

NDPERS  
457  
Companion Plan  
Quarterly Report  
2<sup>nd</sup> Quarter  
4/1/2016 – 6/30/2016



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- U.S. GDP growth picked up steam in Q2, thanks to more robust consumer spending.
- While job creation slowed, wage inflation remained steady and is modestly higher YTD.
- The U.S. dollar regained some strength but finished below its January highs.
- Fed rhetoric on interest rates evolved, indicating a more dovish stance.
- Brexit will likely lead to lower growth in Europe in the near term.
- Japan is still hindered by a strong yen.
- China has enacted short-term stimulus to stabilize slowing growth.

## U.S. GDP growth picked up in Q2

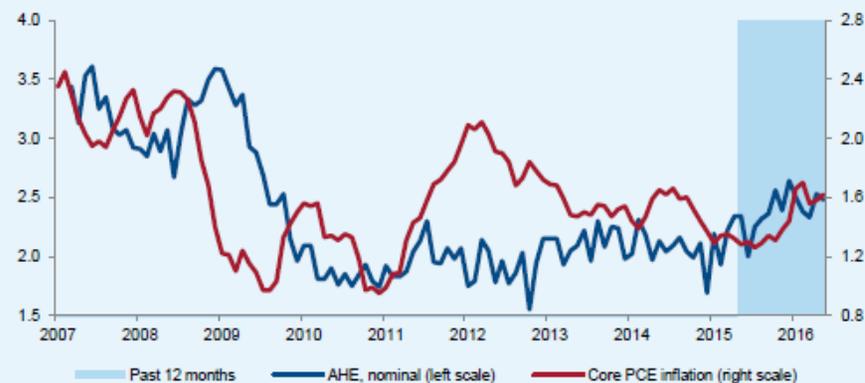
Real gross domestic product, quarterly % growth, seasonally adjusted annual rate



\*TIAA forecast as of 6/30/2016. Sources: BEA/Haver Analytics, TIAA.

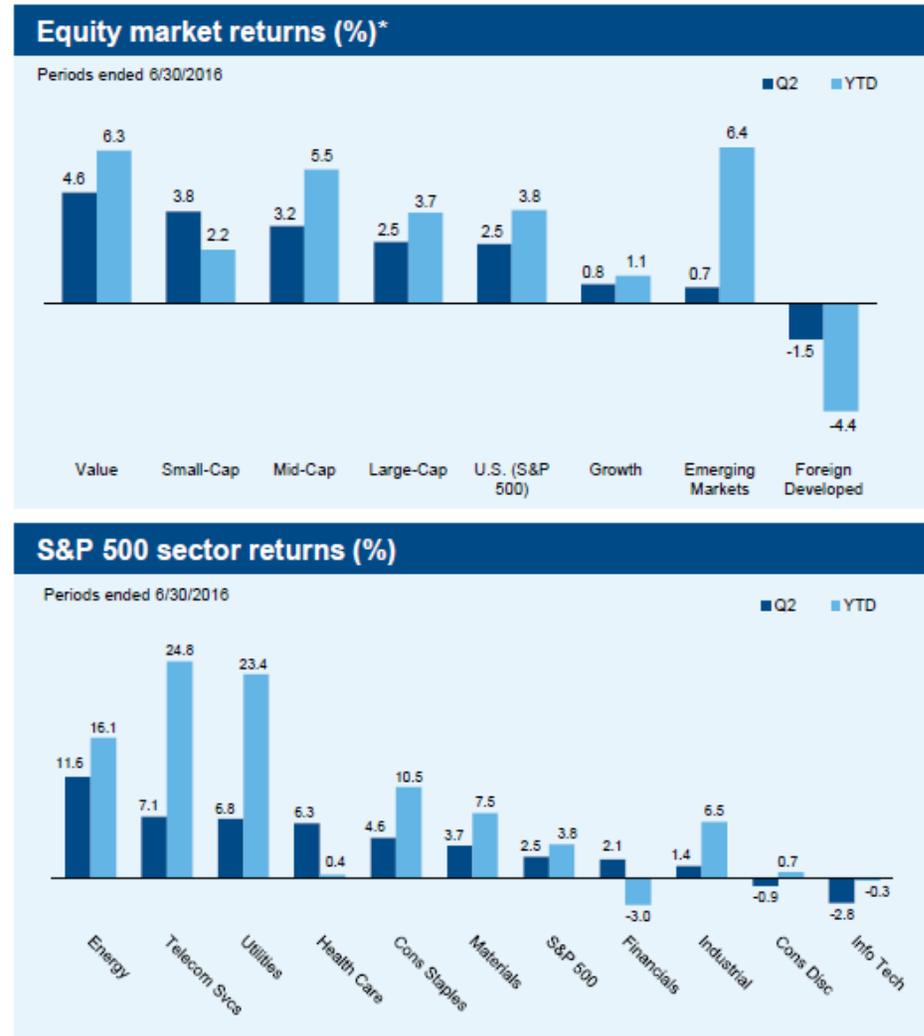
## Wages and core inflation show modest acceleration YTD

Average hourly earnings and PCE chain price index (less food and energy)  
Monthly, % change from year ago, seasonally adjusted



Monthly data through May 2016. Sources: BLS, BEA/Haver Analytics.

- Returns across most regions and sectors were positive in Q2 and YTD.
- Already-lagging Eurozone markets were hit hard by Brexit prior to quarter-end.
- U.S. value, mid caps, and small caps outperformed on cautious economic optimism.
- Sectors with higher dividends benefited from record-low global interest rates.
- U.S. valuations have climbed and continue to look high relative to Europe and Asia.

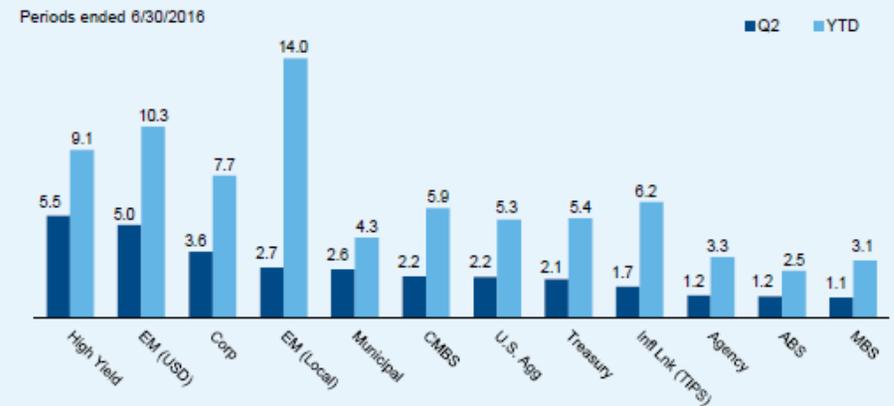


\* U.S. equity returns represented by S&P 500, Russell 2000, Russell 1000, Russell Midcap, Russell 3000 Growth, and Russell 3000 Value indexes; foreign developed-market equity returns represented by MSCI EAFE Index; emerging-market equity returns represented by MSCI Emerging Markets Index. All returns are stated in U.S. dollar terms unless noted otherwise.

