

# Fairfax County Public Schools | Fourth Quarter 2016

# **Presentation Materials**

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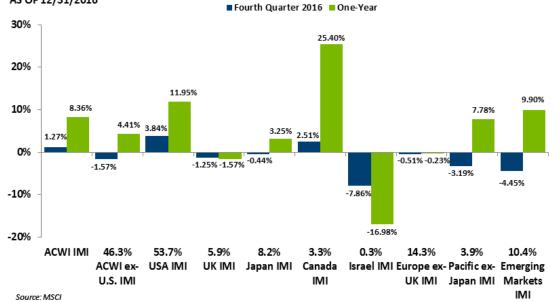
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#### **Global Equity Markets**

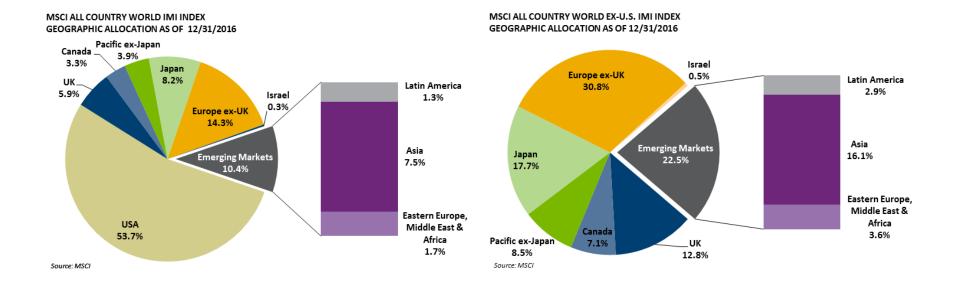


GLOBAL MSCI IMI INDEX RETURNS AS OF 12/31/2016

- Global equity markets rose against a backdrop of political uncertainty in the form of the US Presidential elections, Italian constitutional referendum and ongoing Brexit discussions. Markets entered positive territory towards the end of the quarter on the hopes of Trump's fiscal reforms policies and rising crude oil prices.
- Global equity markets returned 1.27% in Q4 2016 with only US and Canada regions generating positive returns. US was the best performing market with a return of 3.84% over the quarter as strong Q3 2016 GDP data and growing inflation expectations over promises of greater fiscal spending under Trump's administration supported equities. The US Federal Reserve (Fed) raised the federal fund rate target by 25bps to 0.50-0.75% and indicated a faster pace of tightening in 2017.



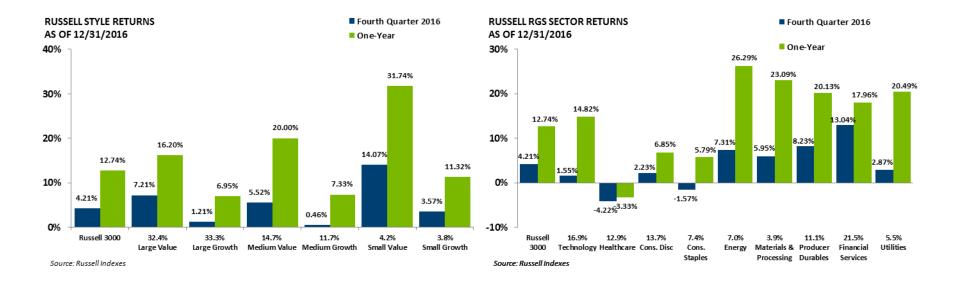
## **Global Equity Markets**



 The two exhibits on this slide illustrate the percentage that each country/region represents of the global equity market as measured by the MSCI All Country World IMI Index and the MSCI All Country World ex-U.S. IMI Index.



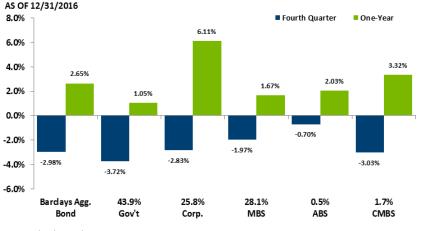
### U.S. Equity Markets



- The Russell 3000 Index returned 4.21% during the fourth quarter and returned 12.74% over the one-year period.
- During the fourth quarter, the financial services sector was the strongest performer, posting returns of 13.04%. The healthcare and consumer staples sectors were the weakest performers, with returns of -4.22% and -1.57% respectively.
- Performance across the market capitalization spectrum was positive over the quarter. Small cap stocks outperformed the other segments in Growth and Value stocks. Value stocks continued their outperformance relative Growth stocks over 2016 across the capitalizations.

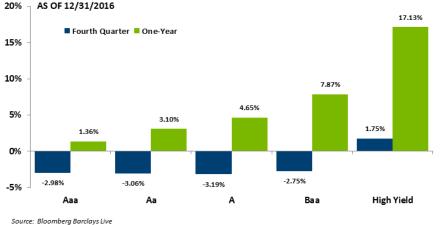


#### U.S. Fixed Income Markets



BLOOMBERG BARCLAYS AGGREGATE RETURNS BY SECTOR

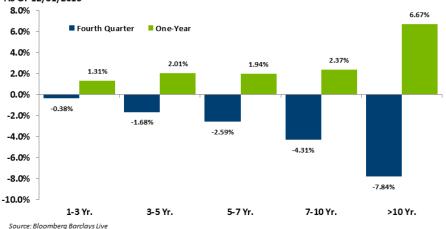
# BLOOMBERG BARCLAYS AGGREGATE RETURNS BY QUALITY AND HIGH YIELD RETURNS



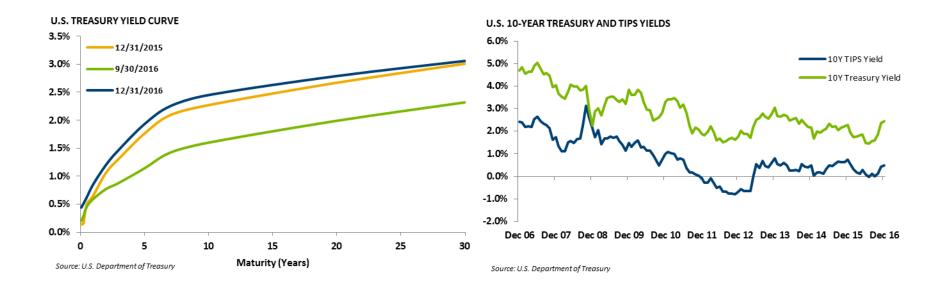
Source: Bloomberg Barclays Live

- The Bloomberg Barclays Aggregate Bond Index fell 2.98% in the fourth quarter. ABS bonds fell by the least with a return of -0.70% whilst Government bonds fell by the most, returning -3.72%.
- High yield bonds outperformed all investment grade corporate bonds, as high yield spreads fell by 71bps (according to the Bloomberg Barclays Live indices).
- Shortest duration bonds outperformed all other bonds in different maturities. This particularly benefitted high yield bonds which typically have low duration.

#### BLOOMBERG BARCLAYS AGGREGATE RETURNS BY MATURITY AS OF 12/31/2016

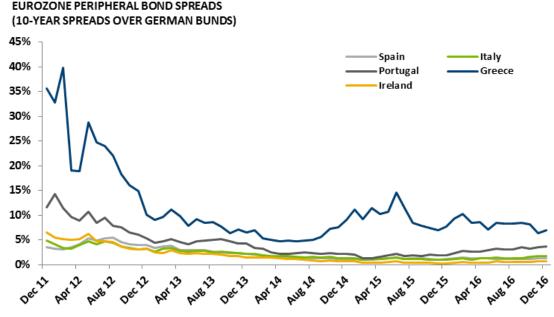






- The Treasury yield curve shifted upwards over the fourth quarter with yields rising across the curve. The yield curve also steepened over the quarter, driven by long maturity bonds rising faster than short maturity bonds.
- The Fed's decision to increase the target federal funds range by 25bps to 0.5-0.75% alongside higher breakeven inflation drove yields higher.
- The 10-year U.S. Treasury yield ended the quarter at 2.45%, 85 basis points higher than its level at the beginning of the quarter.
- The 10-year TIPS yield rose by 50 basis points over the quarter and ended the period at 0.50%.





Source: DataStream

- In the Eurozone, government bond yields rose across the region with the exception of Greece. Bond spreads widened as the peripheral government bond yields rose at a faster pace than the core government bond yields. German bund yields moved into positive territory after several months of negative yields, and ended the quarter at 0.11%.
- Portuguese bond yields continued to rise due to concerns over the government's finances (the European Commission warned Portugal's 2017 draft budget for non-compliance issues) and a weakening of the economy.
- Italian government bond yields rose sharply as concerns over the rescue of the debt-heavy major bank Monte dei Paschi di Siena and Italian referendum weighed heavily on the European bond market. However, the Italian government's intervention to rescue the struggling banking sector towards the end of the quarter failed to stop the bond rout.
- Greek bond yields fell on the hopes of debt relief measures. However, this was later put on hold by the country's creditors following the government's decision to spend additional funds on pensions.

