

NDPERS
401(a)
Defined Contribution Plan
Quarterly Report
3rd Quarter
7/1/2016 – 9/30/2016



North Dakota Public Employees Retirement System
400 E Bdwy, Suite 505
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Bismarck, ND 58502

November 20, 2014 – The NDPERS Board put the **Wells Fargo Growth fund (SGRKKX)** and **PIMCO Total Return Bond fund (PTRAX)** on Formal Fund Review.

May 21, 2015 – The NDPERS Board put the **T. Rowe Price Equity Income fund (PRFDX)** on Formal Fund Review.

September 22, 2016 – The NDPERS Board put the **Allianz NFJ Small Cap Value Fund (PVADX)** on Formal Fund Review.

U.S. GDP growth set to pick up in second half

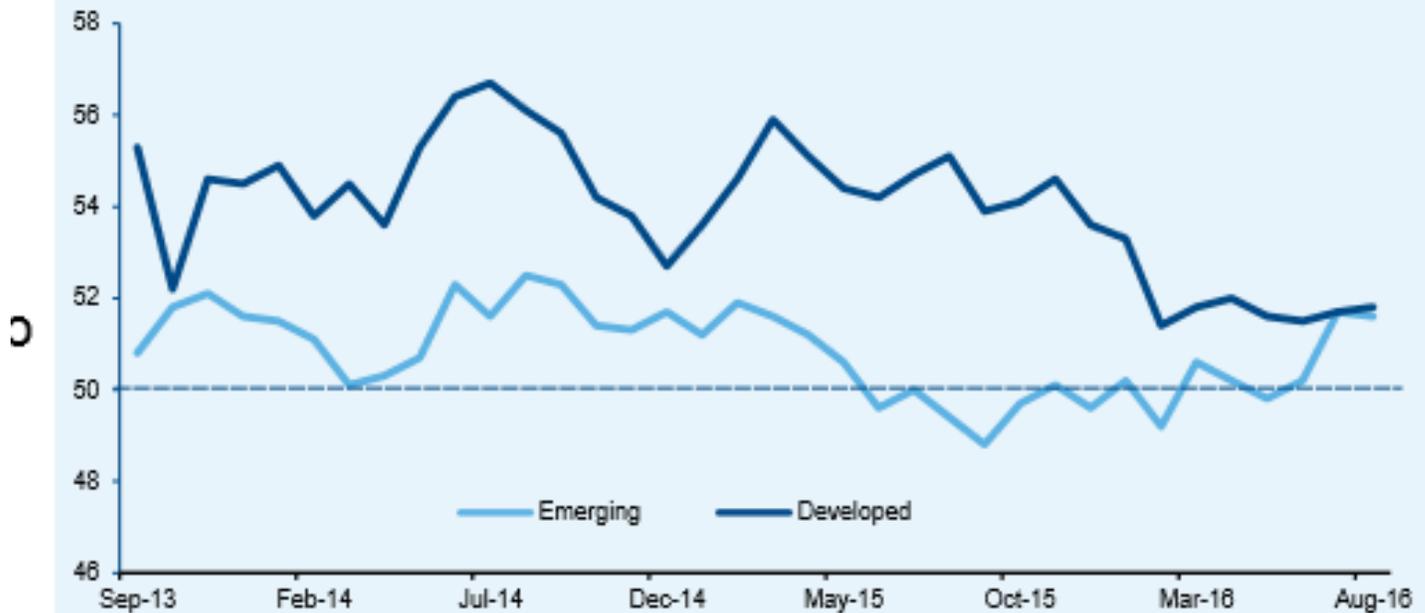
Real gross domestic product, quarterly % growth, seasonally adjusted annual rate



*TIAA forecast as of 9/30/16. Source: Bloomberg, TIAA.

Emerging-market economic cycles catching up to developed

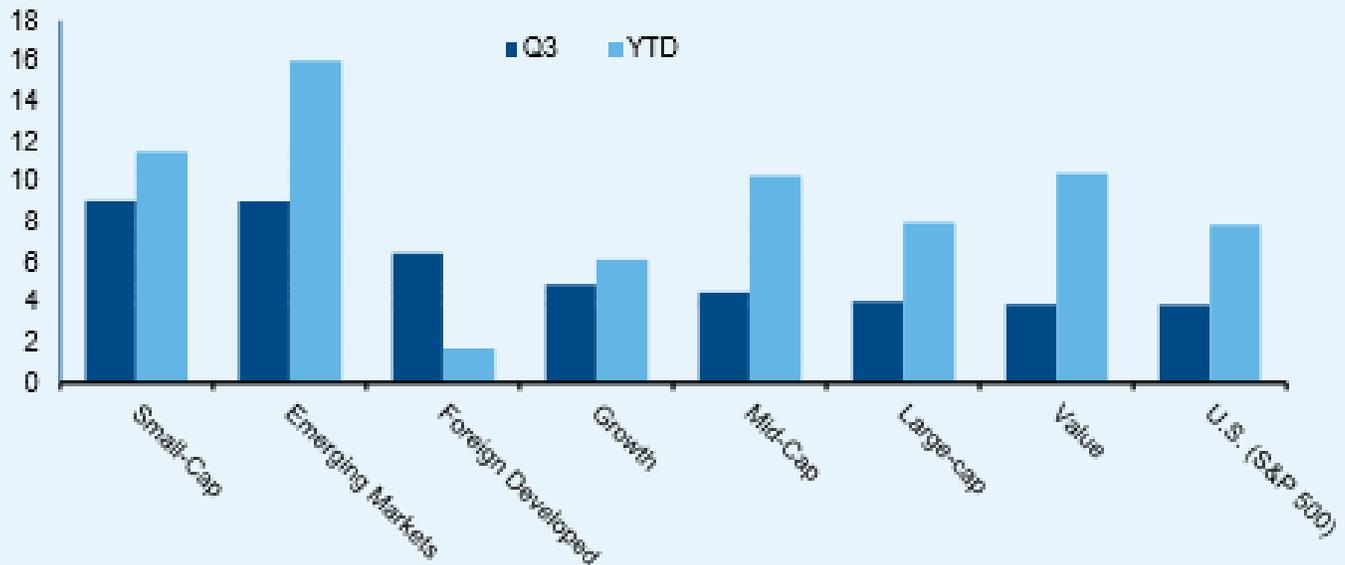
Markit Composite PMI (> 50 = expansion)



Source: Bloomberg.