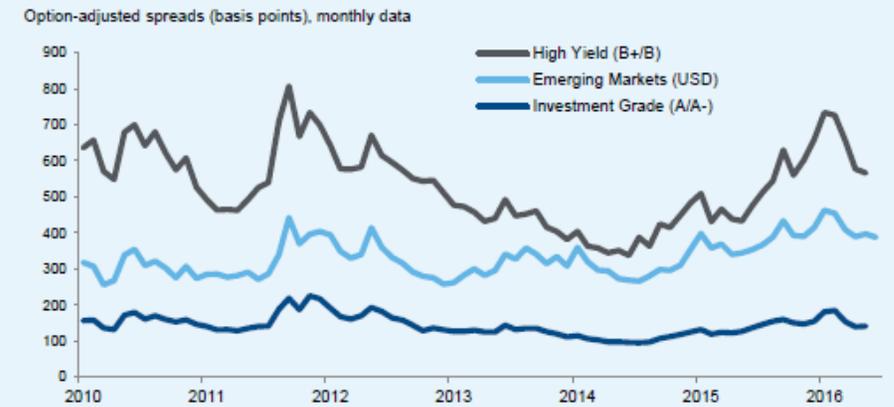
- Fixed income kept pace with equities in Q2 as global rates fell further.
- The 10-year U.S. Treasury yield touched a new record low after the Brexit vote.
- Demand for yield supported both U.S. corporate and USD-denominated EM debt.
- Inflation expectations fell, leading to TIPS underperformance.
- Recent performance will be difficult to replicate should rates stabilize or rise.

\* Source: Developed-market bond segments are represented by their respective Barclays indexes and related subsets: U.S. Aggregate, Treasury, Agencies, Mortgage-Backed Securities (MBS), Commercial Mortgage-Backed Securities (CMBS), Asset-Backed Securities (ABS), Investment-Grade Corporate, High-Yield, and Treasury Inflation-Protected Securities (TIPS). For emerging markets, USD-denominated and local-currency segments are represented by the JPMorgan Emerging Market Bond Index (EMBI)-Global Diversified and the JPMorgan Government Bond Index (GBI)-EM Global Diversified Composite, respectively.

## Fixed-income market returns (%)\*



## High-yield and EM spreads held steady in Q2



Option-adjusted spreads measure the relative value of fixed-income securities that contain an embedded option (such as a call provision in a corporate bond); they are quoted as a spread, or differential, over a benchmark security—in this case, the 10-year U.S. Treasury yield. The wider the option-adjusted spread, the higher the implied return and risk of the bond, compared with the benchmark. Data sources: Barclays/JP Morgan/Bloomberg.

# Benchmark yearly returns



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 YTD
HIGHEST RETURN	EM Equity 34.00	Global REIT 35.06	EM Equity 39.42	Int'l Bond 10.11	EM Equity 78.51	Global REIT 27.95	TIPs 13.56	Global REIT 19.7	Small Cap 38.82	Global REIT 28.03	Global REIT 2.83	Global REIT 13.68
	Int'l Small Cap 22.64	EM Equity 32.14	TIPs 11.64	Bonds 5.24	Int'l Small Cap 62.91	Small Cap 26.85	Global REIT 8.28	Int'l Small Cap 18.52	Mid Cap 34.76	S&P 500 13.69	Int'l Small Cap 2.6	Int'l Bond 13.5
	Int'l Stocks 13.54	Int'l Small Cap 26.86	Int'l Bond 11.45	Short Bonds 5.13	High Yield 58.21	Mid Cap 25.48	Bonds 7.84	EM Equity 18.22	S&P 500 32.39	Mid Cap 13.22	S&P 500 1.38	High Yield 9.06
	Mid Cap 12.65	Int'l Stocks 26.34	Int'l Stocks 11.17	TIPs -2.35	Mid Cap 40.48	Int'l Small Cap 25.21	Int'l Bond 5.17	Int'l Stocks 17.32	Int'l Stocks 22.78	Bonds 5.97	Short Bonds 0.97	EM Equity 6.41
	Global REIT 12.16	Small Cap 18.37	Int'l Small Cap 10.76	High Yield -26.16	Target Date 32.71	EM Equity 18.88	High Yield 4.98	Mid Cap 17.28	Target Date 19.9	Target Date 5.8	Bonds 0.55	TIPs 6.24
	Target Date 11.1	Target Date 16.25	Target Date 8.48	Small Cap -33.79	Int'l Stocks 31.78	Target Date 16.89	Short Bonds 3.14	Small Cap 16.35	Int'l Small Cap 19.73	Small Cap 4.89	Int'l Stocks -0.81	Mid Cap 5.5
	S&P 500 4.91	S&P 500 15.79	Short Bonds 7.27	Target Date -35.15	Global REIT 27.99	High Yield 15.12	S&P 500 2.11	S&P 500 16.00	High Yield 7.44	TIPs 3.64	TIPs -1.44	Bonds 5.31
	Small Cap 4.55	Mid Cap 15.26	Bonds 6.97	S&P 500 -37.00	Small Cap 27.17	S&P 500 15.06	Mid Cap -1.55	High Yield 15.81	Global REIT 2.86	High Yield 2.45	Target Date -1.61	Target Date 4.04
	TIPs 2.84	High Yield 11.85	Mid Cap 5.6	Global REIT -37.73	S&P 500 26.46	Int'l Stocks 7.75	Target Date -2.62	Target Date 13.92	Short Bonds 0.28	Short Bonds 1.42	Mid Cap -2.44	S&P 500 3.84
	High Yield 2.74	Int'l Bond 6.94	S&P 500 5.49	Mid Cap -41.46	TIPs 11.41	Bonds 6.54	Small Cap -4.18	TIPs 6.98	Bonds -2.02	EM Equity -2.19	Small Cap -4.41	Short Bonds 2.6
	Bonds 2.43	Bonds 4.33	High Yield 1.87	Int'l Stocks -43.38	Bonds 5.93	TIPs 6.31	Int'l Stocks -12.14	Bonds 4.21	EM Equity -2.6	Int'l Bond -2.68	High Yield -4.47	Small Cap 2.22
	Short Bonds 1.44	Short Bonds 4.22	Small Cap -1.57	Int'l Small Cap -50.23	Short Bonds 4.62	Int'l Bond 5.21	EM Equity -18.42	Short Bonds 2.24	Int'l Bond -4.56	Int'l Small Cap -4.03	Int'l Bond -5.54	Int'l Small Cap -0.2
LOWEST RETURN	Int'l Bond -9.2	TIPs 0.41	Global REIT -15.69	EM Equity -53.33	Int'l Bond 4.39	Short Bonds 4.08	Int'l Small Cap -18.5	Int'l Bond 1.51	TIPs -8.61	Int'l Stocks -4.9	EM Equity -14.92	Int'l Equity -4.42

Asset categories' returns could vary widely from year to year which will change annualized returns for 3-, 5-, and 10-year returns accordingly.