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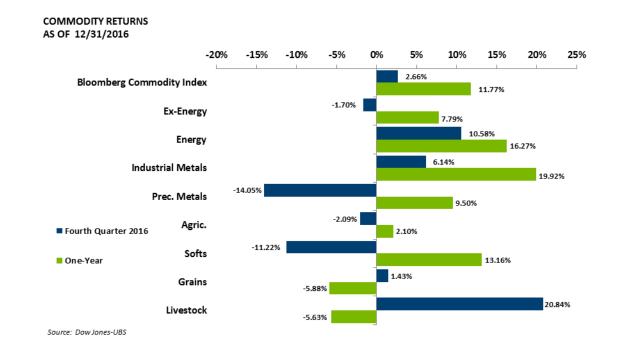
## **Credit Spreads**

Spread (bps)	12/31/2016	9/30/2016	12/31/2015	Quarterly Change (bps)	1-Year Change (bps)
U.S. Aggregate	43	47	56	-4	-13
Long Gov't	3	3	4	0	-1
Long Credit	167	195	225	-28	-58
Long Gov't/Credit	104	118	138	-14	-34
MBS	15	14	24	1	-9
CMBS	75	84	121	-9	-46
ABS	59	55	72	4	-13
Corporate	123	138	165	-15	-42
High Yield	409	480	660	-71	-251
Global Emerging Markets	288	299	389	-11	-101

Source: Barclays Live

- During the fourth quarter, credit spreads were mixed across all the areas of the bond market.
- ABS bonds spreads (4 basis points) rose by the most over the quarter, followed by MBS bonds (1 basis point), whereas high yield spreads (-71 basis points) and long-dated credit (-28 basis points) fell by the most over the quarter.

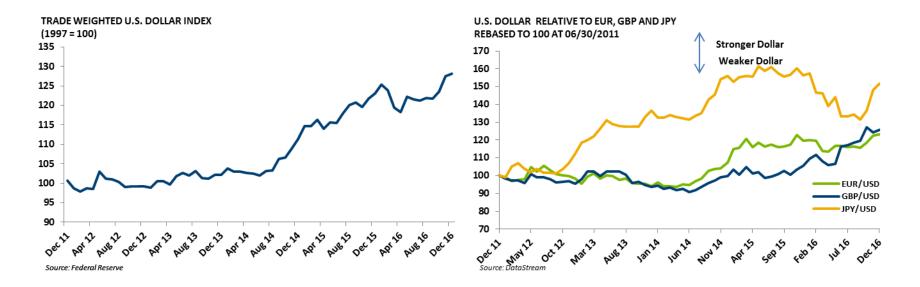
#### Commodities



- The Bloomberg Commodity Index rose during the fourth quarter, returning 2.66%.
- Over the quarter, the best performing segment was Livestock with a return 20.84%, followed by the Energy sector which returned 10.58%.
- Precious Metals was the worst performing sector during the quarter with a return of -14.05%.



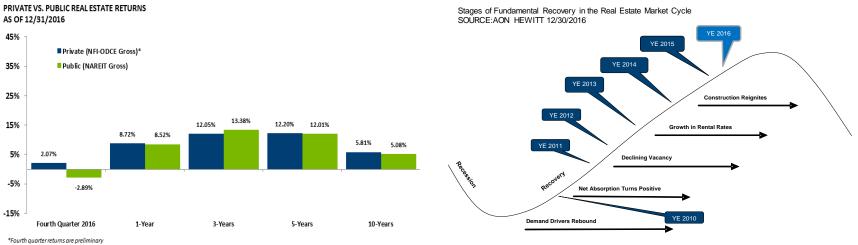
#### Currency



- As measured through the broad trade weighted U.S. dollar index, the U.S. dollar rose sharply over the quarter.
- The US dollar appreciated sharply against all major currencies as expectations of greater fiscal spending and increased number of future interest rate hikes led to significant US dollar inflows. The pound was dragged down by worries over the possibility of a hard-Brexit. The yen depreciated sharply against the dollar owing to the divergent monetary policy stances by the two central banks.



#### **U.S. Commercial Real Estate Markets**



Sources: NCREIF, NAREIT

- U.S. private market real estate performed well on a relative basis in 2016, despite its clear moderating trend following five years of above average performance. The NFI-ODCE is now performing back in line with the sector's long term average, registering 8.72%\* for the calendar year. Income growth for the year (4.48%)\* outpaced appreciation (4.09%)\* as expected, illustrating that income growth has become the larger driver of sector returns at this mature point in the real estate cycle. We expect these trends to continue in 2017.
- The U.S. REIT sector posted similar gains for the year, up 8.5% (FTSE NAREIT Equity REIT Index), but it was a bumpy road with elevated volatility quarter to quarter. In the fourth quarter REITs declined by 2.9%; this was led by interest rate concerns and mid-quarter jitters over the U.S. presidential election. Post-election enthusiasm for better economic growth appeared to buoy the sector as it rallied ahead of the broader equity markets late in the quarter. U.S. REITs ended the year trading at an approximate 1.5% premium to NAVs, although excluding the health care and net lease sectors, the REIT sector ended the year at an approximate 4% discount to private market valuations.
- Capital flows were robust throughout 2016, exceeding \$100bn in final closings for the fourth year in a row. Current signs indicate that the asset class should continue to attract significant levels of
  new capital in 2017. Notable trends in 2016 included a significant increase in average Fund size, while the number of final closings fell. There was increased investment in Real Estate Debt
  funds, while capital closed for Opportunistic funds fell significantly.
- Dry powder for higher risk investments currently stands at an all time peak. While this should help support current sector pricing for a bit longer, moderating trends in underlying fundamentals (for example rent growth), supply-demand balance, interest rates, and economic tailwinds raise investment risk levels at this mature point in the cycle. The outcome of the U.S. election and Brexit, as well as other potential leadership changes in Europe, have also added further risk in relation to political uncertainty globally. To-date, U.S. real estate has not illustrated any fundamental adjustments from these cumulative factors with the exception of a handful of firms with international exposure; if anything, the U.S. continues to benefit as a global safe(r) haven.
- As we enter 2017, the U.S. real estate cycle is mature, and thus more susceptible to bumps along the road. While solid income returns are forecasted to continue to support attractive relative returns against many other asset classes, portfolio construction consideration is essential. At this point in the cycle, appropriate risk mitigation measures should be a staple in all investment portfolios as new investments will likely be required to ride out a cyclical downturn.

\*Indicates preliminary NFI-ODCE data gross of fees



This report has been prepared by Aon Hewitt Investment Consulting (AHIC) to provide Fairfax County Public Schools with an objective, third party review of the historical investment results of the 457(b) Plan.

#### Asset Allocation

The Fairfax County Public Schools 457(b) Plan currently offers 8 investment options and a series of lifecycle funds. As of December 31, 2016, the Plan had 1 guaranteed interest fund, 1 fixed income fund, 1 inflation-sensitive solution, 2 passivelymanaged domestic equity funds, 2 actively-managed domestic equity funds, 1 actively-managed foreign equity fund and a series of actively managed target date funds. The two passively-managed domestic equity funds cover the following asset classes: large cap core and mid cap core. The two actively-managed domestic equity funds cover the following asset classes: large cap core and mid cap growth. Participants may allocate their investments among the funds in accordance with their own personal tolerance for risk. As of December 31, 2016, the assets of the Plan totaled \$181.9 million. The Plan held 16.6% of assets in the guaranteed interest product, 10.5% in fixed income, 55.7% in domestic equity, 8.7% in foreign equity and 7.5% in target date funds. The Plan's asset allocation by fund is detailed later in this report.

#### **Plan Performance**

During the fourth quarter of 2016, global equity markets rose against a backdrop of political uncertainty in the form of the U.S. Presidential elections, Italian constitutional referendum and ongoing Brexit discussions. Markets entered positive territory towards the end of the quarter on the hopes of Trump's fiscal reforms policies and rising crude oil prices. Domestically, the Russell 3000 Index returned 4.21% during the quarter. Sector results were mostly positive during the fourth quarter with the exception of health care and consumer staples, which were down -4.22% and -1.57%, respectively. The top performing sector of the market was financial services, returning 13.04%. Performance was positive across all of the capitalization levels during the quarter. Value outperformed growth in all capitalization levels. During the fourth quarter, the developed non-U.S. equity markets had slightly negative results with the MSCI EAFE Index generating a return of -0.71%. Emerging markets lagged developed non-U.S. markets; the MSCI Emerging Markets Index returned -4.16%. The domestic fixed income market, as represented by the Bloomberg Barclays Aggregate Bond Index, posted a return of -2.98% for the quarter. The strongest performing segment of the domestic bond market was ABS bonds, which returned -0.70% for the quarter. Government bonds continued to represent the worst performing sector during the quarter, with a return of -3.72%. Overall, the global fixed income market underperformed their shorter fixed income market, as measured by the Citigroup Non-U.S. WGBI, which returned -10.84% for the quarter.



### **Plan Performance (continued)**

Against this backdrop, the Plan's options had mixed results on a relative basis. Performance for the Plan's passive strategies closely tracked their target benchmarks.

Longer-term relative performance of most of the Plan's active investments also had mixed results for the ten-year period ending December 31, 2016. Allowing for the expense ratios of the funds, both of the Plan's index options successfully tracked their target Indices for the quarter as well as for longer periods.