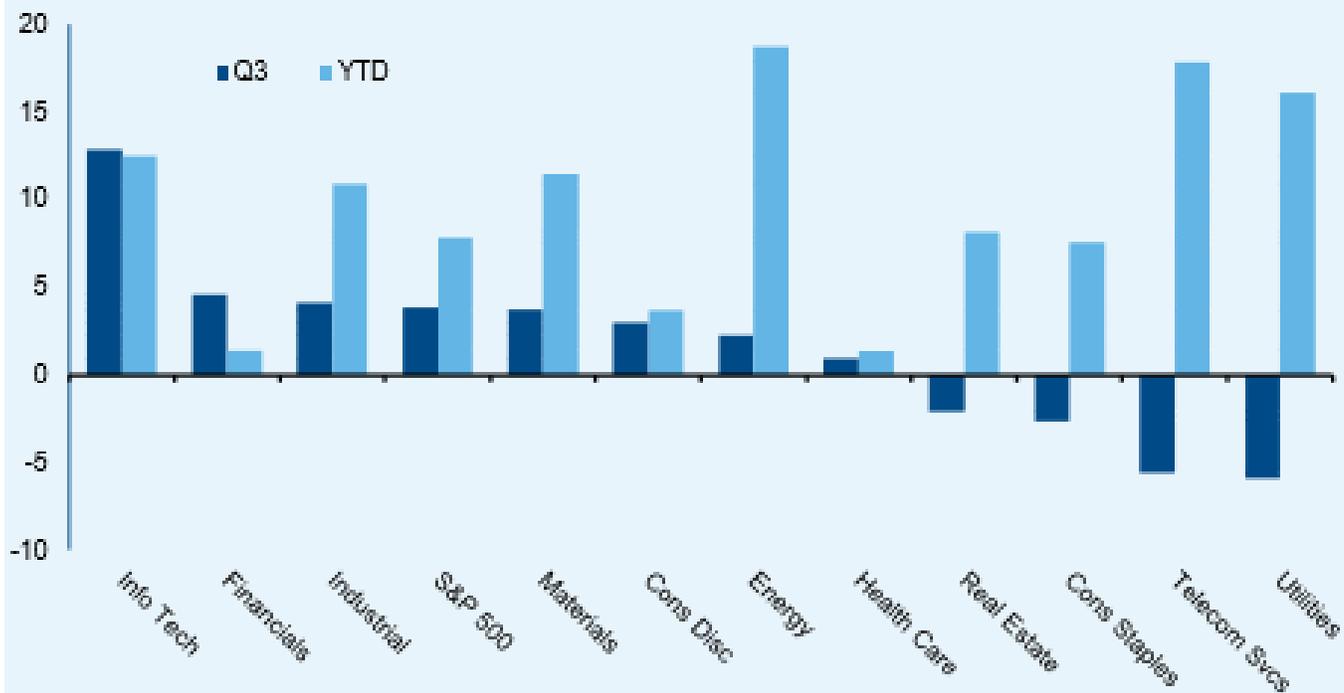
Equity market returns (%)*

Periods ended 9/30/2016



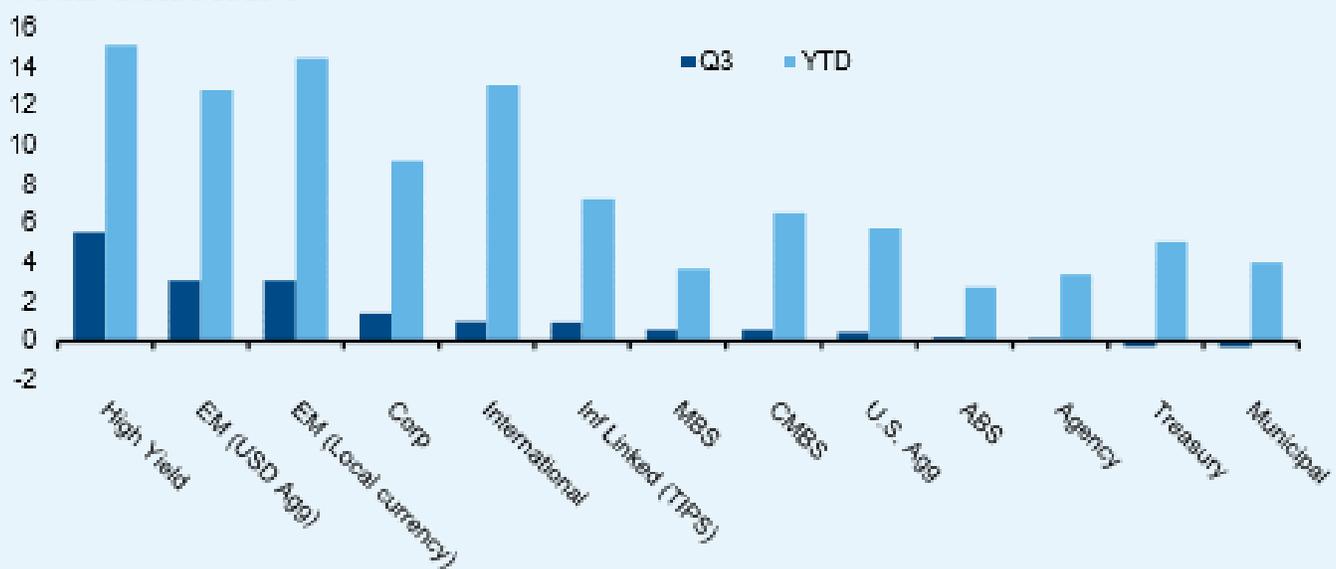
S&P 500 sector returns (%)