Sources: Morningstar Direct

Past performance is no guarantee of future results. You cannot directly invest in an index.

Category	Proxy Index
Bonds	Barclays US Agg Bond TR USD
High Yield	Barclays US Corporate High Yield TR USD
TIPs	Barclays US Treasury US TIPS TR USD
Target Date	DJ Target 2035 TR USD
Global REIT	FTSE NAREIT All Equity REITs TR USD
Int'l Stocks	MSCI EAFE NR USD
EM Equity	MSCI EM NR USD
Small Cap	Russell 2000 TR USD
Mid Cap	Russell Mid Cap TR USD
S&P 500	S&P 500 TR USD
Int'l Bond	Citi WGBI NonUSD USD
Short Bonds	Barclays Govt/Credit 1-5 Yr TR USD
Int'l Small Cap	MSCI ACWI Ex USA Small NR USD
Sources: Morningstar Direct	
Returns as of year end listed.	

# NDPERS 401(a) Defined Contribution Plan & 457 Companion Plan - TIAA-CREF

## INITIAL OFFERING:

	Hartford Dividend & Growth T.Rowe Price Equity Income	Vanguard 500 Index Signal Vanguard Dividend Growth	Franklin Growth Adv Wells Fargo Adv Growth Adm	<b>LARGE</b>
	RidgeWorth Mid Cap Value Equity I	ASTON/Fairpointe Mid Cap I Columbia Mid Cap Index A	Prudential Jennison Mid Cap Growth Z	
	Allianz NFJ Small Cap Value	DFA US Small Cap	Brown Capital Mgmt Small Co Inv	<b>SMALL</b>

VALUE

BLEND

GROWTH

## BALANCED FUND:

T.Rowe Price Capital Appreciation

## INCOME FUNDS:

Wells Fargo Stable Value Fund J

## BOND FUNDS:

PIMCO Total Return Bond Fund

Vanguard Prime Money Market

Prudential High Yield Z

PIMCO Real Return Admin Bond Fund

Templeton Global Bond

## REAL ESTATE:

Cohen & Steers Realty Shares

## INTERNATIONAL FUNDS:

Mutual Global Discovery Z

Vanguard Total Intl Stock Index

Oppenheimer Developing Markets Y

## LIFESTYLE FUNDS:

TIAA-CREF Lifecycle Ret Income

TIAA-CREF Lifecycle 2025

TIAA-CREF Lifecycle 2045

TIAA-CREF Lifecycle 2010

TIAA-CREF Lifecycle 2030

TIAA-CREF Lifecycle 2050

TIAA-CREF Lifecycle 2015

TIAA-CREF Lifecycle 2035

TIAA-CREF Lifecycle 2055

TIAA-CREF Lifecycle 2020

TIAA-CREF Lifecycle 2040

TIAA-CREF Lifecycle 2060

## FUND STYLE CHANGES:

←			Vanguard Dividend Growth →	<b>LARGE</b>
↑ ↓	ASTON/Fairpointe Mid Cap I ←			
				<b>MEDIUM</b>
				<b>SMALL</b>

VALUE

BLEND

GROWTH

## OTHER FUNDS:

## CURRENT LINEUP:

	Hartford Dividend & Growth T.Rowe Price Equity Income	Vanguard 500 Index Signal	Franklin Growth Adv Wells Fargo Adv Growth Adm Vanguard Dividend Growth	<b>LARGE</b>
	ASTON/Fairpointe Mid Cap I RidgeWorth Mid Cap Value Equity	Columbia Mid Cap Index A	Prudential Jennison Mid Cap Growth Z	
	Allianz NFJ Small Cap Value	DFA US Small Cap	Brown Capital Mgmt Small Co Inv	<b>SMALL</b>