## **Quarterly Fund Attribution**

- PIMCO Total Return Fund <u>outperformed</u> during the quarter
  - + U.S. TIPS held in lieu of nominal treasuries
  - + Certain positions in non-Agency MBS and high yield corporates
  - U.S. rate strategies, including duration, curve positioning and instrument selection
- PIMCO Inflation Response Multi-Asset Fund *outperformed* its benchmark during the quarter
  - + Commodity allocations relative to the index
  - + U.S. nominal interest rate strategies
  - + Select exposures to developed and emerging market currencies
- Baron Growth Fund <u>underperformed</u> during the quarter
  - Stock selection in the technology, health care, and telecommunication sectors
  - + Stock selection in financials, consumer discretionary, and real estate

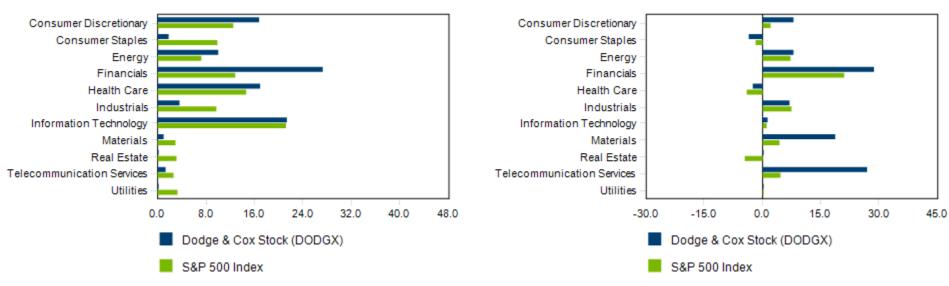


# Fairfax\_County Public Schools – Notable Performance

### **Quarterly Fund Attribution (continued)**

Allocation

- Dodge & Cox Stock Fund <u>significantly outperformed</u> during the quarter
  - + Stock selection in the financial and consumer discretionary sectors
    - -Goldman Sachs (+49%), Bank of America (+42%), and Time Warner Inc. (+22%) were among the best performers
  - + Overweight to financial sector relative to benchmark
    - -Financials were best performing sector in S&P 500; Dodge & Cox held a significant overweight in this sector (30% vs. 14% for benchmark)
  - + Underweight position in consumer staples sector (2% vs. 10% for the benchmark), which was a relatively weaker sector. -Specifically, minimal exposure to Utilities or Real Estate sectors, which were weak performers.



#### Performance



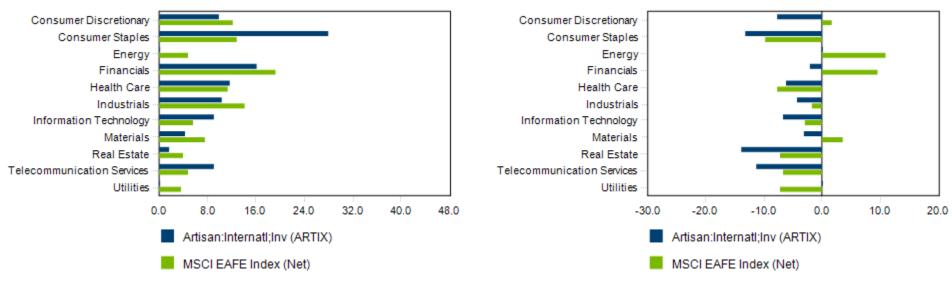
# Fairfax County Public Schools – Notable Performance

### **Quarterly Fund Attribution (continued)**

- Artisan International Fund <u>significantly underperformed</u> during the quarter
  - Overweight to consumer nondurables
    - Japan Tobacco, Unilever, and Nestle were weak performers
  - Stock selection in health care

Allocation

- Medtronic (3% of portfolio) was largest detractor in the fourth quarter (-17%)
- Risk-off approach to equity market
- Lack of meaningful exposure to strong performing sectors, particularly cyclical commodities



#### Performance



# Financial Reconciliation

## (\$000)

	Market Value As of 10/01/2016	Net Transfers	Contributions	Distributions	Capital Apprec./ Deprec.	Market Value As of 12/31/2016
U.S. FIXED INCOME						
Great West Portfolio Fund	29,210.94	992.55	560.20	-750.47	144.49	30,157.70
PIMCO Total Return Adm	19,455.69	-132.80	312.67	-229.66	-487.17	18,918.74
PIMCO Inflation Response MultiAsst Inst	154.07	19.95	5.80	-1.15	-2.24	176.42
TARGET DATE						
T. Rowe Price Retirement 2005	424.04	-23.80	9.84	-0.02	-3.64	406.42
T. Rowe Price Retirement 2010	394.72	-	3.87	-	-2.57	396.02
T. Rowe Price Retirement 2015	1,768.57	-45.47	30.13	-0.20	-3.29	1,749.74
T. Rowe Price Retirement 2020	3,248.92	20.42	60.23	-47.43	-6.32	3,275.81
T. Rowe Price Retirement 2025	2,578.23	10.86	87.99	-86.28	-0.35	2,590.46
T. Rowe Price Retirement 2030	999.62	43.62	77.41	-	2.66	1,123.30
T. Rowe Price Retirement 2035	1,882.11	-24.49	114.70	-10.31	8.24	1,970.25
T. Rowe Price Retirement 2040	628.71	25.48	174.08	-73.67	5.06	759.67
T. Rowe Price Retirement 2045	479.71	46.40	41.70	-	3.77	571.57
T. Rowe Price Retirement 2050	337.88	11.92	18.15	-	2.77	370.73
T. Rowe Price Retirement 2055	308.31	11.92	23.44	-1.56	2.63	344.73
U.S. EQUITY						
BlackRock S&P 500 Stock	23,828.78	27.45	574.31	-328.70	898.38	25,000.22
Dodge & Cox Stock	21,948.05	36.48	308.65	-227.16	2,354.33	24,420.35
Vanguard Mid Cap Index	27,628.82	-439.80	503.36	-277.61	609.08	28,023.85
Baron Growth Inst	24,284.44	-458.72	414.26	-274.45	-26.29	23,939.25
INTERNATIONAL EQUITY						
Artisan International Inv	17,341.84	-121.98	334.90	-220.62	-1,461.77	15,872.39
OTHER						
Loan Fund	1,519.85	-	165.19	-178.44	15.79	1,522.38
Forfeiture Account	295.93	-	20.21	-	-	316.14
Total 457(b) Plan	178,719.25	-	3,841.07	-2,707.71	2,053.55	181,906.15



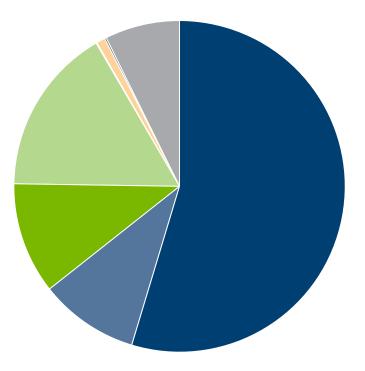
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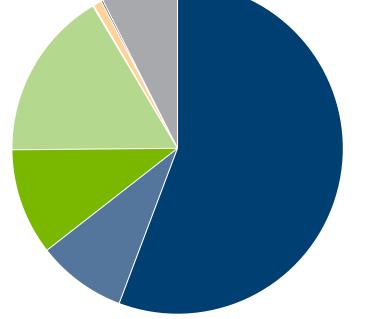
Asset Allocation by Segment

## 457(b) Plan

September 30, 2016 : \$178,719,247

December 31, 2016 : \$181,906,149



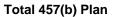


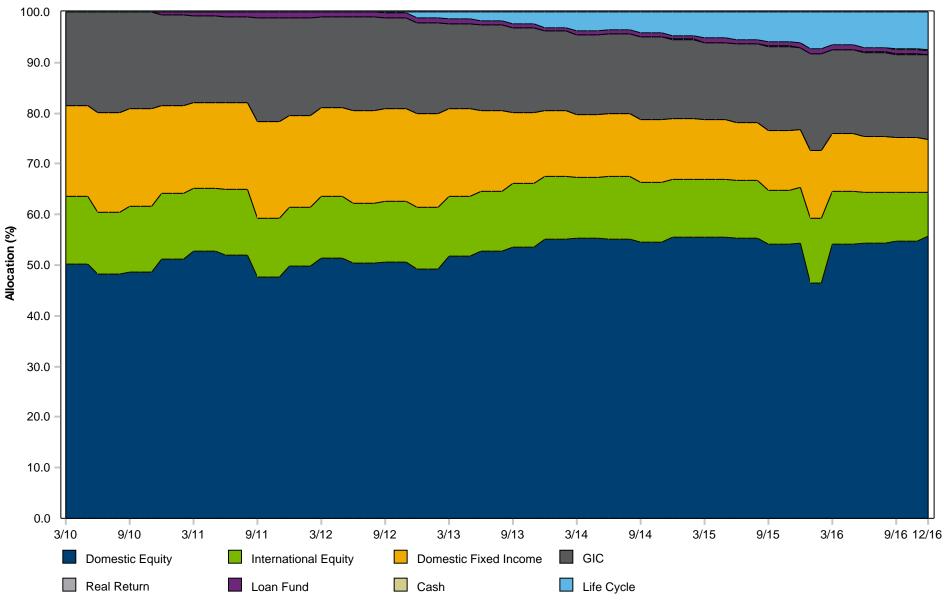
Segments	Market Value (\$)	Allocation (%)
Domestic Equity	97,690,095.80	54.66
International Equity	17,341,844.58	9.70
Domestic Fixed Income	19,455,694.34	10.89
GIC GIC	29,210,943.98	16.34
Real Return	154,065.63	0.09
Loan Fund	1,519,849.60	0.85
Cash	295,934.83	0.17
Life Cycle	13,050,817.84	7.30

