



UNIVERSITY OF CALIFORNIA

Office of the Chief Investment Officer

UC Retirement Savings Program

Investment Performance and Program Review
as of September 30, 2017

Growing Portfolios Building Partnerships

UC Investments

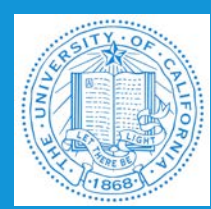


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Plan, People, Industry





UC Retirement Savings Program at a Glance

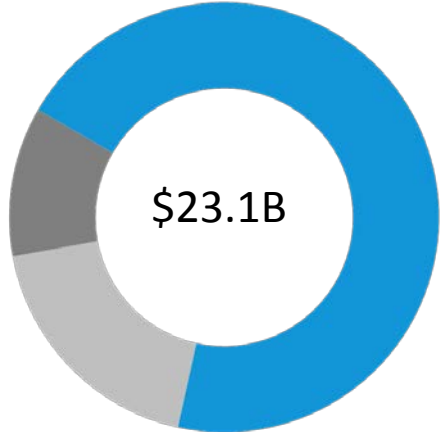
UC Retirement Savings Program

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
- ▶ **\$23.1 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
- ▶ **\$7.0 billion in Target Date Funds**

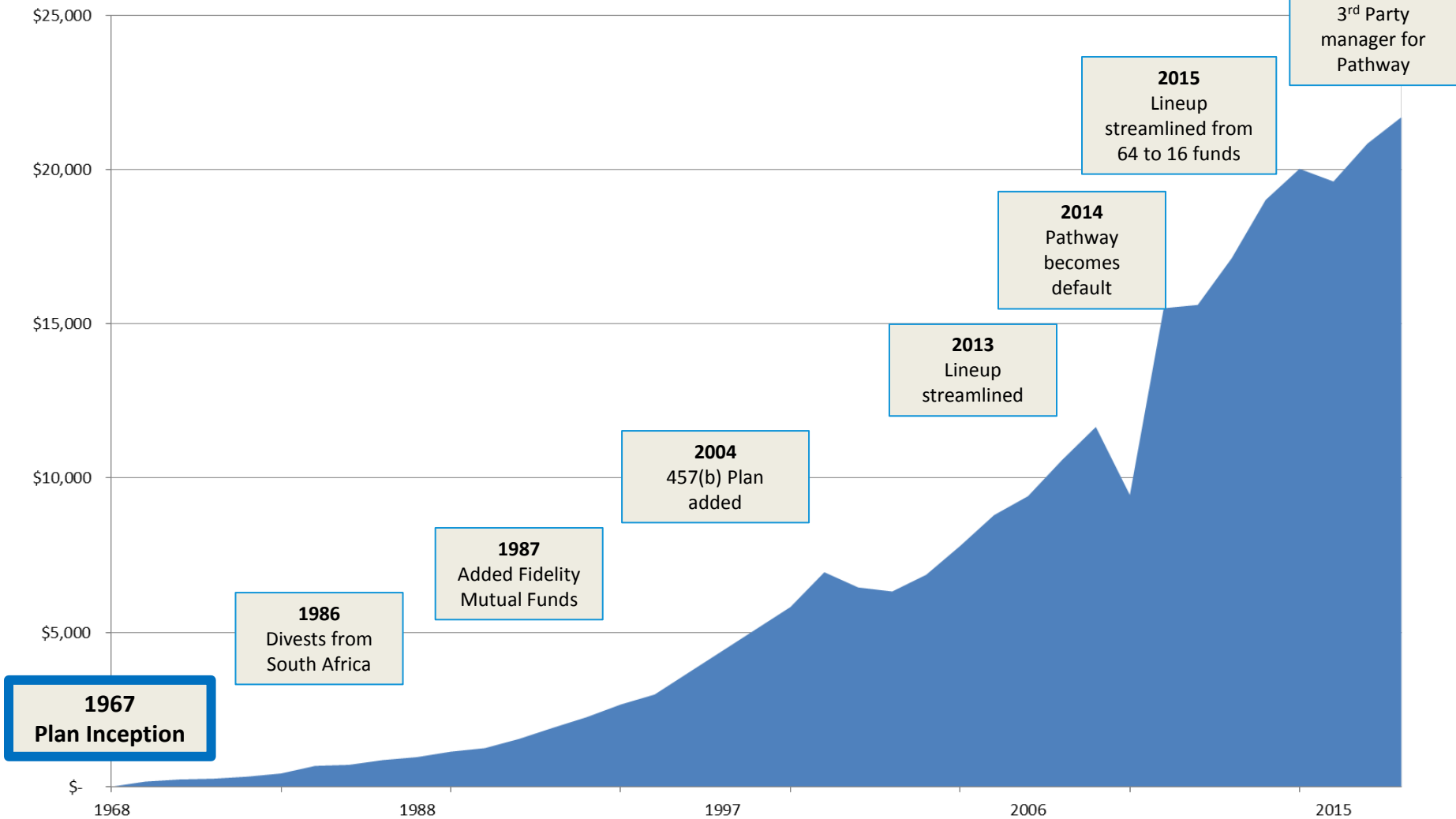
\$23.1 billion across 3 plans





UC Retirement Savings Program Evolution

UCRSP Assets and Evolution 1967-2017



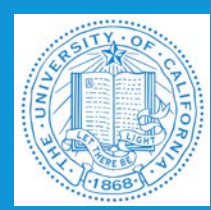
As of September 30, 2017



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

	Sept 30, 2016	Sept 30, 2017
Target Date Fund Series 11 funds ranging from Pathway Income to Pathway 2060	\$5.8B	\$7.0B
UC Global Fund A short duration bond portfolio	\$4.2B	\$4.3B
UC Savings Fund A short duration bond portfolio	\$4.2B	\$4.1B
UC Balanced Growth Fund A fund with an equity and fixed income blend	\$1.5B	\$1.4B
UC Bond Fund A diversified core fixed income fund	\$1.2B	\$1.2B
Brokerage Window A platform allowing participants to choose their own funds	\$1.3B	\$1.5B