VALUE

BLEND

GROWTH

## BALANCED FUND:

T.Rowe Price Capital Appreciation

## INCOME FUNDS:

Wells Fargo Stable Value Fund J

## BOND FUNDS:

PIMCO Total Return Bond Fund

Vanguard Treasury Money Market

Prudential High Yield Z

PIMCO Real Return Admin Bond Fund

Templeton Global Bond

## REAL ESTATE:

Cohen & Steers Realty Shares

## INTERNATIONAL FUNDS:

Mutual Global Discovery Z

Vanguard Total Intl Stock Index

Oppenheimer Developing Markets Y

## LIFESTYLE FUNDS:

TIAA-CREF Lifecycle Ret Income

TIAA-CREF Lifecycle 2025

TIAA-CREF Lifecycle 2045

TIAA-CREF Lifecycle 2010

TIAA-CREF Lifecycle 2030

TIAA-CREF Lifecycle 2050

TIAA-CREF Lifecycle 2015

TIAA-CREF Lifecycle 2035

TIAA-CREF Lifecycle 2055

TIAA-CREF Lifecycle 2020

TIAA-CREF Lifecycle 2040

TIAA-CREF Lifecycle 2060

## NDPERS Investment Benchmarks - 2nd Quarter 2016

	<u>Quarter</u>	<u>Y-T-D</u>	<u>1-Year</u>	<u>3-Year</u>	<u>5-Year</u>
<u>Stable Value / Money Market Fund</u>					
<b>Vanguard Treasury Money Market - VUSXX</b>	0.06%	0.12%	0.13%	0.05%	0.04%
<b>Wells Fargo Stable Return Fund J - WFSJ#</b>	0.24%	0.46%	0.89%	0.79%	0.97%
3 Month T-Bill Index	0.16%	0.31%	0.41%	0.30%	0.34%
<u>Fixed Income Fund</u>					
<b>PIMCO Real Return Admin - PARRX</b>	1.81%	5.95%	3.05%	1.61%	2.11%
<b>PIMCO Total Return Bond Fund - PTRAX &lt;ON WATCH&gt;</b>	2.01%	3.77%	4.05%	3.22%	3.45%
Barclays Aggregate Bond Index	2.21%	5.31%	6.00%	4.06%	3.76%
Taxable Bond Fund Universe	2.70%	6.31%	0.30%	2.11%	3.27%
<b>Prudential High Yield Z - PHYZX</b>	4.45%	7.92%	2.42%	4.57%	5.90%
ML High Yield Bond Fund Index	5.88%	9.32%	1.71%	4.18%	5.71%
High Yield Bond Fund Universe	4.23%	6.44%	2.92%	4.58%	5.97%
<b>Templeton Global Bond Adv - TGBAX</b>	-0.37%	-0.28%	-4.26%	0.39%	1.60%
Citi World Govt Bond Index	3.41%	10.74%	11.26%	2.65%	1.18%
World Bond Fund Universe	2.25%	6.60%	4.77%	2.08%	1.91%
<u>Real Estate Fund</u>					
<b>Cohen &amp; Steers Realty Shares - CSRSX</b>	5.70%	9.65%	21.31%	13.40%	11.38%
FTSE NAREIT All Equity REITs Index	6.96%	13.38%	24.04%	13.58%	12.60%
Real Estate Fund Universe	5.51%	10.45%	19.50%	12.11%	11.17%
<u>Balanced Fund</u>					
<b>T.Rowe Price Capital Appreciation - PACLX</b>	3.04%	5.04%	6.63%	11.06%	10.93%
60% Large Cap Value Univ & 40% Taxable Bond Universe	2.69%	4.92%	0.07%	5.63%	6.93%
60% Russell 1000 Value & 40% Agg Bond Index	3.64%	5.90%	4.14%	7.56%	8.34%
<u>Large Cap Equities - Value</u>					
<b>Hartford Dividend &amp; Growth - HDGTX</b>	2.71%	3.91%	2.72%	9.74%	10.56%
<b>T.Rowe Price Equity Income - PRFDX &lt;ON WATCH&gt;</b>	3.93%	6.78%	1.28%	6.80%	9.11%
Russell 1000 Value Index	4.60%	6.30%	2.90%	9.90%	11.40%
Large Cap Value Fund Universe	2.68%	4.00%	-0.09%	7.97%	9.37%
<u>Large Cap Equities - Blend</u>					
<b>Vanguard 500 Index - VFIAX</b>	2.45%	3.82%	3.95%	11.62%	12.06%
<b>Vanguard Dividend Growth Fund - VDIGX</b>	2.66%	5.60%	9.13%	11.43%	12.22%
S&P 500 Index	2.46%	3.84%	3.99%	11.66%	12.10%
Large Cap Blend Fund Universe	1.76%	2.06%	-0.02%	9.43%	10.10%
<u>Large Cap Equities - Growth</u>					
<b>Wells Fargo Adv Growth Adm - SGRKX &lt;ON WATCH&gt;</b>	3.35%	-2.41%	-4.89%	8.39%	8.93%
Russell 3000 Growth Index	0.80%	1.14%	1.88%	12.65%	12.04%
<b>Franklin Growth Adv - FCGAX</b>	1.14%	1.42%	0.37%	12.16%	10.91%
Russell 1000 Growth Index	0.60%	1.40%	3.00%	13.10%	12.30%
Large Cap Growth Fund Universe	0.54%	-1.93%	-2.33%	10.58%	9.98%
<u>Mid Cap Equities - Value</u>					
<b>RidgeWorth Mid Cap Value Equity I - SMVTX</b>	2.11%	4.83%	-0.44%	8.42%	8.91%
Russell Mid Cap Value	4.77%	8.87%	3.25%	11.00%	11.70%
Mid Cap Value Fund Universe	2.37%	4.87%	-2.16%	7.85%	8.77%
<u>Mid Cap Equities - Blend</u>					
<b>Columbia Mid Cap Index A - NTIAX</b>	3.91%	7.66%	0.89%	10.04%	10.07%
S&P Mid Cap 400	3.99%	7.93%	1.33%	10.53%	10.55%
<b>ASTON/Fairpointe Mid Cap I - ABMIX</b>	-2.97%	0.57%	-9.69%	5.55%	8.66%
Wilshire 4500 Index	4.13%	3.98%	-3.29%	9.42%	9.84%
Mid Cap Blend Fund Universe	1.49%	2.76%	-4.33%	7.55%	8.26%
<u>Mid Cap Equities - Growth</u>					
<b>Prudential Jennison Mid Cap Growth Z - PEGZX</b>	1.32%	0.64%	-6.47%	7.97%	8.40%
Russell Mid Cap Growth	1.56%	2.15%	-2.14%	10.52%	9.98%
Mid Cap Growth Fund Universe	1.98%	0.13%	-6.43%	8.21%	7.93%
<b>Fund Returns in RED do not meet both benchmarks. Fund Returns in BLACK meet both benchmarks.</b>					