Segments	Market Value (\$)	Allocation (%)
Domestic Equity	101,383,672.68	55.73
International Equity	15,872,387.06	8.73
Domestic Fixed Income	18,918,735.78	10.40
GIC GIC	30,157,704.45	16.58
Real Return	176,423.64	0.10
Loan Fund	1,522,384.81	0.84
Cash	316,144.31	0.17
Life Cycle	13,558,696.12	7.45



## **Historical Asset Allocation by Segment**







## **Asset Allocation & Performance**

	Allocati	on	Performance(%)					
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years
Total 457(b) Plan	181,906.15	100.00						
U.S. Fixed Income	49,252.86	27.08						
Great West Portfolio Fund	30,157.70	16.58	0.48	1.98	1.95	1.90	2.10	2.47
50% B Bar Int. Agg/50% 90 day T-Bill			-0.99	1.12	1.27	1.02	1.60	2.38
90 Day U.S. Treasury Bill			0.07	0.25	0.11	0.09	0.10	0.77
PIMCO Total Return Adm	18,918.74	10.40	-2.54 (34)	2.34 (78)	2.40 (82)	2.95 (28)	3.87 (54)	5.36 (3)
Blmbg. Barc. U.S. Aggregate			-2.98 (72)	2.65 (62)	3.03 (44)	2.23 (68)	3.63 (62)	4.34 (52)
PIMCO Inflation Response MultiAsst Inst	176.42	0.10	-1.35 (76)	10.53 (19)	1.53 (65)	0.79 (95)	-	-
PIMCO IRMA Benchmark			-2.78 (88)	13.89 (12)	1.73 (61)	-0.53 (95)	1.98 (97)	2.43 (89)
Target Date	13,558.70	7.45						
TRP Retirement 2005	406.42	0.22	-0.86 (61)	6.72 (25)	3.52 (28)	6.27 (20)	6.29 (18)	4.71 (31)
TRP Retirement 2005 Index			-0.34 (40)	5.84 (41)	3.71 (20)	6.06 (27)	6.11 (21)	4.34 (45)
TRP Retirement 2010	396.02	0.22	-0.66 (77)	7.11 (9)	3.72 (12)	7.03 (6)	6.86 (8)	4.76 (1)
TRP Retirement 2010 Index			-0.10 (18)	6.27 (44)	3.92 (9)	6.81 (14)	6.72 (11)	4.47 (5)
TRP Retirement 2015	1,749.74	0.96	-0.34 (64)	7.31 (12)	3.98 (29)	8.06 (1)	7.61 (1)	5.04 (-)
TRP Retirement 2015 Index			0.26 (12)	6.91 (32)	4.26 (3)	7.84 (4)	7.51 (1)	4.74 (-)
TRP Retirement 2020	3,275.81	1.80	-0.20 (56)	7.41 (18)	4.19 (10)	8.96 (1)	8.24 (1)	5.19 (1)
TRP Retirement 2020 Index			0.66 (8)	7.62 (10)	4.57 (1)	8.73 (2)	8.17 (1)	4.92 (3)
TRP Retirement 2025	2,590.46	1.42	-0.01 (57)	7.55 (20)	4.35 (14)	9.75 (3)	8.75 (2)	5.32 (-)
TRP Retirement 2025 Index			1.03 (9)	8.21 (9)	4.83 (1)	9.52 (3)	8.71 (3)	5.06 (-)
TRP Retirement 2030	1,123.30	0.62	0.24 (65)	7.69 (47)	4.52 (15)	10.43 (3)	9.21 (3)	5.45 (1)
TRP Retirement 2030 Index			1.39 (9)	8.80 (10)	5.03 (1)	10.20 (3)	9.18 (3)	5.18 (1)
TRP Retirement 2035	1,970.25	1.08	0.39 (76)	7.64 (67)	4.56 (31)	10.87 (3)	9.48 (1)	5.52 (-)
TRP Retirement 2035 Index			1.68 (11)	9.21 (14)	5.14 (1)	10.68 (4)	9.48 (1)	5.28 (-)



## **Asset Allocation & Performance**

	Allocatio	on			Perform	ance(%)		
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years
TRP Retirement 2040	759.67	0.42	0.55 (75)	7.63 (67)	4.61 (34)	11.12 (3)	9.65 (1)	5.64 (1)
TRP Retirement 2040 Index			1.96 (11)	9.58 (15)	5.24 (1)	10.95 (4)	9.67 (1)	5.41 (7)
TRP Retirement 2045	571.57	0.31	0.59 (84)	7.69 (71)	4.62 (30)	11.14 (6)	9.65 (1)	5.65 (-)
TRP Retirement 2045 Index			2.05 (11)	9.70 (13)	5.28 (1)	10.98 (8)	9.69 (1)	5.42 (-)
TRP Retirement 2050	370.73	0.20	0.67 (77)	7.71 (69)	4.65 (35)	11.14 (7)	9.67 (1)	5.65 (-)
TRP Retirement 2050 Index			2.05 (10)	9.70 (17)	5.28 (5)	10.98 (8)	9.69 (1)	5.42 (-)
TRP Retirement 2055	344.73	0.19	0.68 (82)	7.73 (76)	4.64 (30)	11.14 (10)	9.67 (-)	5.64 (-)
TRP Retirement 2055 Index			2.05 (10)	9.70 (16)	5.28 (3)	10.98 (16)	9.69 (-)	5.42 (-)
U.S. Equity	101,383.67	55.73						
BlackRock S&P 500 Stock	25,000.22	13.74	3.83 (6)	11.92 (17)	8.82 (12)	14.57 (21)	12.73 (19)	6.86 (16)
S&P 500 Index			3.82 (12)	11.96 (7)	8.87 (1)	14.66 (1)	12.83 (1)	6.95 (4)
Dodge & Cox Stock	24,420.35	13.42	10.71 (1)	21.28 (1)	8.55 (23)	17.01 (1)	13.24 (10)	5.93 (61)
S&P 500 Index			3.82 (47)	11.96 (31)	8.87 (12)	14.66 (22)	12.83 (17)	6.95 (30)
Vanguard Mid Cap Index	28,023.85	15.41	2.13 (64)	11.23 (55)	7.68 (30)	14.38 (31)	13.41 (24)	7.69 (33)
Vanguard Spliced Mid Cap Index			2.14 (64)	11.25 (55)	7.72 (29)	14.42 (30)	13.44 (23)	7.70 (32)
Baron Growth Inst	23,939.25	13.16	-0.08 (64)	6.31 (39)	2.20 (83)	11.56 (55)	11.78 (39)	-
Baron Growth Rtl			-0.14 (65)	6.04 (43)	1.94 (86)	11.27 (61)	11.50 (49)	6.43 (60)
Russell Midcap Growth Index			0.46 (49)	7.33 (31)	6.23 (24)	13.51 (27)	12.93 (21)	7.83 (32)
International Equity	15,872.39	8.73						
Artisan International Inv	15,872.39	8.73	-8.45 (99)	-9.66 (100)	-4.90 (99)	6.19 (40)	4.11 (29)	1.64 (27)
MSCI EAFE Index (Net)			-0.71 (26)	1.00 (49)	-1.60 (34)	6.53 (26)	3.81 (33)	0.75 (54)
MSCI AC World ex USA Index (Net)			-1.25 (41)	4.50 (15)	-1.78 (38)	5.00 (78)	2.93 (62)	0.96 (44)