Investment Options at a Glance

TARGET DATE FUNDS - \$7.0 billion UC Pathway Funds

UC Pathway Income Fund
UC Pathway Fund 2015
UC Pathway Fund 2020
UC Pathway Fund 2025

UC Pathway Fund 2030
UC Pathway Fund 2035
UC Pathway Fund 2040
UC Pathway Fund 2045

UC Pathway Fund 2050
UC Pathway Fund 2055
UC Pathway Fund 2060

CORE FUNDS - \$14.6 billion Bond and Stock Investments

Bond Investments

Short-Term

UC Savings Fund

Intermediate-Term

UC Bond Fund

Inflation-Protected

UC Short Term TIPS Fund
UC TIPS Fund

Domestic Stock

Large Cap

UC Domestic Equity Index Fund
Fidelity Growth Company Fund

Small Cap

Vanguard Small Cap Equity Fund

Balanced Funds

UC Balanced Growth Fund

Foreign Stock

Developed Markets

UC International Equity Index Fund
Fidelity Diversified International Fund
UC Global Fund

Emerging Markets

DFA Emerging Markets Equity Fund

Specialty Stock

Vanguard REIT Fund
Vanguard Social Equity Fund

BROKERAGE WINDOW - \$1.5 billion Fidelity BROKERAGELINK®



Defined Contribution Team

**Chief Operating Officer &
DC Product Manager**



Arthur Guimaraes, CPA, CBV

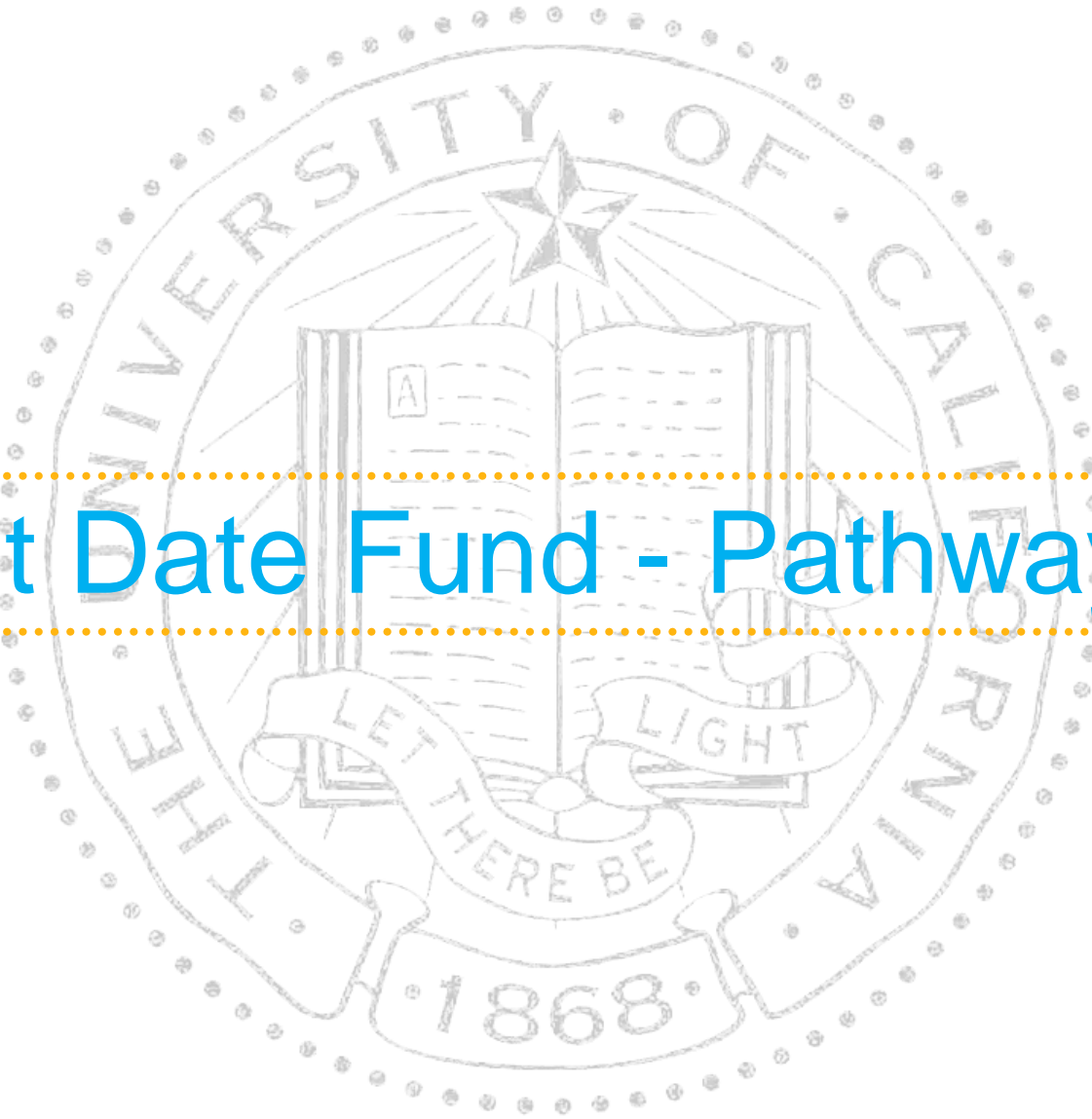
- Joined University of California in 2014
- Led UC glide path review and fund rationalization in 2015
- 10 year career in pension management in the US and Canada
- Most recently, Vice President, Alberta Investment Management Co.
- Previously, senior member of Group Savings & Retirement team at Manulife