## NDPERS Investment Benchmarks - 2nd Quarter 2016

	Quarter	Y-T-D	1-Year	3-Year	5-Year
<b>Small Cap Equities - Value</b>					
<b>Allianz NFJ Small Cap Value - PVADX</b>	2.11%	4.11%	-5.11%	4.43%	6.13%
Russell 2000 Value Index	4.31%	6.08%	-2.58%	6.36%	8.15%
Small Value Fund Universe	2.27%	4.50%	-4.30%	5.92%	7.67%
<b>Small Cap Equities - Blend</b>					
<b>DFA US Small Cap - DFSTX</b>	1.69%	3.56%	-4.05%	8.28%	9.71%
Russell 2000 Index	3.79%	2.22%	-6.73%	7.09%	8.35%
Small Blend Fund Universe	2.43%	2.99%	-5.78%	6.37%	7.62%
<b>Small Cap Equities - Growth</b>					
<b>Brown Capital Mgmt Small Co Inv - BCSIX</b>	7.36%	1.48%	3.25%	13.30%	11.85%
Russell 2000 Growth Index	3.20%	-1.60%	-10.80%	7.70%	8.50%
Small Growth Fund Universe	3.79%	-0.69%	-9.86%	6.46%	7.26%
<b>International Equity Funds</b>					
<b>Mutual Global Discovery Z - MDISX</b>	1.76%	0.31%	-5.73%	5.12%	6.17%
<b>Vanguard Total Intl Stock Index Inv - VGTSX</b>	0.26%	0.08%	-9.11%	2.02%	0.58%
MSCI EAFE	-0.64%	-1.02%	-10.24%	1.16%	0.10%
International Stock Fund Universe	0.78%	-1.26%	-4.17%	5.63%	5.33%
<b>Oppenheimer Developing Markets Y - ODVYX</b>	0.71%	3.80%	-10.13%	-1.21%	-1.31%
MSCI Emerging Markets Index	0.66%	6.41%	-12.00%	-1.56%	-3.78%
Diversified Emerging Mkts Universe	2.28%	6.22%	-9.89%	-1.30%	-3.19%
<b>Asset Allocation Funds:</b>					
<b>TIAA-CREF Lifecycle Ret Income - TLIRX</b>	1.83%	3.22%	1.23%	5.05%	5.26%
Income Benchmark	1.91%	3.66%	2.00%	5.12%	5.06%
<b>TIAA-CREF Lifecycle 2010 - TCLEX</b>	1.76%	3.08%	0.88%	5.44%	5.59%
2010 Benchmark	1.94%	3.61%	1.72%	5.40%	5.36%
<b>TIAA-CREF Lifecycle 2015 - TCLIX</b>	1.76%	2.84%	0.44%	5.76%	5.88%
2015 Benchmark	1.96%	3.56%	1.43%	5.66%	5.64%
<b>TIAA-CREF Lifecycle 2020 - TCLTX</b>	1.78%	2.57%	-0.15%	6.14%	6.25%
2020 Benchmark	1.96%	3.42%	0.91%	6.04%	6.04%
<b>TIAA-CREF Lifecycle 2025 - TCLFX</b>	1.68%	2.12%	-0.91%	6.43%	6.57%
2025 Benchmark	2.01%	3.32%	0.36%	6.42%	6.47%
<b>TIAA-CREF Lifecycle 2030 - TCLNX</b>	1.59%	1.76%	-1.67%	6.72%	6.84%
2030 Benchmark	2.05%	3.21%	-0.21%	6.80%	6.90%
<b>TIAA-CREF Lifecycle 2035 - TCLRX</b>	1.57%	1.40%	-2.42%	6.94%	7.05%
2035 Benchmark	2.02%	2.98%	-0.83%	7.12%	7.25%
<b>TIAA-CREF Lifecycle 2040 - TCLOX</b>	1.46%	0.89%	-3.29%	6.98%	7.19%
2040 Benchmark	1.99%	2.74%	-1.45%	7.41%	7.57%
<b>TIAA-CREF Lifecycle 2045 - TTRFX</b>	1.38%	0.89%	-3.29%	6.93%	7.17%
2045 Benchmark	1.99%	2.74%	-1.45%	7.40%	7.56%
<b>TIAA-CREF Lifecycle 2050 - TFRX</b>	1.38%	0.89%	-3.24%	6.97%	7.19%
2050 Benchmark	1.99%	2.73%	-1.46%	7.40%	7.56%
<b>TIAA-CREF Lifecycle 2055 - TTRLX</b>	1.31%	0.87%	-3.28%	6.94%	7.20%
2055 Benchmark	1.99%	2.73%	-1.46%	7.39%	7.55%
<b>TIAA-CREF Lifecycle 2060 - TTRLX</b>	1.40%	0.97%	-3.18%	N/A	N/A
2060 Benchmark	1.99%	2.73%	-1.46%	7.39%	7.55%
Income Benchmark is comprised of 27.2% Wilshire 5000, 13.1% MSCI EAFE, 46.6% Ag Bond, 3.0% HY Bond, 10.1% 3 Month T-Bill					
2010 Benchmark is comprised of 30.8% Wilshire 5000, 14.6% MSCI EAFE, 43.7% Ag Bond, 3.0% HY Bond, 7.9% 3 Month T-Bill					
2015 Benchmark is comprised of 34.3% Wilshire 5000, 16.1% MSCI EAFE, 40.7% Ag Bond, 3.0% HY Bond, 5.9% 3 Month T-Bill					
2020 Benchmark is comprised of 39.9% Wilshire 5000, 18.5% MSCI EAFE, 34.7% Ag Bond, 3.0% HY Bond, 3.9% 3 Month T-Bill					
2025 Benchmark is comprised of 45.5% Wilshire 5000, 20.8% MSCI EAFE, 27.8% Ag Bond, 4.0% HY Bond, 1.9% 3 Month T-Bill					
2030 Benchmark is comprised of 51.1% Wilshire 5000, 23.2% MSCI EAFE, 20.7% Ag Bond, 5.0% HY Bond					
2035 Benchmark is comprised of 56.8% Wilshire 5000, 25.5% MSCI EAFE, 12.7% Ag Bond, 5.0% HY Bond					
2040 Benchmark is comprised of 62.2% Wilshire 5000, 27.9% MSCI EAFE, 4.9% Ag Bond, 5.0% HY Bond					
2045 Benchmark is comprised of 62.1% Wilshire 5000, 27.9% MSCI EAFE, 5.0% Ag Bond, 5.0% HY Bond					
2050 Benchmark is comprised of 62.1% Wilshire 5000, 28.0% MSCI EAFE, 4.9% Ag Bond, 5.0% HY Bond					
2055&2060 Benchmark is comprised of 62.0% Wilshire 5000, 28.0% MSCI EAFE, 5.0% Ag Bond, 5.0% HY Bond					
Wilshire 5000 Index	2.84%	3.69%	1.65%	10.73%	11.37%
MSCI EAFE	-0.64%	-1.02%	-10.24%	1.16%	0.10%
Barclays Aggregate Bond Index	2.21%	5.31%	6.00%	4.06%	3.76%
ML High Yield Bond Fund Index	5.88%	9.32%	1.71%	4.18%	5.71%
3 Month T-Bill Index	0.16%	0.31%	0.41%	0.30%	0.34%

Fund Returns in RED do not meet both benchmarks.

Fund Returns in BLACK meet both benchmarks.

# NDPERS Mutual Fund Research - 6/30/2016

## Large Value

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
Hartford Dividend & Growth	HDGTX	7.9 Billion	12/22/2006	Team	0.74%	1.57	23%	14.9	4-Stars	17	25	2.71%	2.72%	9.74%	10.56%	6.49%	98	0.97	-1.42	11.03	0.89	
T.Rowe Price Equity Income	PRFDX	21.8 Billion	10/31/1985	1 years	0.66%	2.03	27%	15.0	3-Stars	73	60	3.93%	1.28%	6.80%	9.11%	5.82%	93	0.99	-4.34	11.54	0.62	

## Large Blend

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
T.Rowe Price Capital Appreciation (Balanced)	PACLX	25.8 Billion	3/6/1990	9 Years	1.01%	1.07	67%	19.4	5-Stars	1	1	3.04%	6.63%	11.06%	10.93%	8.45%				7.42	1.44	
Vanguard 500 Index Signal	VFIAX	239.6 Billion	9/29/2006	1 Years	0.05%	2.08	3%	N/A	5-Stars	9	8	2.45%	3.95%	11.62%	12.06%	7.42%	100	1.00	-0.03	11.25	1.03	
Vanguard Dividend Growth	VDIGX	30.6 Billion	2/1/2006	10 Years	0.33%	1.86	26%	18.7	5-Stars	10	8	2.66%	9.13%	11.43%	12.22%	9.08%	94	0.87	1.18	10.13	1.11	

## Large Growth

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
Wells Fargo Adv Growth Adm	SGRKX	6.9 Billion	8/30/2002	Team	0.96%	0.00	35%	25.0	4-Stars	89	74	3.35%	-4.89%	8.39%	8.93%	10.06%	72	1.06	-3.29	13.98	0.64	
Franklin Growth Adv	FCGAX	11.8 Billion	12/31/1996	Team	0.63%	0.92	5%	17.9	4-Stars	18	28	1.14%	0.37%	12.16%	10.91%	8.21%	94	0.91	1.39	10.60	1.13	

## Medium Value

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
RidgeWorth Mid Cap Value Equity I	SMVTX	3.2 Billion	11/30/2001	14 Years	1.12%	1.15	98%	16.2	4-Stars	44	50	2.11%	-0.44%	8.42%	8.91%	8.95%	90	1.07	-3.66	12.72	0.69	