#### Fairfax County Public Schools

As of December 31, 2016

## **Calendar Year Performance**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
U.S. Fixed Income										
Great West Portfolio Fund	3.26	3.42	3.37	2.67	2.55	2.11	1.53	1.86	2.00	1.98
50% B Bar Int. Agg/50% 90 day T-Bill	5.97	3.50	3.28	3.11	2.99	1.80	-0.48	2.06	0.62	1.12
90 Day U.S. Treasury Bill	4.91	2.10	0.17	0.13	0.08	0.08	0.05	0.04	0.03	0.25
PIMCO Total Return Adm	8.82 (1)	4.56 (23)	13.53 (30)	8.57 (16)	3.91 (95)	10.10 (3)	-2.16 (72)	4.43 (81)	0.47 (37)	2.34 (78)
Blmbg. Barc. U.S. Aggregate	6.97 (19)	5.24 (19)	5.93 (84)	6.54 (68)	7.84 (15)	4.21 (76)	-2.02 (64)	5.97 (33)	0.55 (27)	2.65 (62)
PIMCO Inflation Response MultiAsst Inst	-	-	-	-	-	9.56 (65)	-9.29 (100)	1.57 (73)	-6.77 (78)	10.53 (19)
PIMCO IRMA Benchmark	10.35 (30)	-14.42 (14)	17.32 (89)	13.49 (42)	3.82 (14)	4.83 (92)	-11.77 (100)	-0.46 (82)	-7.12 (79)	13.89 (12)
Target Date										
TRP Retirement 2005	6.67 (25)	-22.24 (82)	24.55 (17)	11.51 (17)	1.43 (65)	11.35 (17)	9.74 (22)	4.72 (40)	-0.75 (37)	6.72 (25)
TRP Retirement 2005 Index	6.79 (23)	-19.10 (68)	16.91 (63)	10.22 (42)	2.38 (43)	9.52 (42)	9.86 (21)	5.48 (25)	-0.10 (19)	5.84 (41)
TRP Retirement 2010	6.65 (48)	-26.71 (80)	27.95 (4)	12.70 (4)	0.54 (55)	12.44 (6)	11.93 (8)	4.99 (23)	-0.76 (59)	7.11 (9)
TRP Retirement 2010 Index	6.82 (46)	-23.19 (34)	19.64 (67)	11.42 (30)	1.81 (25)	10.61 (26)	12.00 (7)	5.77 (12)	-0.17 (14)	6.27 (44)
TRP Retirement 2015	6.75 (-)	-30.22 (86)	31.35 (1)	13.79 (4)	-0.32 (81)	13.81 (1)	15.18 (2)	5.37 (31)	-0.58 (33)	7.31 (12)
TRP Retirement 2015 Index	6.85 (-)	-26.61 (33)	22.08 (65)	12.57 (27)	1.09 (42)	11.94 (25)	14.97 (3)	6.30 (16)	-0.28 (17)	6.91 (32)
TRP Retirement 2020	6.73 (50)	-33.48 (82)	34.19 (1)	14.74 (3)	-1.20 (84)	15.01 (1)	18.05 (2)	5.63 (37)	-0.31 (25)	7.41 (18)
TRP Retirement 2020 Index	6.84 (49)	-29.72 (62)	24.20 (58)	13.47 (22)	0.48 (45)	13.04 (20)	17.56 (3)	6.70 (5)	-0.41 (32)	7.62 (10)
TRP Retirement 2025	6.81 (-)	-35.90 (87)	36.29 (1)	15.37 (1)	-2.06 (71)	16.00 (1)	20.78 (3)	5.84 (38)	-0.17 (13)	7.55 (20)
TRP Retirement 2025 Index	6.84 (-)	-32.24 (36)	26.15 (66)	14.12 (26)	-0.22 (25)	14.00 (22)	20.01 (4)	7.06 (9)	-0.56 (31)	8.21 (9)
TRP Retirement 2030	6.83 (56)	-37.79 (74)	37.99 (1)	16.01 (3)	-2.70 (70)	16.82 (1)	23.09 (4)	6.05 (36)	-0.02 (6)	7.69 (47)
TRP Retirement 2030 Index	6.80 (56)	-34.16 (45)	27.43 (70)	14.72 (32)	-0.79 (21)	14.85 (20)	22.13 (8)	7.29 (7)	-0.73 (40)	8.80 (10)
TRP Retirement 2035	6.81 (-)	-38.88 (71)	39.04 (1)	16.34 (1)	-3.26 (61)	17.35 (1)	24.86 (3)	6.07 (38)	0.13 (4)	7.64 (67)
TRP Retirement 2035 Index	6.74 (-)	-35.35 (28)	28.59 (70)	15.10 (42)	-1.37 (10)	15.45 (39)	23.76 (12)	7.37 (5)	-0.87 (35)	9.21 (14)
TRP Retirement 2040	6.77 (63)	-38.85 (72)	39.07 (1)	16.51 (9)	-3.49 (43)	17.55 (1)	25.93 (8)	6.18 (38)	0.17 (3)	7.63 (67)
TRP Retirement 2040 Index	6.74 (64)	-35.35 (14)	28.59 (84)	15.17 (38)	-1.46 (9)	15.66 (40)	24.73 (20)	7.43 (7)	-1.01 (40)	9.58 (15)
TRP Retirement 2045	6.84 (-)	-38.83 (53)	39.10 (1)	16.44 (10)	-3.47 (31)	17.62 (1)	25.93 (5)	6.14 (35)	0.17 (3)	7.69 (71)
TRP Retirement 2045 Index	6.74 (-)	-35.35 (18)	28.59 (91)	15.17 (44)	-1.46 (1)	15.66 (53)	24.73 (22)	7.43 (7)	-0.98 (36)	9.70 (13)



#### Fairfax County Public Schools

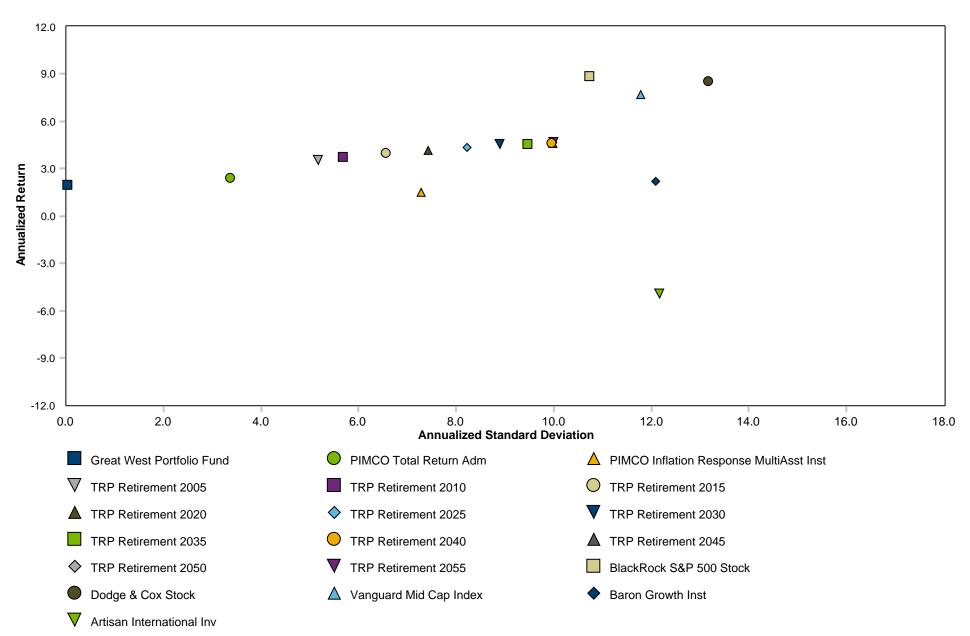
As of December 31, 2016

## **Calendar Year Performance**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TRP Retirement 2050	6.82 (-)	-38.80 (5	58) 38.92 (1)	16.41 (15)	-3.36 (26)	17.55 (4)	25.90 (12)	6.19 (36)	0.19 (4)	7.71 (69)
TRP Retirement 2050 Index	6.74 (-)	-35.35 (6	6) 28.59 (85)	) 15.17 (39)	-1.46 (5)	15.66 (40)	24.73 (28)	7.43 (8)	-0.98 (40)	9.70 (17)
TRP Retirement 2055	6.82 (-)	-38.89 (-	) 38.97 (-)	16.41 (-)	-3.35 (16)	17.60 (1)	25.86 (12)	6.18 (40)	0.18 (5)	7.73 (76)
TRP Retirement 2055 Index	6.74 (-)	-35.35 (-	) 28.59 (-)	15.17 (-)	-1.46 (1)	15.66 (60)	24.73 (29)	7.43 (10)	-0.98 (47)	9.70 (16)
U.S. Equity										
BlackRock S&P 500 Stock	5.36 (36	6) -37.01 (3	30) 26.49 (18)	14.92 (36)	1.98 (41)	15.84 (33)	32.21 (28)	13.61 (14)	1.35 (19)	11.92 (17)
S&P 500 Index	5.49 (11	1) -37.00 (2	29) 26.46 (23)	) 15.06 (1)	2.11 (8)	16.00 (3)	32.39 (3)	13.69 (1)	1.38 (9)	11.96 (7)
Dodge & Cox Stock	0.14 (94	4) -43.31 (9	92) 31.27 (26)	13.49 (54)	-4.08 (89)	22.01 (2)	40.55 (1)	10.40 (72)	-4.49 (93)	21.28 (1)
S&P 500 Index	5.49 (62	2) -37.00 (5	56) 26.46 (54)	) 15.06 (33)	2.11 (31)	16.00 (44)	32.39 (47)	13.69 (20)	1.38 (30)	11.96 (31)
Vanguard Mid Cap Index	6.22 (60	0) -41.76 (6	69) 40.51 (33)	25.67 (32)	-1.96 (42)	16.01 (43)	35.17 (51)	13.78 (10)	-1.33 (36)	11.23 (55)
Vanguard Spliced Mid Cap Index	6.19 (60	0) -41.80 (6	59) 40.49 (33 <sub>)</sub>	) 25.69 (32)	-1.91 (41)	16.04 (42)	35.21 (50)	13.83 (10)	-1.28 (36)	11.25 (55)
Baron Growth Inst	-	-	-	24.32 (53)	1.51 (12)	16.74 (21)	38.69 (25)	4.66 (78)	-4.06 (78)	6.31 (39)
Baron Growth Rtl	6.59 (84	4) -39.18 (2	28) 34.24 (65)	24.01 (54)	1.24 (14)	16.43 (25)	38.32 (26)	4.40 (81)	-4.31 (80)	6.04 (43)
Russell Midcap Growth Index	11.43 (74	4) -44.32 (6	65) 46.29 (27)	) 26.38 (40)	-1.65 (33)	15.81 (34)	35.74 (49)	11.90 (13)	-0.20 (43)	7.33 (31)
International Equity										
Artisan International Inv	19.73 (10	0) -46.96 (9	98) 39.77 (12)	5.91 (72)	-7.26 (15)	25.39 (5)	25.18 (8)	-0.97 (10)	-3.85 (79)	-9.66 (100)
MSCI EAFE Index (Net)	11.17 (69	9) -43.38 (6	56) 31.78 (51	) 7.75 (54)	-12.14 (47)	17.32 (65)	22.78 (16)	-4.90 (38)	-0.81 (38)	1.00 (49)
MSCI AC World ex USA Index (Net)	16.65 (19	9) -45.53 (8	36) 41.45 (7)	11.15 (21)	-13.71 (74)	16.83 (71)	15.29 (83)	-3.87 (25)	-5.66 (86)	4.50 (15)