**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

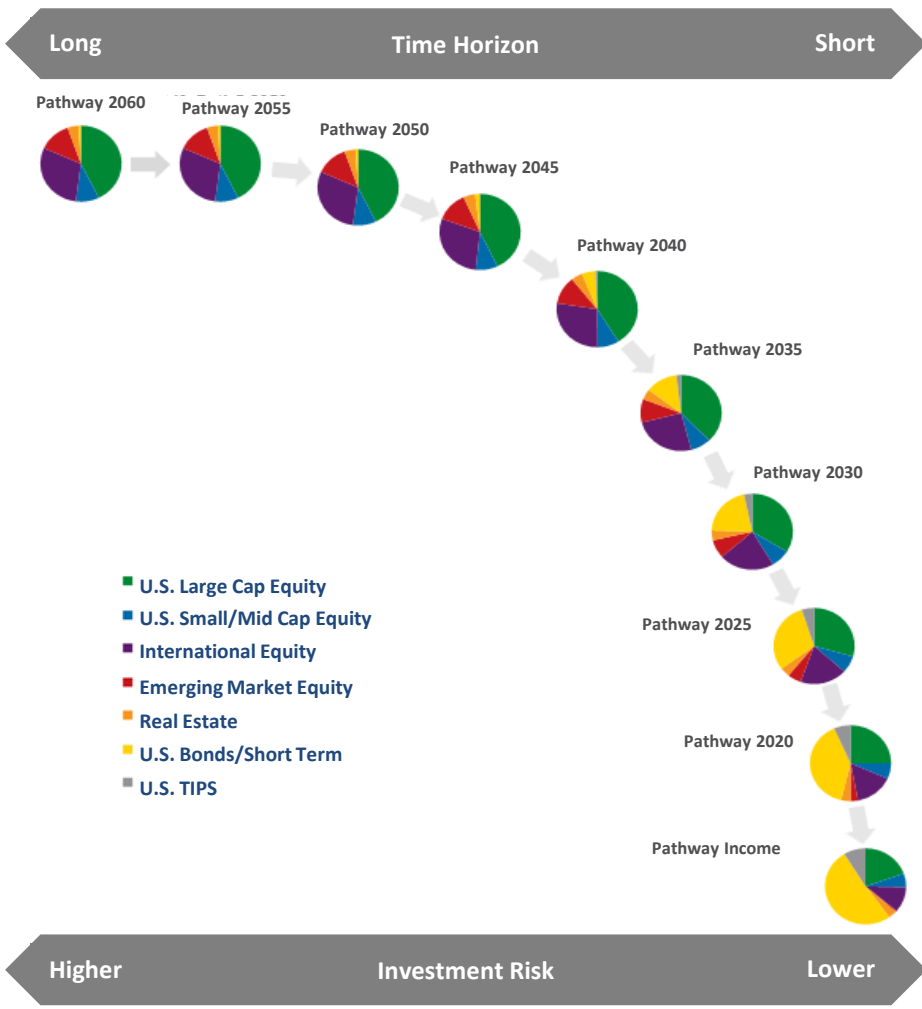


Target Date Fund - Pathway



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

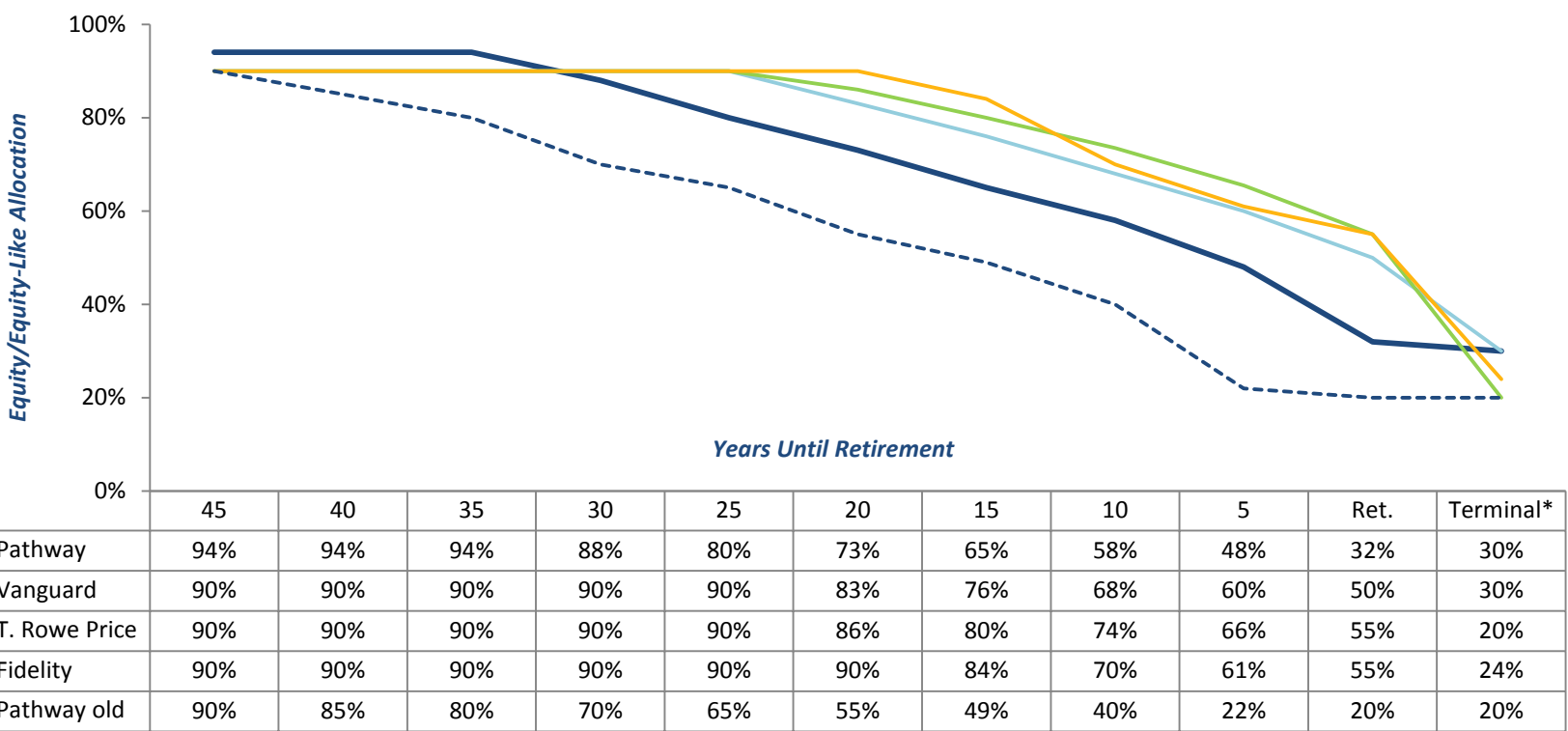
Key Benefits for Participants

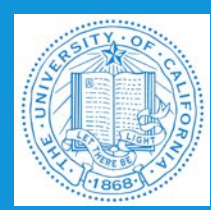
- Constructed to **navigate the major sources of uncertainty** participants face
- Seeks to reduce volatility in an effort to keep participants **saving and investing across market cycles**
- **Continuous research** to anticipate, assess and adapt ahead of evolving conditions to help meet participant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