Periods ended 9/30/2016



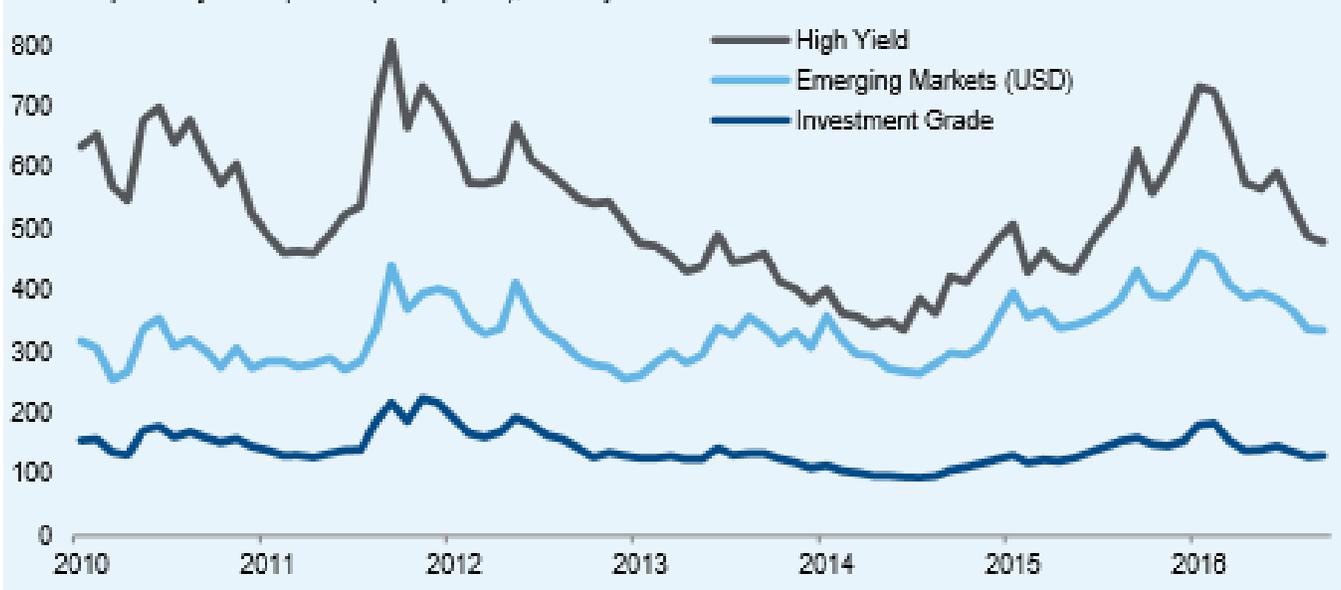
Fixed-income market returns (%)*

Periods ended 9/30/2016



High-yield spreads fell to average levels in Q3

Option-adjusted spreads (basis points), monthly data



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/JPMorgan/Bloomberg.

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	LARGE
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	SMALL
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

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 2010

TIAA-CREF Lifecycle 2015

TIAA-CREF Lifecycle 2020

TIAA-CREF Lifecycle 2025

TIAA-CREF Lifecycle 2030

TIAA-CREF Lifecycle 2035

TIAA-CREF Lifecycle 2040

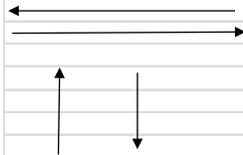
TIAA-CREF Lifecycle 2045

TIAA-CREF Lifecycle 2050

TIAA-CREF Lifecycle 2055

TIAA-CREF Lifecycle 2060

FUND STYLE CHANGES:



			LARGE
ASTON/Fairpointe Mid Cap I	RidgeWorth Mid Cap Value Equity		
			MEDIUM
			SMALL
VALUE	BLEND	GROWTH	

OTHER FUNDS:

CURRENT LINEUP:

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

PIMCO Real Return Admin Bond Fund

Vanguard Treasury Money Market

Prudential High Yield Z

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 2010

TIAA-CREF Lifecycle 2015

TIAA-CREF Lifecycle 2020

TIAA-CREF Lifecycle 2025

TIAA-CREF Lifecycle 2030

TIAA-CREF Lifecycle 2035

TIAA-CREF Lifecycle 2040

TIAA-CREF Lifecycle 2045

TIAA-CREF Lifecycle 2050

TIAA-CREF Lifecycle 2055

TIAA-CREF Lifecycle 2060

NDPERS Investment Benchmarks - 3rd 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>					
Vanguard Treasury Money Market - VUSXX	0.06%	0.18%	0.19%	0.07%	0.05%
Wells Fargo Stable Return Fund J - WFSJ#	0.24%	0.69%	0.91%	0.80%	0.94%
3 Month T-Bill Index	0.15%	0.46%	0.49%	0.33%	0.36%
<u>Fixed Income Fund</u>					
PIMCO Real Return Admin - PARRX	1.34%	7.37%	6.42%	1.68%	1.73%
PIMCO Total Return Bond Fund - PTRAX <ON WATCH>	1.17%	4.99%	5.42%	3.25%	3.92%
Barclays Aggregate Bond Index	0.46%	5.80%	5.19%	4.03%	3.08%
Taxable Bond Fund Universe	1.95%	9.40%	8.80%	5.36%	5.14%
Prudential High Yield Z - PHYZX	5.33%	13.68%	11.62%	5.56%	8.14%
ML High Yield Bond Fund Index	5.49%	15.32%	12.82%	5.27%	8.24%
High Yield Bond Fund Universe	4.70%	11.45%	9.13%	3.76%	7.05%
Templeton Global Bond Adv - TGBAX	-1.27%	-1.54%	0.68%	-0.39%	2.99%
Citi World Govt Bond Index	0.30%	11.07%	9.71%	1.78%	0.77%
World Bond Fund Universe	1.48%	8.21%	7.60%	2.07%	2.42%
<u>Real Estate Fund</u>					
Cohen & Steers Realty Shares - CSRSX	-0.07%	9.57%	18.17%	14.37%	15.37%
FTSE NAREIT All Equity REITs Index	-1.43%	11.75%	19.86%	14.22%	15.91%
Real Estate Fund Universe	-0.89%	9.51%	16.66%	12.72%	14.56%
<u>Balanced Fund</u>					
T.Rowe Price Capital Appreciation - PACLX	2.65%	7.82%	12.64%	10.44%	14.23%
60% Large Cap Value Univ & 40% Taxable Bond Universe	3.00%	8.46%	11.37%	6.76%	10.47%
60% Russell 1000 Value & 40% Agg Bond Index	2.28%	8.32%	11.80%	7.43%	10.95%
<u>Large Cap Equities - Value</u>					
Hartford Dividend & Growth - HDGTX	3.33%	7.37%	14.16%	9.49%	14.82%
T.Rowe Price Equity Income - PRFDX <ON WATCH>	4.09%	11.15%	17.45%	6.63%	13.71%
Russell 1000 Value Index	3.50%	10.00%	16.20%	9.70%	16.20%
Large Cap Value Fund Universe	3.70%	7.84%	13.08%	7.70%	14.02%
<u>Large Cap Equities - Blend</u>					
Vanguard 500 Index - VFIAX	3.84%	7.81%	15.39%	11.12%	16.34%
Vanguard Dividend Growth Fund - VDIGX	0.81%	6.46%	13.73%	10.07%	14.70%
S&P 500 Index	3.85%	7.84%	15.43%	11.16%	16.37%
Large Cap Blend Fund Universe	3.80%	6.01%	12.03%	8.75%	14.71%
<u>Large Cap Equities - Growth</u>					
Wells Fargo Adv Growth Adm - SGRKX <ON WATCH>	6.07%	3.51%	10.17%	5.98%	13.62%
Russell 3000 Growth Index	4.92%	6.12%	13.64%	11.40%	16.56%
Franklin Growth Adv - FCGAX	5.74%	7.24%	12.85%	11.61%	15.70%
Russell 1000 Growth Index	4.60%	6.00%	13.80%	11.80%	16.60%
Large Cap Growth Fund Universe	5.59%	3.45%	10.46%	9.23%	14.98%
<u>Mid Cap Equities - Value</u>					
RidgeWorth Mid Cap Value Equity I - SMVTX	6.35%	11.48%	18.17%	7.99%	16.51%
Russell Mid Cap Value	4.45%	13.72%	17.26%	10.49%	17.38%
Mid Cap Value Fund Universe	5.05%	10.24%	13.24%	7.34%	14.92%
<u>Mid Cap Equities - Blend</u>					
Columbia Mid Cap Index A - NTIAX	4.01%	11.98%	14.77%	8.85%	15.97%
S&P Mid Cap 400	4.14%	12.40%	15.33%	9.35%	16.50%
ASTON/Fairpointe Mid Cap I - ABMIX	9.24%	9.86%	15.51%	5.87%	16.58%
Wilshire 4500 Index	7.08%	11.34%	14.79%	8.29%	16.61%
Mid Cap Blend Fund Universe	4.93%	7.90%	10.51%	6.69%	14.34%
<u>Mid Cap Equities - Growth</u>					
Prudential Jennison Mid Cap Growth Z - PEGZX	2.54%	3.20%	6.07%	5.73%	12.69%
Russell Mid Cap Growth	4.59%	6.84%	11.24%	8.90%	15.85%
Mid Cap Growth Fund Universe	4.81%	4.93%	8.41%	6.40%	13.89%
Fund Returns in RED do not meet both benchmarks. Fund Returns in BLACK meet both benchmarks.					

NDPERS Investment Benchmarks - 3rd Quarter 2016

	Quarter	Y-T-D	1-Year	3-Year	5-Year
Small Cap Equities - Value					
Allianz NFJ Small Cap Value - PVADX <ON WATCH>	5.49%	9.82%	10.61%	3.59%	11.04%
Russell 2000 Value Index	8.87%	15.49%	18.81%	6.77%	15.45%
Small Value Fund Universe	7.29%	12.26%	14.51%	5.72%	14.56%
Small Cap Equities - Blend					
DFA US Small Cap - DFSTX	7.00%	10.82%	13.82%	7.28%	16.84%
Russell 2000 Index	9.05%	11.46%	15.47%	6.71%	15.82%
Small Blend Fund Universe	6.97%	10.09%	13.05%	5.57%	14.53%
Small Cap Equities - Growth					
Brown Capital Mgmt Small Co Inv - BCSIX	8.36%	9.97%	20.10%	9.66%	18.56%
Russell 2000 Growth Index	9.20%	7.50%	12.10%	6.60%	16.10%
Small Growth Fund Universe	8.22%	7.39%	10.47%	5.09%	14.42%
International Equity Funds					
Mutual Global Discovery Z - MDISX	5.85%	6.17%	10.24%	5.13%	11.06%
Vanguard Total Intl Stock Index Inv - VTIAIX	6.65%	6.74%	9.66%	0.89%	6.78%
MSCI EAFE	6.91%	5.82%	9.26%	0.18%	6.04%
International Stock Fund Universe	5.42%	5.78%	10.57%	4.66%	10.83%
Oppenheimer Developing Markets Y - ODVYX	8.80%	12.94%	18.21%	-1.25%	4.95%
MSCI Emerging Markets Index	9.03%	16.02%	16.78%	-0.56%	3.03%
Diversified Emerging Mkts Universe	7.60%	14.34%	15.24%	-0.36%	3.68%
Asset Allocation Funds:					
TIAA-CREF Lifecycle Ret Income - TLIRX	2.98%	6.30%	8.18%	4.81%	7.23%
Income Benchmark	2.47%	6.27%	8.24%	4.99%	6.95%
TIAA-CREF Lifecycle 2010 - TCLEX	3.23%	6.41%	8.51%	5.12%	8.05%
2010 Benchmark	2.71%	6.48%	8.77%	5.25%	7.53%
TIAA-CREF Lifecycle 2015 - TCLIX	3.54%	6.48%	8.94%	5.42%	8.78%
2015 Benchmark	2.94%	6.68%	9.28%	5.50%	8.09%
TIAA-CREF Lifecycle 2020 - TCLTX	3.84%	6.51%	9.42%	5.69%	9.64%
2020 Benchmark	3.32%	6.93%	10.04%	5.85%	8.96%
TIAA-CREF Lifecycle 2025 - TCLFX	4.31%	6.51%	9.88%	5.97%	10.49%
2025 Benchmark	3.74%	7.28%	10.87%	6.22%	9.87%
TIAA-CREF Lifecycle 2030 - TCLNX	4.70%	6.54%	10.41%	6.19%	11.27%
2030 Benchmark	4.17%	7.63%	11.71%	6.58%	10.79%
TIAA-CREF Lifecycle 2035 - TCLRX	5.03%	6.50%	10.77%	6.34%	11.97%
2035 Benchmark	4.53%	7.78%	12.38%	6.87%	11.61%
TIAA-CREF Lifecycle 2040 - TCLOX	5.36%	6.30%	11.01%	6.37%	12.28%
2040 Benchmark	4.89%	7.92%	13.03%	7.14%	12.39%
TIAA-CREF Lifecycle 2045 - TTRFX	5.56%	6.50%	11.24%	6.40%	12.30%
2045 Benchmark	4.89%	7.92%	13.02%	7.13%	12.38%
TIAA-CREF Lifecycle 2050 - TLFrx	5.56%	6.50%	11.32%	6.44%	12.30%
2050 Benchmark	4.90%	7.92%	13.02%	7.13%	12.38%
TIAA-CREF Lifecycle 2055 - TTRLX	5.62%	6.54%	11.32%	6.42%	12.36%
2055 Benchmark	4.89%	7.92%	13.01%	7.12%	12.37%
TIAA-CREF Lifecycle 2060 - TTRLX	5.64%	6.66%	11.48%	N/A	N/A
2060 Benchmark	4.89%	7.92%	13.01%	7.12%	12.37%
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	4.29%	8.44%	15.35%	10.65%	16.31%
MSCI EAFE	6.91%	5.82%	9.26%	0.18%	6.04%
Barclays Aggregate Bond Index	0.46%	5.80%	5.19%	4.03%	3.08%
ML High Yield Bond Fund Index	5.49%	15.32%	12.82%	5.27%	8.24%
3 Month T-Bill Index	0.15%	0.46%	0.49%	0.33%	0.36%
Fund Returns in RED do not meet both benchmarks. Fund Returns in BLACK meet both benchmarks.					