## **Risk Profile**





# Fairfax County Public Schools – Watch List Review

	Organiza	ation/Staff	Process	Perfor	rmance			Watch Li	ist Status	
	Significant Organizational Change	Adverse Change in Portfolio Manager	Diverged from Strategy and/or Portfolio Characteristics	Underperformed / Adverse Tracking During Trailing 5- Years	Underperformed / Adverse Tracking in 3 of 4 Trailing Calendar Quarters	Overall Manager Research Rating	4th Quarter 2016	3rd Quarter 2016	2nd Quarter 2016	1st Quartei 2016
U.S FIXED INCOME										
Great West Portfolio Fund	No	No	No	No	No	N/R				
PIMCO Total Return Adm	No	No	No	No	No	Buy				
PIMCO Inflation Response MultiAsst Inst	No	No	No	No	No	Buy				
TARGET DATE	-			1						
T. Rowe Price Retirement Series	No	No	No	No	No	Buy				
U.S. EQUITY					1	1	_			
BlackRock S&P 500 Stock	No	No	No	No	No	Buy				
Dodge & Cox Stock Fund	No	No	No	No	No	Buy				
Vanguard Mid Cap Index	No	No	No	No	No	Buy				
Baron Growth Instl	No	No	No	Yes	Yes	Qualified				
INTERNATIONAL EQUITY						1				
Artisan International Inv	No	No	No	Yes	Yes	Qualified				
Status		Number o	f Criteria Met				Suga	ested Actio	n	
Green	1 or less affirmat					Active – No ac			211	
Yellow	2 to 3 affirmative	S				Active - On "c	losely monit	ored list"		
Red			or 4 consecutive qu	arters		Full fund revie made	w and recor	nmendatior	n for action	will be
Changes in Watch List designations from the Passively managed index funds are expected										



# Watch List Guidelines

# **AHIC Investment Option Review Criteria**

- 1. If the Fund has underperformed its benchmark over the most recent trailing five-year period
  - If passively managed, the fund's return must be no more than 0.5 percentage points above or below the return of the benchmark
- 2. If the fund has underperformed its benchmark in three of the most recent four calendar quarters
- 3. If the Fund diverged from its strategy and / or portfolio characteristics
- 4. Adverse change in portfolio manager
- 5. Merger with another fund
- 6. Significant organizational change

# **Suggested Action Triggers**

- 1. When an investment fund is placed on the Red Watch List, a formal fund retention meeting may be conducted. At this meeting, the fund's representative would be asked to address all relevant issues and explain why the fund should be retained. After this retention meeting, the Investment Committee may elect to either terminate the fund or grant it a one-year extension.
- 2. If a fund is granted the one-year extension described above and remains on the Watch List for this period, the fund may be terminated unless the Committee determines that an alternate course of action is appropriate.

# **Special Circumstances**

1. In the event of a major change to the fund (e.g., investments, ownership, and staffing), the Committee retains the right to immediately terminate any fund without invoking the Watch List criteria in any fashion.



#### Fairfax County Public Schools 457(b) Plan

#### As of December 31, 2016 **Demographic Information**

	Dem
Participants per Investment Option	
Investment Option	Participants
Great West Portfolio	1,016
PIMCO Total Return	1,099
PIMCO Inflation Response MultiAsst	40
T Rowe Price Retirement 2005	35
T Rowe Price Retirement 2010	13
T Rowe Price Retirement 2015	40
T Rowe Price Retirement 2020	73
T Rowe Price Retirement 2025	92
T Rowe Price Retirement 2030	66
T Rowe Price Retirement 2035	100
T Rowe Price Retirement 2040	68
T Rowe Price Retirement 2045	54
T Rowe Price Retirement 2050	26
T Rowe Price Retirement 2055	48
BlackRock S&P 500 Stock	941
Dodge & Cox Stock	971
Vanguard Mid Cap Index	1,173
Baron Growth	1,094
Artisan International	1,080
Participants with Balance in One Investment Option	n
Investment Option	Participants
Great-West Portfolio Fund	217
PIMCO Total Return Admin	48
PIMCO Inflation Response MultiAsst	1
T Rowe Price Retirement 2005	1
T Rowe Price Retirement 2010	1
T Rowe Price Retirement 2015	4
T Rowe Price Retirement 2020	12
T Rowe Price Retirement 2025	25
T Rowe Price Retirement 2030	12
T Rowe Price Retirement 2035	27
T Rowe Price Retirement 2040	20
T Rowe Price Retirement 2045	20
T Rowe Price Retirement 2050	6
T Rowe Price Retirement 2055	14
BlackRock S & P 500 Stock	65

Investment Options per Participant							
Investment Options	Participants						
One	564						
Тwo	364						
Three	263						
Four	315						
Five	286						
Six	246						
Seven	178						
Eight	23						
More than Eight	29						

Other Demographics								
Item	Result							
Participation Rate	53.13%							
Number of Participants with Account Balances	2,268							
Average Deferral Rate	16.74%							
Average Number of Funds per Participant	3.54							
Average Account Balance	\$79,394.55							

Administration Statistics						
Item	Result					
Number of Internet Accesses	10,908					
VRU Calls	183					

Empower Results®

\* Information directly provided by Empower Retirement.

Dodge & Cox Stock

Baron Growth Instl

Artisan International Inv

Vanguard Mid Cap Index Ins

25

29

26

11

## 457(b) Plan Statistics

	<u>457(b)</u>	<u>403(b)</u>
Contributions Dec. 2014	\$1,097,000	\$3.0 million
Contributions Dec. 2015	\$1,014,000	\$3.1 million
Contributions Dec. 2016	\$ 959,000	\$3.0 million
Contributions Jan. 2017	\$1,305,000	\$3.9 million
Assets Dec. 31, 2014	\$161.1 million	
Assets Dec. 31, 2015	\$163.5 million	
Assets Dec. 31, 2016	\$180.4 million	
Assets Jan. 31, 2017	\$184.5 million	
Number of Participants Dec. 2014	2266	5529
Number of Participants Dec. 2015	2313	5428
Number of Participants Dec. 2016	2268	5577
Number of Participants Feb. 2017	2258	5508
Average Contribution/Month - Dec. 2014	\$788/mo; \$158/b	iweek
Average Contribution/Month - Dec. 2015	\$751/mo; \$191/b	iweek
Average Contribution/Month - Dec. 2016	\$819/mo; \$178/b	iweek
	402/b)	
Average Contribution/Month - Dec. 2016	<u>403(b)</u> \$629/mo; \$185/bi	week
Arciage contribution month $\sim$ Dec. 2010	τος τι οσζητιίο, τι οσζησι	WUUN

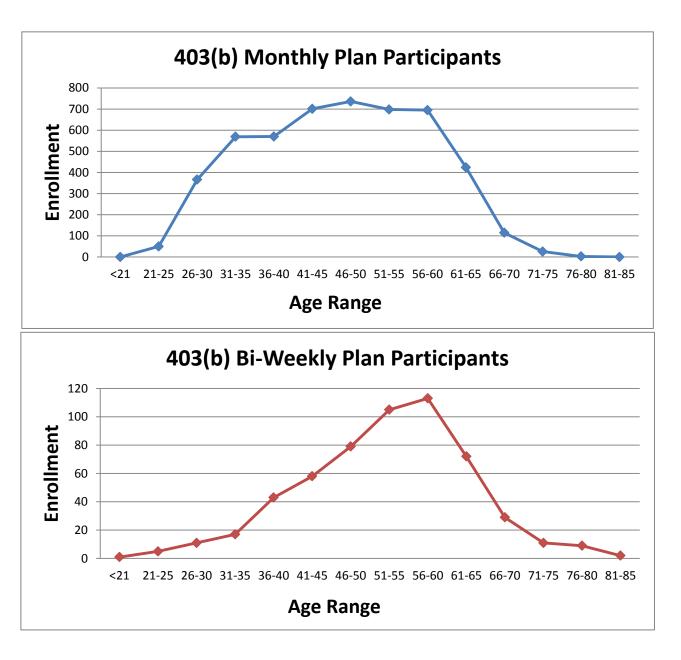
Number of Employees Currently Contributing to 457(b): 1289/mo; 58/biweek Number of Employees Currently Contributing to 403(b): 4953/mo; 555/biweek

Number of Employees Currently Contributing to both 457(b) & 403(b): 401 total



# 403(b) Plan Participants

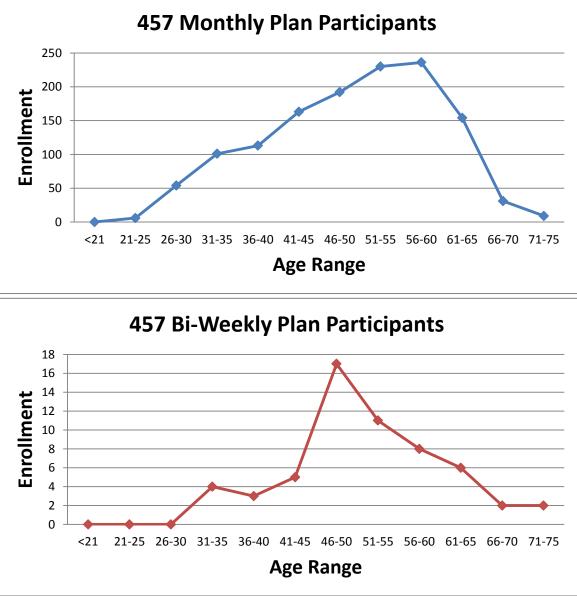
Age	Monthly	Bi-Weekly
<21	0	1
21-25	50	5
26-30	366	11
31-35	569	17
36-40	570	43
41-45	701	58
46-50	736	79
51-55	698	105
56-60	695	113
61-65	424	72
66-70	115	29
71-75	26	11
76-80	3	9
81-85	0	2
Total	4953	555