Pathway Glidepath

Pathway Target Date Fund vs. Top 3 TDF providers





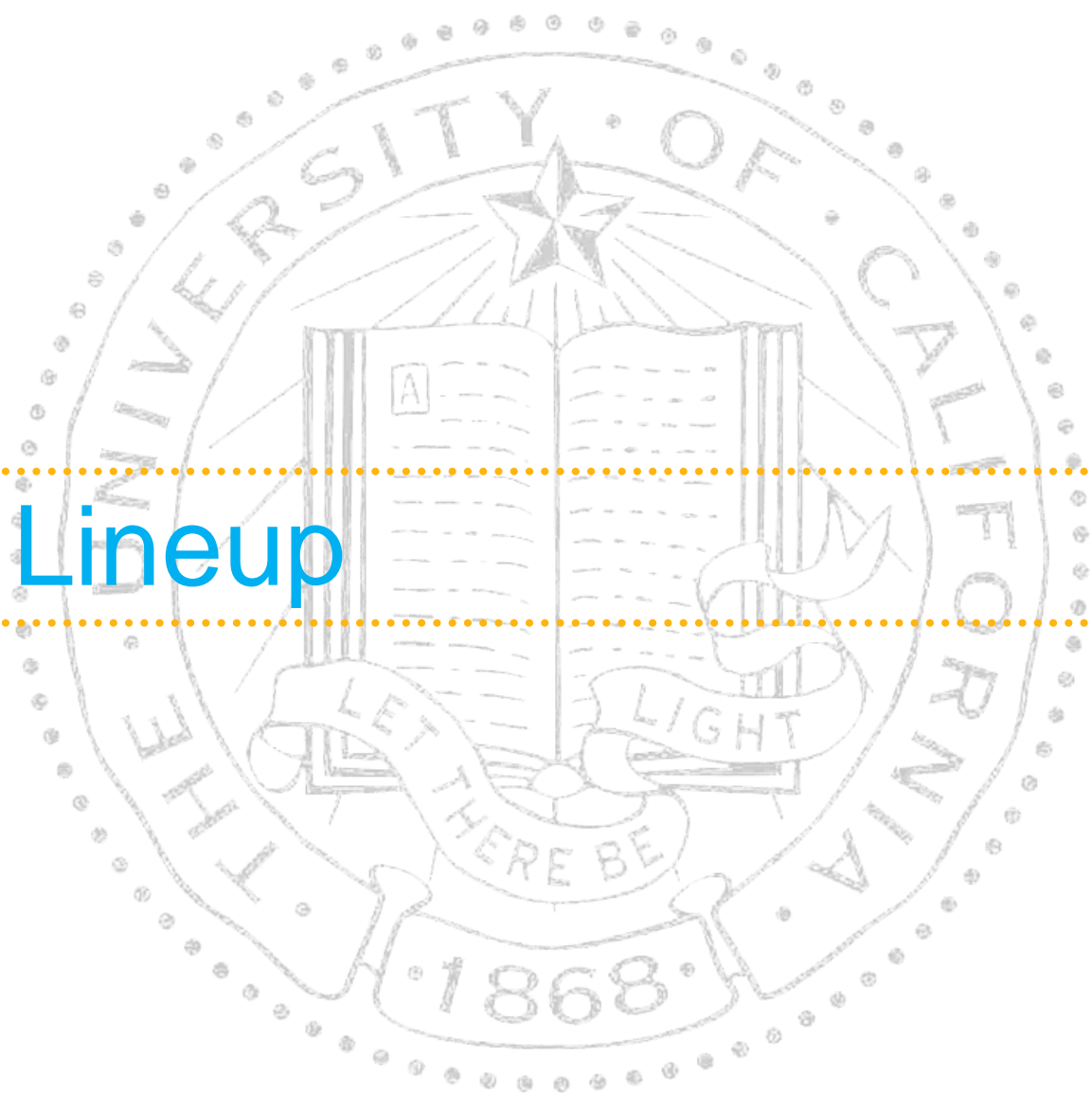
Pathway Performance - Summary

Q3 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	2.02	2.02	2.84	3.21	3.56	3.87	4.18	4.51	4.80	4.90	4.90
Policy Benchmark Return	2.06	2.06	2.99	3.40	3.78	4.13	4.48	4.84	5.15	5.23	5.23
Value Added	-0.04	-0.04	-0.15	-0.19	-0.22	-0.26	-0.30	-0.33	-0.35	-0.33	-0.33

One year performance relative to policy benchmarks

Net of fee returns (%) - 9/30/2016-9/30/2017											
	Pathway Income	Pathway 2015	Pathway 2020	Pathway 2025	Pathway 2030	Pathway 2035	Pathway 2040	Pathway 2045	Pathway 2050	Pathway 2055	Pathway 2060
Fund Return	6.19	6.16	8.67	10.17	11.64	12.99	14.37	15.80	17.06	17.47	17.44
Policy Benchmark Return	5.93	5.93	8.55	10.18	11.68	13.09	14.54	16.05	17.33	17.60	17.60
Value Added	0.26	0.23	0.12	-0.01	-0.04	-0.10	-0.17	-0.25	-0.27	-0.13	-0.16