## Medium Blend

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
Columbia Mid Cap Index A	NTIAX	3.8 Billion	5/31/2000	Team	0.45%	0.96	20%	17.2	4-Stars	21	26	3.91%	0.89%	10.04%	10.07%	8.13%	80	0.99	-1.18	12.44	0.82	
ASTON/Fairpointe Mid Cap I	ABMIX	3.7 Billion	7/6/2004	Team	0.86%	0.62	32%	15.6	3-Stars	71	35	-2.97%	-9.69%	5.55%	8.66%	9.39%	76	1.19	-7.30	15.34	0.42	

## Medium Growth

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
Prudential Jennison Mid Cap Growth Z	PEGZX	8.1 Billion	12/31/1996	10 Years	0.75%	0.00	45%	20.3	4-Stars	55	43	1.32%	-6.47%	7.97%	8.40%	8.27%	82	0.99	-3.14	12.32	0.68	

## Small Value

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
Allianz NFJ Small Cap Value Admin	PVADX	4.1 Billion	11/1/1995	Team	1.03%	1.64	42%	13.0	4-Stars	77	84	2.11%	-5.11%	4.43%	6.13%	6.73%	76	0.97	-6.28	12.61	0.40	

## Small Blend

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
DFA Small Cap	DFSTX	12.7 Billion	3/19/1992	Team	0.37%	1.17	11%	16.2	4-Stars	27	19	1.69%	-4.05%	8.28%	9.71%	7.44%	70	1.07	-3.51	14.38	0.62	

## Small Growth

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index				Standard Deviation	Sharpe Ratio
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
Brown Capital Mgmt Small Co Inv	BCSIX	2.9 Billion	1/2/1996	Team	1.26%	0.00	22%	38.9	5-Stars	2	3	7.36%	3.25%	13.30%	11.85%	12.43%	57	1.09	1.09	16.20	0.85	

International																					
Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=ACWI Index			Standard Deviation	Sharpe Ratio
				Tenure						3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha		
Mutual Global Discovery Z	MDISX	21.6 Billion	12/31/1992	Team	0.97%	1.75	22%	14.5	4-Stars	61	33	1.76%	-5.73%	5.12%	6.17%	5.97%	94	0.85	-0.04	10.35	0.53
Vanguard Total Intl Stock Index Inv	VTIAX	207.5 Billion	4/29/1996	7 Years	0.12%	2.83	3%	13.8	3-Stars	39	67	0.26%	-9.11%	2.02%	0.58%	2.44%	98	0.96	0.87	12.85	0.21
Oppenheimer Developing Markets Y	ODVYX	29.4 Billion	9/7/2005	9	1.05%	0.72	36%	16.3	4-Stars	53	15	0.71%	-10.13%	-1.21%	-1.31%	6.52%	82	1.10	-2.16	16.04	0.00

## Lifestyle / Others

Fund	Symbol	Assets	Inception	Manager	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard Deviation	Sharpe Ratio	
				Tenure						3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha			
Vanguard Treasury Money Market	VUSXX	137.6 Billion		12 Years	0.15%	0.45						0.06%	0.13%	0.05%	0.04%	0.97%					0.04	0.37
Wells Fargo Stable Return Fund J	WFSJ	30.3 Billion	10/1/1985		1.05%							0.24%	0.89%	0.79%	0.97%	2.03%	N/A	N/A	N/A	N/A	N/A	N/A
PIMCO Real Return Bond Fund	PARRX	11.1 Billion	4/28/2000	8 Years	0.70%	0.70	102%		4-Stars	34	21	1.81%	3.05%	1.61%	2.11%	4.63%	N/A	N/A	N/A	5.08	0.32	
PIMCO Total Return Bond Fund	PTRAX	86.4 Billion	9/8/1994	1 Year	0.71%	2.95	478%		4-Stars	75	62	2.01%	4.05%	3.22%	3.45%	5.99%	N/A	N/A	N/A	3.19	0.98	
Vanguard Total Bond Market Index Fund	VBTLX	164.4 Billion	11/12/2001	3 Years	0.06%	2.42	84%		3-Stars	32	51	2.36%	6.12%	4.03%	3.73%	5.12%	N/A	N/A	N/A	2.81	1.39	
Prudential High Yield Z	PHYZX	4.5 Billion	3/1/1996	Team	0.58%	6.59	48%		5-Stars	8	9	4.45%	2.42%	4.57%	5.90%	7.38%	N/A	N/A	N/A	5.60	0.81	
Templeton Global Bond Adv	TGBAX	47.2 Billion	12/31/1996	Team	0.63%	3.26	43%		4-Stars	82	45	-0.37%	-4.26%	0.39%	1.60%	6.85%	N/A	N/A	N/A	6.12	0.08	
Cohen & Steers Realty Shares	CSRSX	6.0 Billion	7/2/1991	Team	0.98%	2.45	58%	44.4	4-Stars	22	51	5.70%	21.31%	13.40%	11.38%	7.34%	N/A	N/A	N/A	15.10	0.90	
TIAA-CREF Lifecycle Ret Income	TLIRX	408 Million	11/30/2007	Team	0.61%	2.14	19%	16.7	4-Stars	8	8	1.83%	1.23%	5.05%	5.26%	4.20%	N/A	N/A	N/A	5.44	0.92	
TIAA-CREF Lifecycle 2010	TCLEX	1.1 Billion	10/15/2004	Team	0.62%	1.85	20%	16.7	4-Stars	17	16	1.76%	0.88%	5.44%	5.59%	5.03%	N/A	N/A	N/A	6.03	0.89	
TIAA-CREF Lifecycle 2015	TCPIX	1.8 Billion	10/15/2004	Team	0.63%	1.82	16%	16.7	4-Stars	17	22	1.76%	0.44%	5.76%	5.88%	5.07%	N/A	N/A	N/A	6.64	0.86	
TIAA-CREF Lifecycle 2020	TCITX	3.1 Billion	10/15/2004	Team	0.64%	1.71	13%	16.7	4-Stars	13	11	1.78%	-0.15%	6.14%	6.25%	5.03%	N/A	N/A	N/A	7.48	0.82	
TIAA-CREF Lifecycle 2025	TCLFX	3.2 Billion	10/15/2004	Team	0.66%	1.67	12%	16.7	4-Stars	19	18	1.68%	-0.91%	6.43%	6.57%	4.99%	N/A	N/A	N/A	8.39	0.77	
TIAA-CREF Lifecycle 2030	TCLNX	3.1 Billion	10/15/2004	Team	0.67%	1.62	11%	16.7	4-Stars	17	15	1.59%	-1.67%	6.72%	6.84%	4.92%	N/A	N/A	N/A	9.37	0.73	
TIAA-CREF Lifecycle 2035	TCLRX	3.1 Billion	10/15/2004	Team	0.68%	1.47	11%	16.7	4-Stars	21	18	1.57%	-2.42%	6.94%	7.05%	5.03%	N/A	N/A	N/A	10.22	0.70	
TIAA-CREF Lifecycle 2040	TCLOX	3.9 Billion	10/15/2004	Team	0.69%	1.33	11%	16.7	3-Stars	22	18	1.46%	-3.29%	6.98%	7.19%	5.22%	N/A	N/A	N/A	11.03	0.66	
TIAA-CREF Lifecycle 2045	TTFRX	1.7 Billion	11/30/2007	Team	0.69%	1.65	8%	16.7	4-Stars	27	22	1.38%	-3.29%	6.93%	7.17%	N/A	N/A	N/A	N/A	11.04	0.65	
TIAA-CREF Lifecycle 2050	TLFRX	1.0 Billion	11/30/2007	Team	0.69%	1.65	7%	16.7	4-Stars	28	23	1.38%	-3.24%	6.97%	7.19%	N/A	N/A	N/A	N/A	11.09	0.66	
TIAA-CREF Lifecycle 2055	TTRLX	219 Million	4/29/2011	Team	0.69%	1.59	9%	16.7	4-Stars	37	32	1.31%	-3.28%	6.94%	7.20	N/A	N/A	N/A	N/A	11.08	0.65	
TIAA-CREF Lifecycle 2060	TLXRX	13 Million	9/26/2014	Team	0.69%	1.72	N/A	N/A	N/A	N/A	N/A	1.40%	-3.18%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