# **457 Plan Participants**

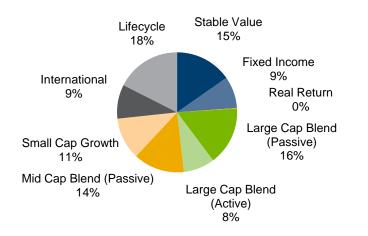
Age	Monthly	Bi-Weekly
<21	0	0
21-25 26-30 31-35	6	0
26-30	54	0
31-35	101	4
36-40	113	<u>3</u> 5
41-45	163	
46-50	192	17
51-55	230	11
56-60	236	8
61-65	154	6
66-70	31	6 2 2
71-75	9	2
Total	1289	58



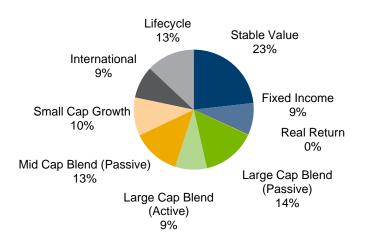


#### **Contribution Analysis**

#### 4th Quarter 2016 Contribution Allocation

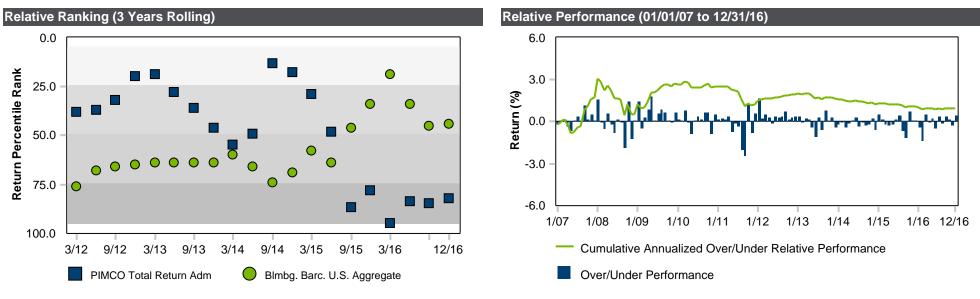


### **3rd Quarter 2016 Contribution Allocation**



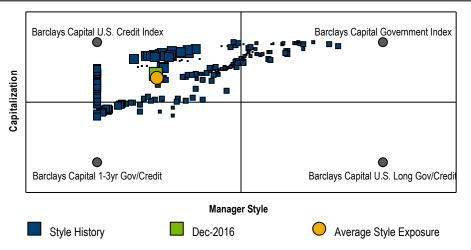


## PIMCO Total Return Adm 12/31/16



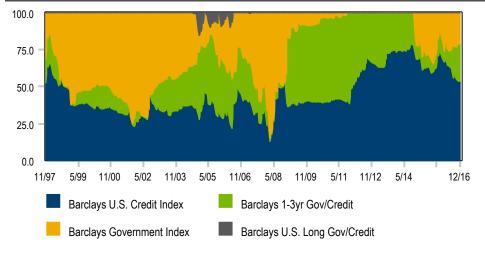
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>PIMCO Total Return Adm	>BImbg. Barc. U.S. Aggregate
PIMCO Total Return Adm	20	13	4	6	N/A	14
Blmbg. Barc. U.S. Aggregate	20	6	1	1	6	N/A



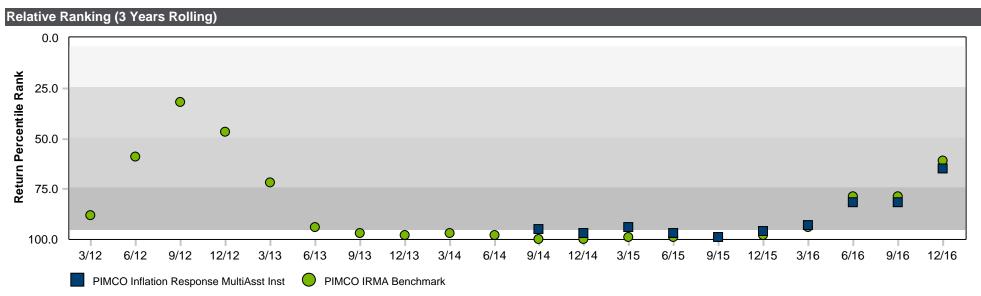
#### Style Map (Since Inception - 36 Months Rolling)

Style History (Since Inception - 36 Months Rolling)





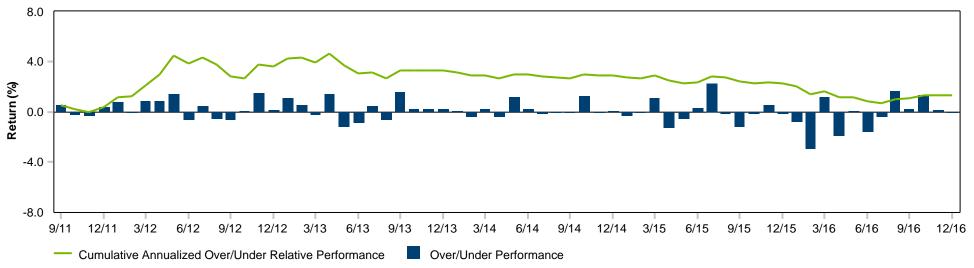
#### PIMCO Inflation Response MultiAsst Inst 12/31/16



#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>PIMCO Inflation Response MultiAsst Inst	>PIMCO IRMA Benchmark
PIMCO Inflation Response MultiAsst Inst	10	0	0	9	N/A	7
PIMCO IRMA Benchmark	10	0	0	9	3	N/A

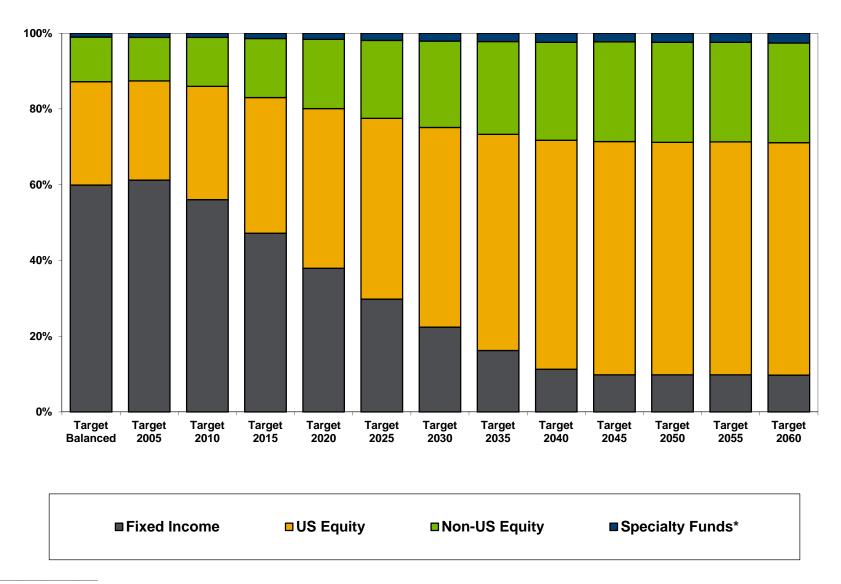
### Relative Performance (09/01/11 to 12/31/16)





#### As of December 31, 2016

## Asset Allocation for T. Rowe Price Retirement Funds



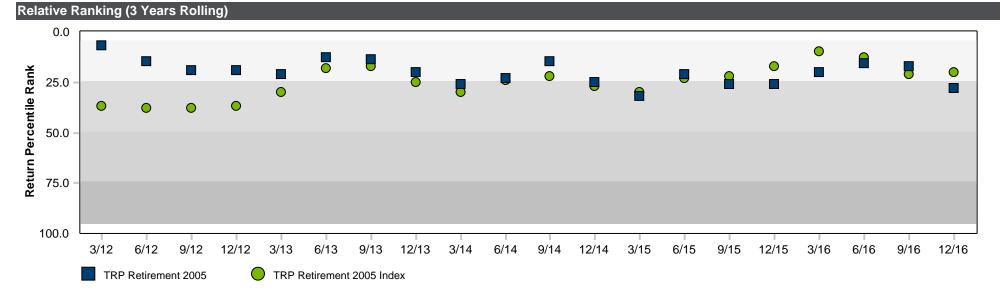
\* Specialty Funds include T. Rowe Price Real Assets Fund