Core Lineup



Core Lineup Assets - Details

CORE FUNDS - \$14,608 Bond and Stock Investments

Bond Investments - \$5,527

Short-Term

UC Savings Fund - \$4,082

Intermediate-Term

UC Bond Fund - \$1,192

Inflation-Protected

UC Short Term TIPS Fund - \$34

UC TIPS Fund - \$219

Domestic Stock - \$2,072

Large Cap

UC Domestic Equity Index Fund - \$820

Fidelity Growth Company Fund - \$778

Small Cap

Vanguard Small Cap Equity Fund - \$474

Balanced Funds - \$1,421

UC Balanced Growth Fund - \$1,421

Foreign/Global Stock - \$5,009

Developed Markets

UC International Equity Index Fund - \$319

Fidelity Diversified International Fund - \$139

Global Markets

UC Global Fund - \$4,342

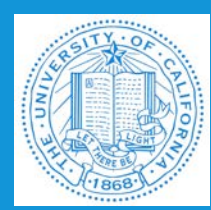
Emerging Markets

DFA Emerging Markets Equity Fund - \$209

Specialty Stock - \$579

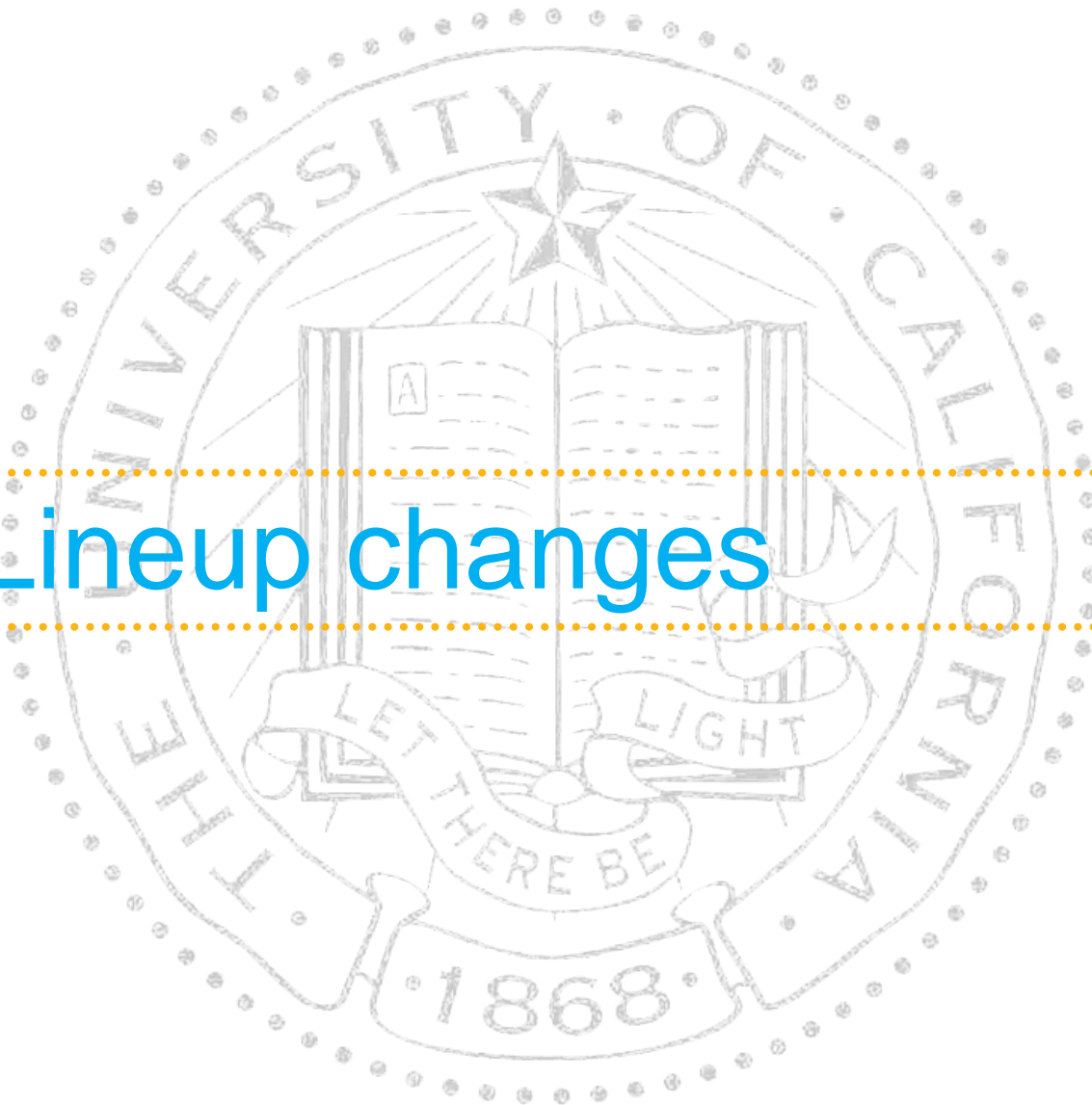
Vanguard REIT Fund - \$225

Vanguard Social Equity Fund - \$354

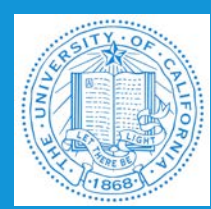


Core Line-Up Performance - Summary

Balanced Fund	Market Value (\$M)	% of Plan	3 Months	One Year	Annualized Total Return (%)		
					Three Year	Five Year	Ten Year
UC Balanced Growth Fund	\$1,421	6.16%	3.95	12.80	6.47	8.16	5.56
US Large Equity							
UC Domestic Equity Index Fund	\$820	3.55%	4.74	18.97	10.81	14.39	7.66
Vanguard FTSE Social Index Fund	\$354	1.53%	4.76	21.75	11.95	16.34	7.45
US Small/Mid Cap Equity							
Vanguard Small Cap Index Fund	\$474	2.06%	4.59	21.03	11.60	14.66	
Global/World ex-US Equity							
UC Global Equity Fund	\$4,342	18.82%	4.81	18.68	9.79	13.34	6.72
UC International Equity Index Fund	\$319	1.38%	5.75	19.57	4.86	8.19	1.63
Capital Preservation							
UC Savings Fund	\$4,082	17.69%	0.36	1.39	1.27	1.17	1.95
Inflation Sensitive							
UC Short Term TIPS Fund	\$34	0.15%	0.56	0.70	0.63		
UC TIPS Fund	\$219	0.95%	0.85	-0.05	1.93	0.32	4.30
Diversified Fixed Income							
UC Bond Fund	\$1,192	5.17%	0.94	0.68	3.05	2.43	4.58
New Large Equity							
Fidelity Growth Company Fund	\$778	3.37%	7.60	30.54	16.15	17.71	10.93
World ex-US Equity							
Fidelity Diversified Intl. Fund	\$139	0.60%	5.10	16.53	6.38	9.22	1.94
DFA Emerging Markets Portfolio	\$209	0.91%	6.40	20.98	4.71	4.06	
Real Estate							
Vanguard REITS Index Fund	\$225	0.98%	0.87	0.45	9.55	9.50	
Total:	14,608	64%					

