49	0.67	8.15	1.00
<i>Value Added</i>			<i>0.33</i>	<i>0.81</i>	<i>0.28</i>	<i>0.37</i>	<i>0.33</i>



Core Lineup Performance - Details

Capital Preservation	Market Value (\$M)	% of Plan	Annualized Total Return (%)				
			3 Months	One Year	Three Year	Five Year	Ten Year
UC Savings Fund	\$4,122	18.46%	0.36	1.34	1.24	1.16	2.03
Two-Year U.S. Treasury Notes Income Return			0.31	0.96	0.75	0.55	0.93
<i>Value Added</i>			<i>0.05</i>	<i>0.38</i>	<i>0.49</i>	<i>0.61</i>	<i>1.10</i>
Inflation Sensitive							
UC Short Term TIPS Fund	\$34	0.15%	-0.47	0.45	0.12		
Barclays 1-3 Year U.S. TIPS Index			-0.75	0.23	-0.32		
<i>Value Added</i>			<i>0.28</i>	<i>0.22</i>	<i>0.44</i>	-	-
UC TIPS Fund	\$221	0.99%	-0.37	0.04	1.01	0.57	4.68
Barclays US TIPS Index			-0.40	-0.63	0.63	0.27	4.27
<i>Value Added</i>			<i>0.03</i>	<i>0.67</i>	<i>0.38</i>	<i>0.30</i>	<i>0.41</i>
Diversified Fixed Income							
UC Bond Fund	\$1,169	5.24%	1.62	0.45	2.77	2.76	4.76
Barclays Aggregate Fixed Income Benchmark			1.45	-0.31	2.48	2.21	4.48
<i>Value Added</i>			<i>0.17</i>	<i>0.76</i>	<i>0.29</i>	<i>0.55</i>	<i>0.28</i>
New Large Equity							
Fidelity Growth Company Fund	\$647	2.90%	7.85	32.57	13.48	17.52	10.94
S&P 500 Index			3.09	17.90	9.61	14.63	7.18
<i>Value Added</i>			<i>4.76</i>	<i>14.67</i>	<i>3.87</i>	<i>2.89</i>	<i>3.76</i>
World ex-US Equity							
Fidelity Diversified Intl. Fund	\$125	0.56%	7.71	18.00	2.73	9.54	1.76
MSCI EAFE			6.22	20.51	1.33	8.86	1.18
<i>Value Added</i>			<i>1.49</i>	<i>-2.51</i>	<i>1.40</i>	<i>0.68</i>	<i>0.58</i>
DFA Emerging Markets Portfolio	\$183	0.82%	5.92	22.45	1.38	4.19	
MSCI Emerging Markets Index			6.27	23.75	1.07	3.96	
<i>Value Added</i>			<i>-0.35</i>	<i>-1.30</i>	<i>0.31</i>	<i>0.23</i>	-
Real Estate							
Vanguard REITS Index Fund	\$228	1.02%	1.63	-1.88	8.09	9.30	
REIT Spliced Index			1.65	-1.82	8.19	9.38	
<i>Value Added</i>			<i>-0.02</i>	<i>-0.06</i>	<i>-0.10</i>	<i>-0.08</i>	-