NDPERS Mutual Fund Research - 9/30/2016

Large Value

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
Hartford Dividend & Growth	HDGTX	7.6 Billion	12/22/2006	Team	0.74%	1.50	23%	18.1	4-Stars	10	25	3.33%	14.16%	9.49%	14.82%	6.67%	98	0.96	-1.14	10.54	0.90
T.Rowe Price Equity Income	PRFDX	21.9 Billion	10/31/1985	1 years	0.66%	1.96	27%	18.9	3-Stars	76	63	4.09%	17.45%	6.63%	13.71%	5.67%	93	0.99	-4.01	11.10	0.62

Large Blend

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
T.Rowe Price Capital Appreciation (Balanced)	PACLX	26.6 Billion	3/6/1990	9 Years	1.01%	1.04	67%	24.0	5-Stars	1	1	2.65%	12.64%	10.44%	14.23%	8.22%				7.01	1.44
Vanguard 500 Index Signal	VFIAX	260.4 Billion	9/29/2006	1 Years	0.05%	1.98	3%	19.7	5-Stars	7	11	3.84%	15.39%	11.12%	16.34%	7.23%	100	1.00	-0.03	10.82	1.02
Vanguard Dividend Growth	VDIGX	33.3 Billion	2/1/2006	10 Years	0.33%	1.84	26%	22.1	4-Stars	31	53	0.81%	13.73%	10.07%	14.70%	8.44%	92	0.86	0.43	9.74	1.02

Large Growth

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
Wells Fargo Adv Growth Adm	SGRKX	5.8 Billion	8/30/2002	Team	0.96%	0.00	38%	33.5	4-Stars	94	88	6.07%	10.17%	5.98%	13.62%	11.05%	73	1.05	-5.09	13.39	0.49
Franklin Growth Adv	FCGAX	12.2 Billion	12/31/1996	Team	0.63%	0.87	5%	20.3	4-Stars	16	40	5.74%	12.85%	11.61%	15.70%	8.37%	94	0.92	1.26	10.27	1.11

Medium Value

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
RidgeWorth Mid Cap Value Equity I	SMVTX	3.1 Billion	11/30/2001	14 Years	1.12%	1.09	98%	18.5	4-Stars	50	32	6.35%	18.17%	7.99%	16.51%	9.34%	89	1.06	-3.46	12.19	0.68

Medium Blend

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
Columbia Mid Cap Index A	NTIAX	3.8 Billion	5/31/2000	Team	0.45%	0.93	20%	21.7	4-Stars	23	27	4.01%	14.77%	8.85%	15.97%	8.68%	79	0.95	-1.52	11.65	0.78
ASTON/Fairpointe Mid Cap I	ABMIX	3.5 Billion	7/6/2004	Team	0.86%	0.57	32%	15.3	3-Stars	63	15	9.24%	15.51%	5.87%	16.58%	9.96%	73	1.17	-6.29	14.88	0.45

Medium Growth

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
Prudential Jennison Mid Cap Growth Z	PEGZX	7.5 Billion	12/31/1996	10 Years	0.75%	0.00	45%	23.9	4-Stars	62	68	2.54%	6.07%	5.73%	12.69%	8.30%	81	0.98	-1.16	11.80	0.52

Small Value

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
Allianz NFJ Small Cap Value Admin	PVADX	3.6 Billion	11/1/1995	Team	1.07%	1.56	48%	18.1	3-Stars	80	91	5.49%	10.61%	3.59%	11.04%	7.26%	74	0.96	-6.49	12.07	0.34

Small Blend

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
DFA Small Cap	DFSTX	13.2 Billion	3/19/1992	Team	0.37%	1.06	11%	20.4	4-Stars	27	18	7.00%	13.82%	7.28%	16.84%	8.21%	68	1.03	-3.58	13.51	0.58

Small Growth

Fund	Symbol	Assets	Inception	Manager Tenure	Expense Ratio	Yield	Turnover	P/E	Morn-Star Rating	Category Rank		Average Return					Standard=S&P 500 Index			Standard	Sharpe
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha	Deviation	Ratio
Brown Capital Mgmt Small Co Inv	BCSIX	3.1 Billion	1/2/1996	Team	1.26%	0.00	22%	41.5	5-Stars	8	3	8.36%	20.10%	9.66%	18.56%	13.68%	57	1.03	-1.24	14.89	0.69

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
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha		
Mutual Global Discovery Z	MDISX	22.0 Billion	12/31/1992	Team	0.97%	1.60	22%	16.1	4-Stars	27	28	5.85%	10.24%	5.13%	11.06%	6.09%	93	0.86	0.61	10.12	0.53
Vanguard Total Intl Stock Index Inv	VTIAX	226.0 Billion	4/29/1996	7 Years	0.12%	2.77	6%	15.7	3-Stars	36	58	6.65%	6.74%	9.66%	0.89%	6.78%	98	0.95	0.68	12.13	0.12
Oppenheimer Developing Markets Y	ODVYX	30.6 Billion	9/7/2005	9	1.05%	0.66	36%	21.9	4-Stars	63	26	8.80%	18.21%	-1.25%	4.95%	6.73%	80	1.07	-1.15	15.23	-0.01