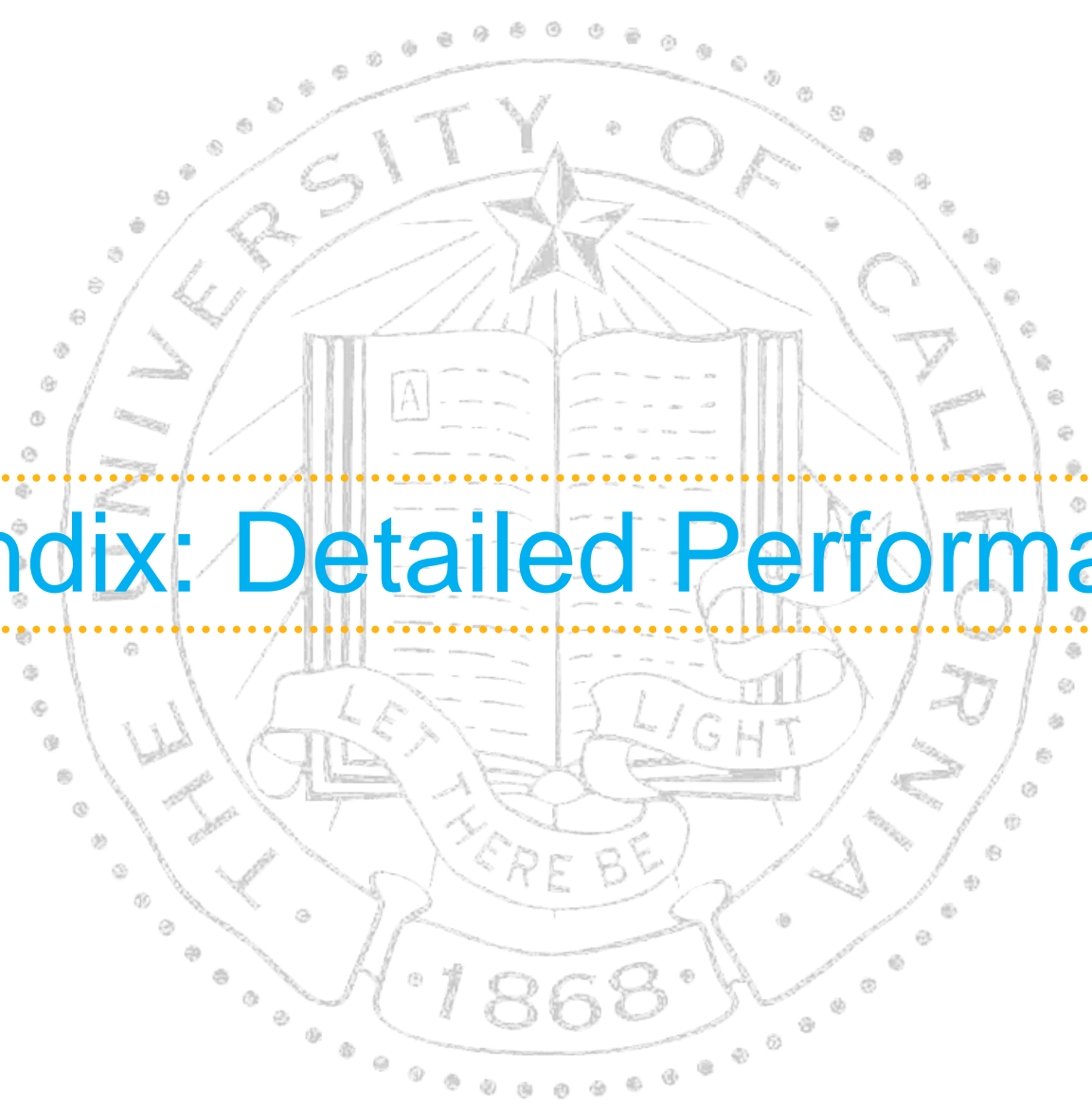


2017 Lineup changes



2017 lineup changes

	Overview of Changes	Implementation Date
I.	Eliminated Calvert Fund – moved assets to Vanguard Social Fund	2/28/2017
II.	Repackaged Fidelity and DFA funds	10/02/2017
III.	Renamed 3 Vanguard funds	10/02/2017
IV.	Eliminated the UC Balanced Growth and UC Global funds	10/02/2017
V.	Implement 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	\$613	2.66%	2.02	6.19	3.67	2.15	3.77
Policy Benchmark			2.06	5.93	3.38	1.82	3.10
<i>Value Added</i>			<i>-0.04</i>	<i>0.26</i>	<i>0.29</i>	<i>0.33</i>	<i>0.67</i>
UC Pathway Fund 2015	\$518	2.25%	2.02	6.16	3.79	2.74	
Policy Benchmark			2.06	5.93	3.51	2.44	-
<i>Value Added</i>			<i>-0.04</i>	<i>0.23</i>	<i>0.28</i>	<i>0.30</i>	<i>-</i>
UC Pathway Fund 2020	\$1,205	5.22%	2.84	8.67	5.31	4.48	3.76
Policy Benchmark			2.99	8.55	5.10	4.24	3.36
<i>Value Added</i>			<i>-0.15</i>	<i>0.12</i>	<i>0.21</i>	<i>0.24</i>	<i>0.40</i>
UC Pathway Fund 2025	\$1,096	4.75%	3.21	10.17	5.73	5.22	
Policy Benchmark			3.40	10.18	5.59	5.03	-
<i>Value Added</i>			<i>-0.19</i>	<i>-0.01</i>	<i>0.14</i>	<i>0.19</i>	<i>-</i>
UC Pathway Fund 2030	\$1,094	4.74%	3.56	11.64	6.19	5.96	3.75
Policy Benchmark			3.78	11.68	6.07	5.78	3.40
<i>Value Added</i>			<i>-0.22</i>	<i>-0.04</i>	<i>0.12</i>	<i>0.18</i>	<i>0.35</i>
UC Pathway Fund 2035	\$765	3.32%	3.87	12.99	6.59	6.66	
Policy Benchmark			4.13	13.09	6.49	6.50	-
<i>Value Added</i>			<i>-0.26</i>	<i>-0.10</i>	<i>0.10</i>	<i>0.16</i>	<i>-</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	\$676	2.93%	4.18	14.37	6.98	7.37	4.08
Policy Benchmark			4.48	14.54	6.92	7.22	3.75
<i>Value Added</i>			<i>-0.30</i>	<i>-0.17</i>	<i>0.06</i>	<i>0.15</i>	<i>0.33</i>
UC Pathway Fund 2045	\$418	1.81%	4.51	15.80	7.36	8.07	
Policy Benchmark			4.84	16.05	7.33	7.93	-
<i>Value Added</i>			<i>-0.33</i>	<i>-0.25</i>	<i>0.03</i>	<i>0.14</i>	<i>-</i>
UC Pathway Fund 2050	\$310	1.34%	4.80	17.06	7.71	8.69	4.35
Policy Benchmark			5.15	17.33	7.68	8.56	4.06
<i>Value Added</i>			<i>-0.35</i>	<i>-0.27</i>	<i>0.03</i>	<i>0.13</i>	<i>0.29</i>
UC Pathway Fund 2055	\$130	0.56%	4.90	17.47	7.90	9.18	
Policy Benchmark			5.23	17.60	7.82	9.02	-
<i>Value Added</i>			<i>-0.33</i>	<i>-0.13</i>	<i>0.08</i>	<i>0.16</i>	<i>-</i>
UC Pathway Fund 2060	\$173	0.75%	4.90	17.44	7.91	9.56	
Policy Benchmark			5.23	17.60	7.84	9.42	-
<i>Value Added</i>			<i>-0.33</i>	<i>-0.16</i>	<i>0.07</i>	<i>0.14</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	\$1,421	6.16%	3.95	12.80	6.47	8.16	5.56
Policy Benchmark			4.14	12.54	6.44	8.05	5.15
<i>Value Added</i>			<i>-0.19</i>	<i>0.26</i>	<i>0.03</i>	<i>0.11</i>	<i>0.41</i>
US Large Equity							
UC Domestic Equity Index Fund	\$820	3.55%	4.74	18.97	10.81	14.39	7.66