**R-squared** - This compares a fund's performance to a given index. If R-squared is 100, the fund moves in lockstep with the index to which it is being compared. Generally, a higher R-squared will indicate a more useful beta figure. If the R-squared is lower, then the beta is less relevant to the fund's performance.

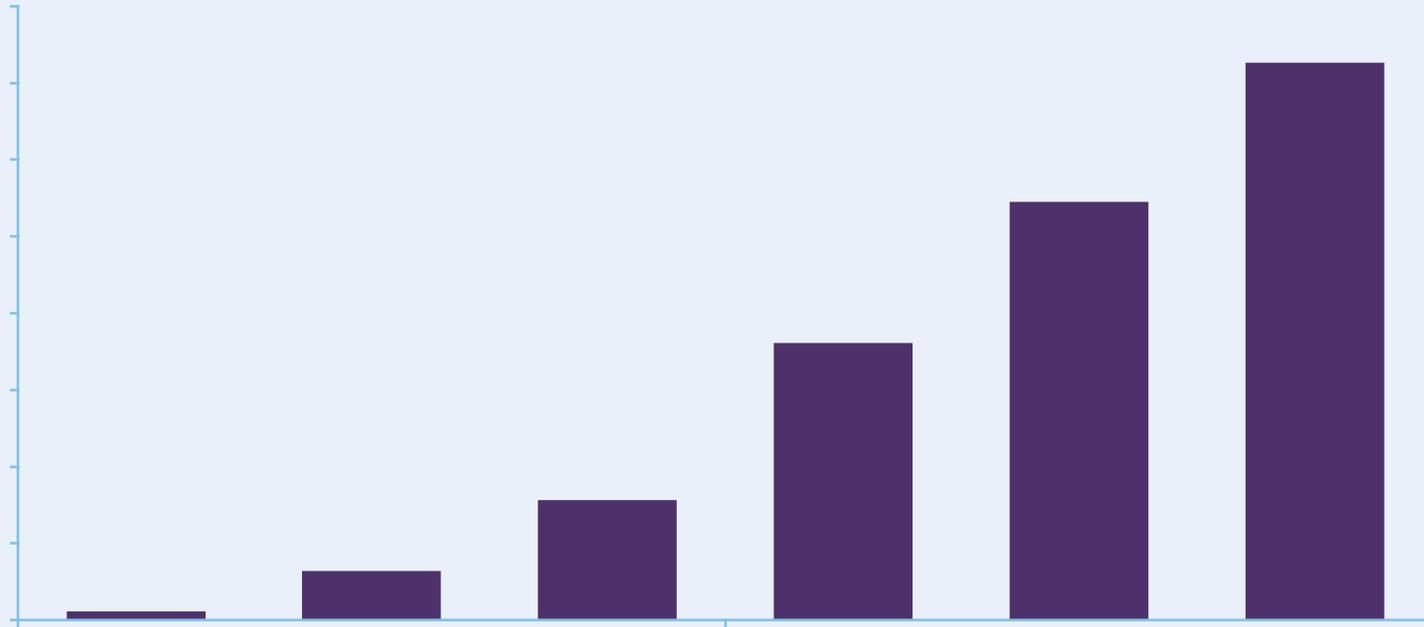
**Beta** - This compares a fund's volatility to a given index. If beta is greater than 1, the fund is more volatile than the index to which it is being compared. If beta is lower than 1, the fund is less volatile than the index. If a fund's R-squared is low, beta is less reliable as a predictor of volatility.

**Alpha** - This is a measure of risk-adjusted performance. The higher a fund's alpha, the better it has done. A fund's alpha is only reliable when its R-squared is relatively high.

**Standard Deviation** - The higher this number is, the more volatile the fund's returns have been. It indicates how much the fund has deviated from its mean total return over the past three years.

**Sharpe Ratio** - This measure combines standard deviation and mean total return to show a risk-adjusted measure of the fund's performance. The higher this number is, the better. As a rule of thumb, a Sharpe ratio of more than 1.00 is very good.