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
										3 - Year	5 - Year	3-month	1-Year	3-Year	5-Year	10-Year	R-Squared	Beta	Alpha		
Vanguard Treasury Money Market	VUSXX	131.6 Billion		12 Years	0.04%							0.06%	0.19%	0.07%	0.05%	0.85%				0.03	-3.33
Wells Fargo Stable Return Fund J	WFSJ	30.3 Billion	10/1/1985		1.05%							0.24%	0.91%	0.80%	0.94%	1.96%	N/A	N/A	N/A	N/A	N/A
PIMCO Real Return Bond Fund	PARRX	11.7 Billion	4/28/2000	8 Years	0.70%	0.71	102%		4-Stars	33	14	1.34%	6.42%	1.68%	1.73%	4.43%	N/A	N/A	N/A	4.81	0.35
PIMCO Total Return Bond Fund	PTRAX	84.4 Billion	9/8/1994	1 Year	0.71%	2.71	478%		4-Stars	77	31	1.17%	5.42%	3.25%	3.92%	5.72%	N/A	N/A	N/A	3.01	1.04
Vanguard Total Bond Market Index Fund	VBTLX	174.8 Billion	11/12/2001	3 Years	0.06%	2.42	11%		3-Stars	37	70	0.41%	5.31%	3.98%	3.00%	4.77%	N/A	N/A	N/A	2.76	1.39
Prudential High Yield Z	PHYZX	5.2 Billion	3/1/1996	Team	0.58%	6.42	48%		5-Stars	6	12	5.33%	11.62%	5.56%	8.14%	7.52%	N/A	N/A	N/A	5.70	0.96
Templeton Global Bond Adv	TGBAX	42.1 Billion	12/31/1996	Team	0.63%	3.05	43%		4-Stars	55	21	-1.27%	0.68%	-0.39%	2.99%	6.50%	N/A	N/A	N/A	5.94	-0.06
Cohen & Steers Realty Shares	CSRSX	5.9 Billion	7/2/1991	Team	0.98%	2.46	58%	37.0	4-Stars	11	20	-0.07%	18.17%	14.37%	15.37%	6.40%	N/A	N/A	N/A	14.66	0.98
TIAA-CREF Lifecycle Ret Income	TLIRX	422 Million	11/30/2007	Team	0.62%	2.09	18%	19.9	5-Stars	9	4	2.98%	8.18%	4.81%	7.23%	4.42%	N/A	N/A	N/A	5.15	0.92
TIAA-CREF Lifecycle 2010	TCLX	1.1 Billion	10/15/2004	Team	0.62%	1.80	19%	19.9	4-Stars	18	16	3.23%	8.51%	5.12%	8.05%	4.98%	N/A	N/A	N/A	5.67	0.89
TIAA-CREF Lifecycle 2015	TCLX	1.8 Billion	10/15/2004	Team	0.63%	1.76	18%	19.9	4-Stars	21	17	3.54%	8.94%	5.42%	8.78%	5.04%	N/A	N/A	N/A	6.25	0.86
TIAA-CREF Lifecycle 2020	TCLTX	3.2 Billion	10/15/2004	Team	0.65%	1.65	14%	19.9	4-Stars	14	10	3.84%	9.42%	5.69%	9.64%	5.02%	N/A	N/A	N/A	7.05	0.81
TIAA-CREF Lifecycle 2025	TCLFX	3.3 Billion	10/15/2004	Team	0.66%	1.60	11%	19.9	4-Stars	22	16	4.31%	9.88%	5.97%	10.49%	5.04%	N/A	N/A	N/A	7.95	0.76
TIAA-CREF Lifecycle 2030	TCLNX	3.2 Billion	10/15/2004	Team	0.67%	1.55	12%	19.9	4-Stars	21	11	4.70%	10.41%	6.19%	11.27%	4.99%	N/A	N/A	N/A	8.91	0.71
TIAA-CREF Lifecycle 2035	TCLRX	3.2 Billion	10/15/2004	Team	0.68%	1.40	11%	19.9	4-Stars	30	15	5.03%	10.77%	6.34%	11.97%	5.13%	N/A	N/A	N/A	9.71	0.67
TIAA-CREF Lifecycle 2040	TCLOX	4.1 Billion	10/15/2004	Team	0.69%	1.27	11%	19.9	3-Stars	29	10	5.36%	11.01%	6.37%	12.28%	5.35%	N/A	N/A	N/A	10.51	0.63
TIAA-CREF Lifecycle 2045	TFRX	1.8 Billion	11/30/2007	Team	0.70%	1.56	8%	19.9	4-Stars	34	16	5.56%	11.24%	6.40%	12.30%	N/A	N/A	N/A	N/A	10.55	0.63
TIAA-CREF Lifecycle 2050	TFRX	1.1 Billion	11/30/2007	Team	0.70%	1.56	9%	19.9	4-Stars	33	12	5.56%	11.32%	6.44%	12.30%	N/A	N/A	N/A	N/A	10.60	0.63
TIAA-CREF Lifecycle 2055	TTRLX	250 Million	4/29/2011	Team	0.70%	1.51	24%	19.9	4-Stars	38	26	5.62%	11.32%	6.42%	12.36	N/A	N/A	N/A	N/A	10.61	0.63
TIAA-CREF Lifecycle 2060	TLRX	17 Million	9/26/2014	Team	0.70%	1.63	54%	N/A	N/A	N/A	N/A	5.64%	11.48%	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.