Russell 3000 TF Index			4.75	18.75	10.65	14.23	7.46
<i>Value Added</i>			<i>-0.01</i>	<i>0.22</i>	<i>0.16</i>	<i>0.16</i>	<i>0.20</i>
Vanguard FTSE Social Index Fund	\$354	1.53%	4.76	21.75	11.95	16.34	7.45
Spliced Social Index			4.75	21.88	12.07	16.43	7.56
<i>Value Added</i>			<i>0.01</i>	<i>-0.13</i>	<i>-0.12</i>	<i>-0.09</i>	<i>-0.11</i>
US Small/Mid Cap Equity							
Vanguard Small Cap Index Fund	\$474	2.06%	4.59	21.03	11.60	14.66	
CRSP Small Cap Index			4.58	20.96	11.54	14.61	
<i>Value Added</i>			<i>0.01</i>	<i>0.07</i>	<i>0.06</i>	<i>0.05</i>	<i>-</i>
Global/World ex-US Equity							
UC Global Equity Fund	\$4,342	18.82%	4.81	18.68	9.79	13.34	6.72
Policy Benchmark			4.89	18.68	9.64	13.20	6.56
<i>Value Added</i>			<i>-0.08</i>	<i>0.00</i>	<i>0.15</i>	<i>0.14</i>	<i>0.16</i>
UC International Equity Index Fund	\$319	1.38%	5.75	19.57	4.86	8.19	1.63
MSCI World ex-US TF Index			5.62	18.73	4.57	7.81	1.28
<i>Value Added</i>			<i>0.13</i>	<i>0.84</i>	<i>0.29</i>	<i>0.38</i>	<i>0.35</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	\$4,082	17.69%	0.36	1.39	1.27	1.17	1.95
Two-Year U.S. Treasury Notes Income Return			0.32	1.12	0.82	0.61	0.85
<i>Value Added</i>			<i>0.04</i>	<i>0.27</i>	<i>0.45</i>	<i>0.56</i>	<i>1.10</i>
Inflation Sensitive							
UC Short Term TIPS Fund	\$34	0.15%	0.56	0.70	0.63		
Barclays 1-3 Year U.S. TIPS Index			0.43	0.43	0.21		
<i>Value Added</i>			<i>0.13</i>	<i>0.27</i>	<i>0.42</i>	-	-
UC TIPS Fund	\$219	0.95%	0.85	-0.05	1.93	0.32	4.30
Barclays US TIPS Index			0.86	-0.73	1.62	0.02	3.90
<i>Value Added</i>			<i>-0.01</i>	<i>0.68</i>	<i>0.31</i>	<i>0.30</i>	<i>0.40</i>
Diversified Fixed Income							
UC Bond Fund	\$1,192	5.17%	0.94	0.68	3.05	2.43	4.58
Barclays Aggregate Fixed Income Benchmark			0.85	0.07	2.71	2.06	4.27
<i>Value Added</i>			<i>0.09</i>	<i>0.61</i>	<i>0.34</i>	<i>0.37</i>	<i>0.31</i>
New Large Equity							
Fidelity Growth Company Fund	\$778	3.37%	7.60	30.54	16.15	17.71	10.93
Russell 3000 Growth			5.93	21.87	12.65	15.18	9.03
<i>Value Added</i>			<i>1.67</i>	<i>8.67</i>	<i>3.50</i>	<i>2.53</i>	<i>1.90</i>
World ex-US Equity							
Fidelity Diversified Intl. Fund	\$139	0.60%	5.10	16.53	6.38	9.22	1.94
MSCI EAFE			5.43	19.34	5.23	8.55	1.50
<i>Value Added</i>			<i>-0.33</i>	<i>-2.81</i>	<i>1.15</i>	<i>0.67</i>	<i>0.44</i>
DFA Emerging Markets Portfolio	\$209	0.91%	6.40	20.98	4.71	4.06	
MSCI Emerging Markets Index			7.89	22.46	4.90	3.99	
<i>Value Added</i>			<i>-1.49</i>	<i>-1.48</i>	<i>-0.19</i>	<i>0.07</i>	-
Real Estate							
Vanguard REITS Index Fund	\$225	0.98%	0.87	0.45	9.55	9.50	
REIT Spliced Index			0.93	0.54	9.67	9.58	
<i>Value Added</i>			<i>-0.06</i>	<i>-0.09</i>	<i>-0.12</i>	<i>-0.08</i>	-