# Average account balance by age

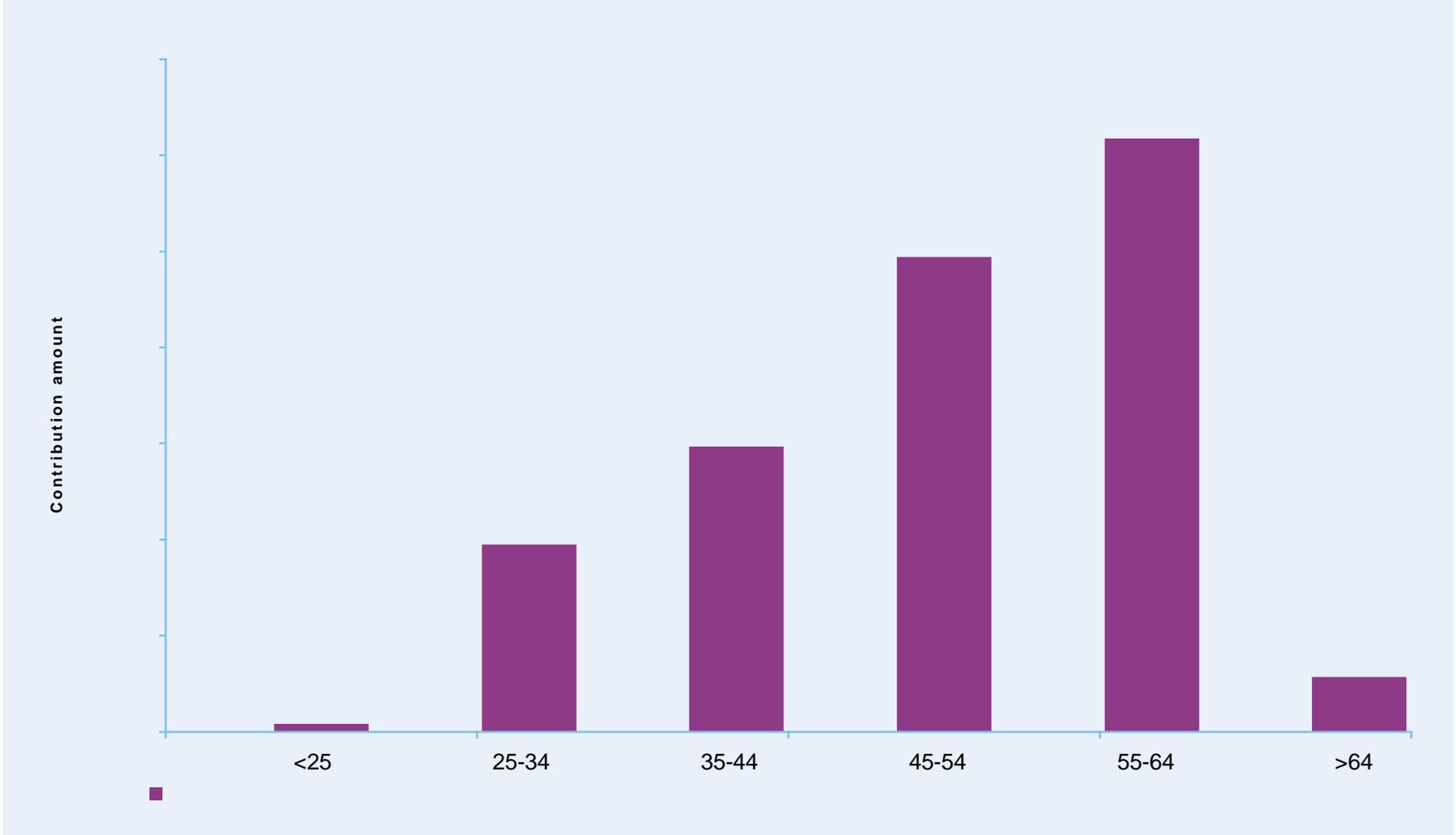


	<25	25-34	35-44	45-54	55-64	>64	Total
# of Active Participants	122	1,118	1,081	1,057	942	81	4,401
% of Total Active Participants	3%	25%	25%	24%	21%	2%	100%
Total Active Assets	\$71,344	\$3,571,817	\$8,460,175	\$19,077,547	\$25,693,333	\$2,943,732	\$59,817,949
% of Total Active Assets	0%	6%	14%	32%	43%	5%	100%

This report is as of the period ending 06/30/2016 and reflects the trailing 12 months of activity unless otherwise noted. The report includes all TIAA plans except 457(f), 457(b) Private, Nonqualified Deferred Compensation, and Retirement Healthcare plans.

# Contribution amounts by age

Employer (ER) & employee (EE) contributions



This report is as of the period ending 06/30/2016 and reflects the trailing 12 months of activity unless otherwise noted. The report includes all TIAA plans except 457(f), 457(b) Private, Nonqualified Deferred Compensation, and Retirement Healthcare plans.

457(b)	Assets	Pct
TIAA-CREF Lifecycle 2020 Fund Retirement	\$12,339,736	15.9%
TIAA-CREF Lifecycle 2025 Fund Retirement	\$11,916,403	15.4%
TIAA-CREF Lifecycle 2030 Fund Retirement	\$8,119,607	10.5%
TIAA-CREF Lifecycle 2015 Fund Retirement	\$7,670,260	9.9%
TIAA-CREF Lifecycle 2035 Fund Retirement	\$5,176,322	6.7%
TIAA-CREF Lifecycle 2040 Fund Retirement	\$4,029,536	5.2%
TIAA-CREF Lifecycle 2045 Fund Retirement	\$3,359,876	4.3%
Vanguard 500 Index Fund Admiral	\$2,820,825	3.6%
TIAA-CREF Lifecycle 2050 Fund Retirement	\$2,151,035	2.8%
TIAA-CREF Lifecycle 2010 Fund Retirement	\$1,689,173	2.2%
Vanguard Total International Stock Index Fund Admiral	\$1,520,653	2.0%
Wells Fargo Stable Return Fund - J	\$1,411,041	1.8%
Vanguard Dividend Growth Fund Investor	\$1,323,067	1.7%
AllianzGI NFJ Small Cap Value Fund Administrative	\$1,305,785	1.7%
PIMCO Total Return Fund Admin	\$1,292,939	1.7%
Columbia Mid Cap Index Fund A	\$927,221	1.2%
T. Rowe Price Capital Appreciation Fund Advisor	\$895,290	1.2%
T. Rowe Price Equity Income Fund	\$895,109	1.2%
Franklin Growth Fund Advisor	\$801,715	1.0%
Cohen & Steers Realty Shares	\$796,451	1.0%
Wells Fargo Growth Fund Administrator	\$753,310	1.0%
Vanguard Admiral Treasury Money Market Fund Investor	\$639,964	0.8%
Templeton Global Bond Fund Advisor	\$544,378	0.7%
Self Directed Brokerage Account	\$505,578	0.7%
ASTON/Fairpointe Mid Cap Fund I	\$501,593	0.6%
TIAA-CREF Lifecycle Retirement Income Fund Retirement	\$494,981	0.6%
Oppenheimer Developing Markets Fund Y	\$481,414	0.6%
Hartford Dividend and Growth Fund R5	\$452,214	0.6%
RidgeWorth Mid Cap Value Equity Fund I	\$377,668	0.5%
Prudential High Yield Fund Z	\$372,781	0.5%
Prudential Jennison Mid-Cap Growth Fund Z	\$347,814	0.4%
TIAA-CREF Lifecycle 2055 Fund Retirement	\$328,385	0.4%
PIMCO Real Return Fund Administrative	\$326,581	0.4%
Brown Capital Management Small Company Fund Institutional	\$321,158	0.4%
Franklin Mutual Global Discovery Fund Z	\$305,898	0.4%
DFA U.S. Small Cap Portfolio Institutional	\$246,947	0.3%
Vanguard Total Bond Market Index Fund Admiral	\$94,586	0.1%
TIAA-CREF Lifecycle 2060 Fund Retirement	\$5,366	0.0%
TIAA-CREF Money Market Fund Retirement	\$0	0.0%
<b>Total</b>	<b>\$77,542,661</b>	<b>100.0%</b>