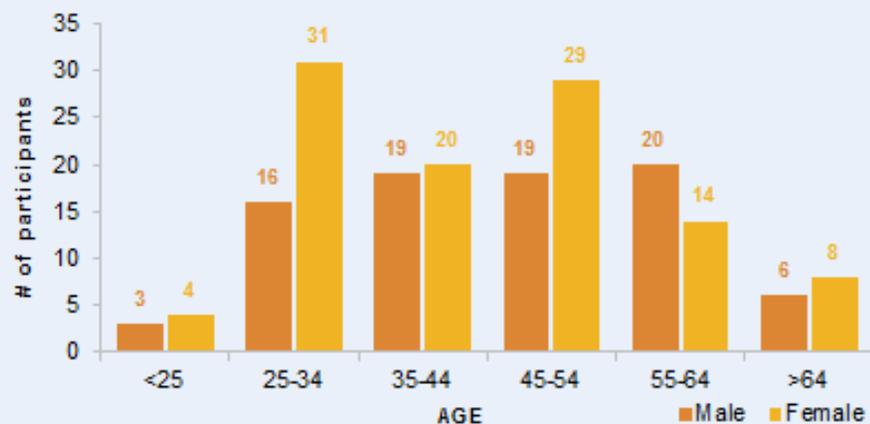
Alpha - This is a measure of risk-adjusted performance. The higher a fund's alpha, the better it has done. A fund's alpha is only reliable when its R-squared is relatively high.

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.

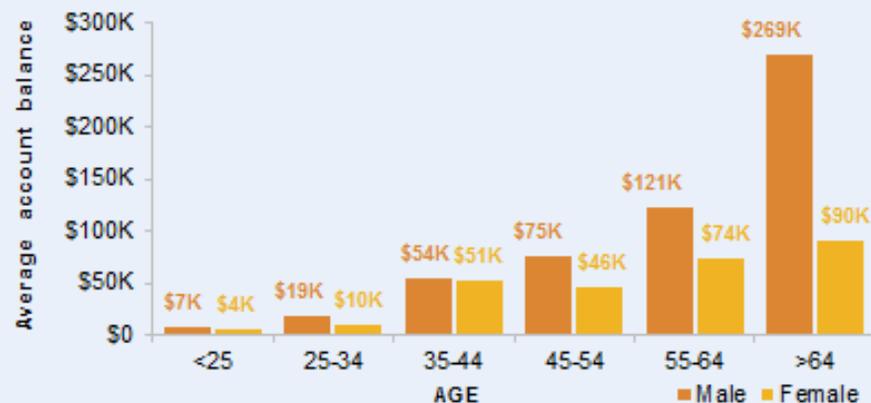
Sharpe Ratio - This measure combines standard deviation and mean total return to show a risk-adjusted measure of the fund's performance. The higher this number is, the better. As a rule of thumb, a Sharpe ratio of more than 1.00 is very good.

401(a)	Assets	Pct
TIAA-CREF Lifecycle 2025 Fund Retirement	\$1,389,517	12.3%
TIAA-CREF Lifecycle 2030 Fund Retirement	\$1,210,641	10.7%
TIAA-CREF Lifecycle 2020 Fund Retirement	\$1,036,880	9.2%
TIAA-CREF Lifecycle 2035 Fund Retirement	\$965,302	8.5%
TIAA-CREF Lifecycle 2010 Fund Retirement	\$796,382	7.0%
Vanguard 500 Index Fund Admiral	\$508,453	4.5%
TIAA-CREF Lifecycle 2040 Fund Retirement	\$418,572	3.7%
Wells Fargo Growth Fund Administrator	\$373,890	3.3%
Vanguard Total International Stock Index Fund Admiral	\$358,080	3.2%
Wells Fargo Stable Return Fund - J	\$319,812	2.8%
T. Rowe Price Capital Appreciation Fund Advisor	\$317,907	2.8%
PIMCO Total Return Fund Admin	\$305,119	2.7%
TIAA-CREF Lifecycle 2050 Fund Retirement	\$281,336	2.5%
Self Directed Brokerage Account	\$277,246	2.5%
TIAA-CREF Lifecycle 2045 Fund Retirement	\$272,436	2.4%
AllianzGI NFJ Small Cap Value Fund Administrative	\$217,024	1.9%
Cohen & Steers Realty Shares	\$211,951	1.9%
Prudential High Yield Fund Z	\$202,037	1.8%
Franklin Mutual Global Discovery Fund Z	\$184,535	1.6%
Brown Capital Management Small Company Fund Institutional	\$181,452	1.6%
Franklin Growth Fund Advisor	\$169,259	1.5%
TIAA-CREF Lifecycle 2015 Fund Retirement	\$161,576	1.4%
TIAA-CREF Lifecycle 2055 Fund Retirement	\$141,354	1.2%
Hartford Dividend and Growth Fund R5	\$126,532	1.1%
T. Rowe Price Equity Income Fund	\$116,587	1.0%
Templeton Global Bond Fund Advisor	\$101,178	0.9%
RidgeWorth Ceredex Mid Cap Value Equity Fund I	\$95,488	0.8%
	\$89,278	0.8%
Prudential Jennison Mid-Cap Growth Fund Z	\$72,855	0.6%
Oppenheimer Developing Markets Fund Y	\$72,398	0.6%
PIMCO Real Return Fund Administrative	\$64,055	0.6%
Vanguard Dividend Growth Fund Investor	\$62,049	0.5%
DFA U.S. Small Cap Portfolio Institutional	\$57,174	0.5%
Vanguard Admiral Treasury Money Market Fund Investor	\$56,109	0.5%
Columbia Mid Cap Index Fund A	\$52,125	0.5%
Vanguard Total Bond Market Index Fund Admiral	\$36,811	0.3%
TIAA-CREF Lifecycle 2060 Fund Retirement	\$5,400	0.0%
TIAA-CREF Lifecycle Retirement Income Fund Retirement	\$0	0.0%
TIAA-CREF Money Market Fund Retirement	\$0	0.0%
Total	\$11,308,799	100.0%

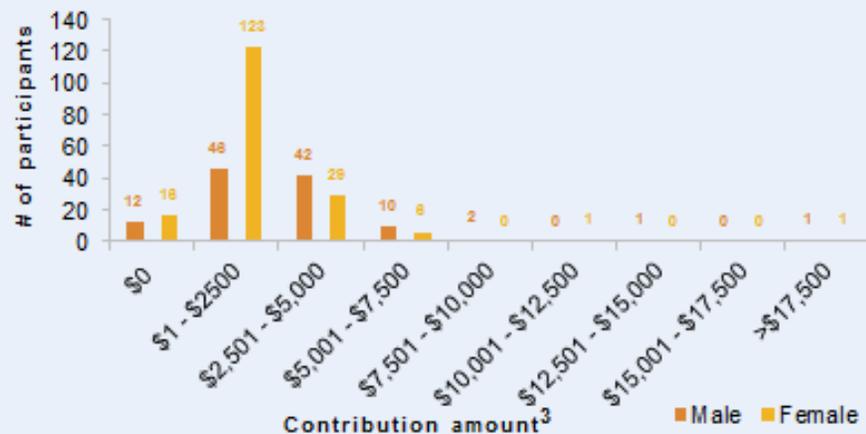
Demographics by age and gender



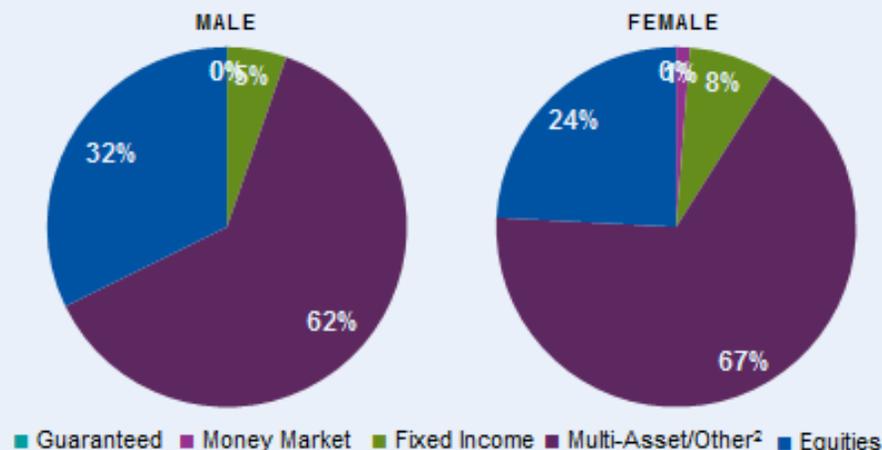
Average account balance by age and gender



Employee contribution amounts by gender

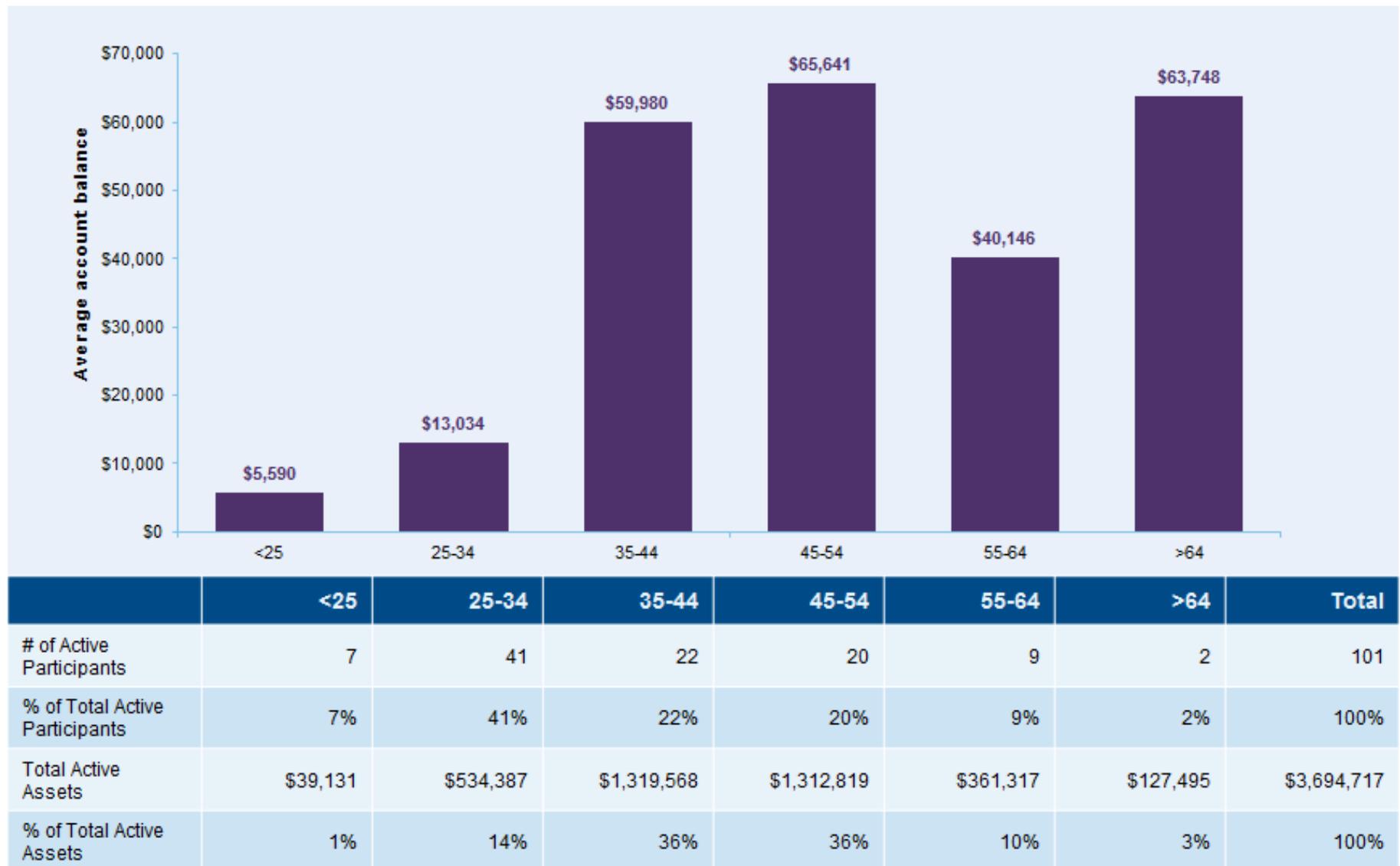


Diversification by gender



This report is as of the period ending 09/30/2016 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. 1. Data reflected is for all participant statuses except Employee Contribution Amounts by Gender which includes only active or leave status. Does not include 2 participants with no age or gender on file. 2. Multi-Asset/Other includes Lifecycle, Real Estate, and Brokerage. 3. Contribution data reflects the trailing 12 months of data.

Active participants: Average account balance by age



This report is as of the period ending 09/30/2018 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.