	Balanced Fund	2005 Fund	2010 Fund	2015 Fund	2020 Fund	2025 Fund	2030 Fund	2035 Fund	2040 Fund	2045 Fund	2050 Fund	2055 Fund	2060 Fund
Fixed Income	59.9%	61.2%	56.0%	47.2%	37.9%	29.8%	22.4%	16.2%	11.3%	9.8%	9.8%	9.8%	9.7%
T. Rowe Price Inflation Focused Bond	30.0%	18.0%	15.5%	11.4%	6.5%	3.5%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
T. Rowe Price New Income	20.6%	29.9%	28.0%	24.6%	21.7%	18.2%	14.4%	11.2%	7.8%	6.8%	6.8%	6.8%	6.7%
T. Rowe Price High Yield	3.5%	5.0%	4.7%	4.2%	3.6%	3.0%	2.4%	1.8%	1.3%	1.1%	1.1%	1.1%	1.1%
T. Rowe Price Intl Bond	2.5%	3.6%	3.4%	3.0%	2.6%	2.2%	1.7%	1.4%	0.9%	0.8%	0.8%	0.8%	0.8%
T. Rowe Price EM Bond	3.3%	4.8%	4.5%	4.0%	3.5%	2.9%	2.3%	1.8%	1.3%	1.1%	1.1%	1.1%	1.1%
U.S. Equity	27.3%	26.2%	29.9%	35.8%	42.1%	47.7%	52.8%	57.1%	60.5%	61.6%	61.4%	61.5%	61.4%
T. Rowe Price Value	0.0%	0.0%	0.0%	1.9%	6.2%	10.0%	13.4%	16.6%	18.9%	19.5%	19.4%	19.4%	19.6%
T. Rowe Price Equity Index 500	21.1%	20.2%	23.2%	23.1%	19.2%	16.0%	13.1%	10.0%	8.0%	7.5%	7.4%	7.5%	7.4%
T. Rowe Price Growth Stock	0.0%	0.0%	0.0%	2.7%	7.2%	11.0%	14.6%	17.8%	20.2%	20.8%	20.8%	20.9%	20.7%
T. Rowe Price Mid-Cap Value	1.6%	1.6%	1.7%	2.1%	2.4%	2.8%	3.0%	3.3%	3.5%	3.6%	3.6%	3.5%	3.6%
T. Rowe Price Mid-Cap Growth	1.4%	1.4%	1.5%	1.9%	2.2%	2.5%	2.7%	2.9%	3.1%	3.2%	3.2%	3.2%	3.2%
T. Rowe Price Small-Cap Value	1.1%	1.0%	1.2%	1.6%	1.8%	2.1%	2.3%	2.5%	2.6%	2.7%	2.7%	2.6%	2.6%
T. Rowe Price Small-Cap Stock	1.3%	1.2%	1.4%	1.5%	1.8%	2.0%	2.2%	2.3%	2.5%	2.6%	2.6%	2.6%	2.6%
T. Rowe Price New Horizons	0.8%	0.8%	0.9%	1.0%	1.2%	1.4%	1.5%	1.7%	1.7%	1.8%	1.8%	1.8%	1.7%
Non-U.S. Equity	11.8%	11.5%	12.9%	15.6%	18.3%	20.6%	22.8%	24.5%	25.9%	26.3%	26.4%	26.3%	26.3%
T. Rowe Price Intl Value Equity Fund	3.4%	3.3%	3.7%	4.5%	5.3%	5.9%	6.5%	7.1%	7.4%	7.6%	7.6%	7.6%	7.6%
T. Rowe Price Overseas Stock	3.6%	3.5%	4.0%	4.8%	5.6%	6.3%	6.9%	7.4%	7.8%	8.0%	7.9%	8.0%	8.0%
T. Rowe Price International Stock	3.2%	3.1%	3.6%	4.2%	5.0%	5.6%	6.3%	6.7%	7.2%	7.2%	7.3%	7.2%	7.2%
T. Rowe Price Emerging Markets Stock	1.6%	1.6%	1.7%	2.1%	2.5%	2.8%	3.1%	3.3%	3.5%	3.6%	3.6%	3.6%	3.6%
Real Assets	1.0%	1.0%	1.1%	1.4%	1.6%	1.8%	2.0%	2.1%	2.3%	2.3%	2.3%	2.3%	2.3%
T. Rowe Price Real Assets	1.0%	1.0%	1.1%	1.4%	1.6%	1.8%	2.0%	2.1%	2.3%	2.3%	2.3%	2.3%	2.3%
MM/Short Term Investment	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.3%
T.Rowe Price U.S. Treasury Money Fund	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

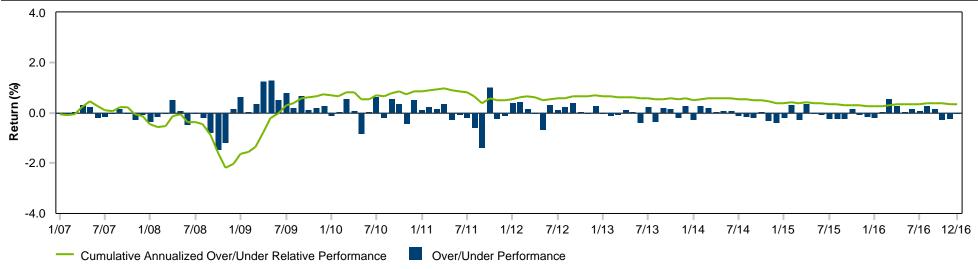
# As of December 31, 2016 Asset Allocation: T. Rowe Price Retirement Funds

# TRP Retirement 2005 12/31/16



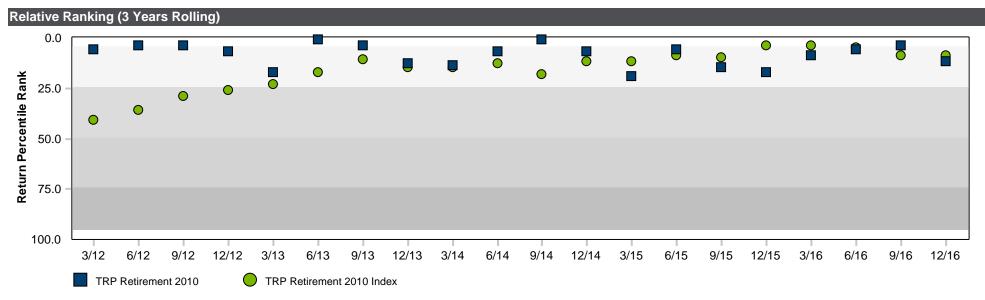
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2005	>TRP Retirement 2005 Index
TRP Retirement 2005	20	20	15	0	N/A	14
TRP Retirement 2005 Index	20	20	12	0	6	N/A



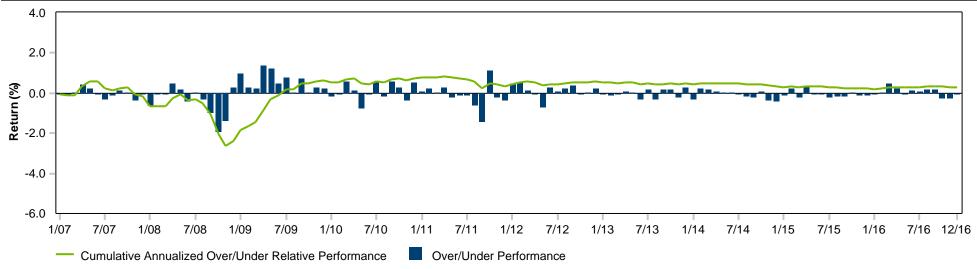


# TRP Retirement 2010 12/31/16



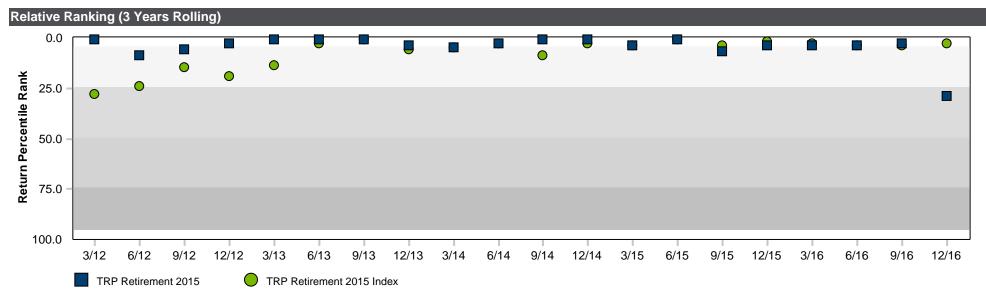
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2010	>TRP Retirement 2010 Index
TRP Retirement 2010	20	20	20	0	N/A	14
TRP Retirement 2010 Index	20	20	16	0	6	N/A



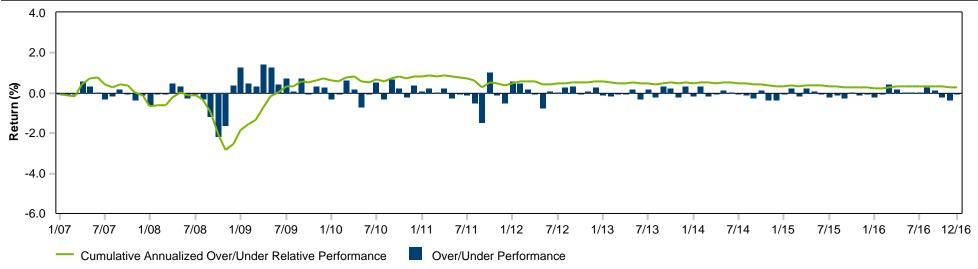


# TRP Retirement 2015 12/31/16



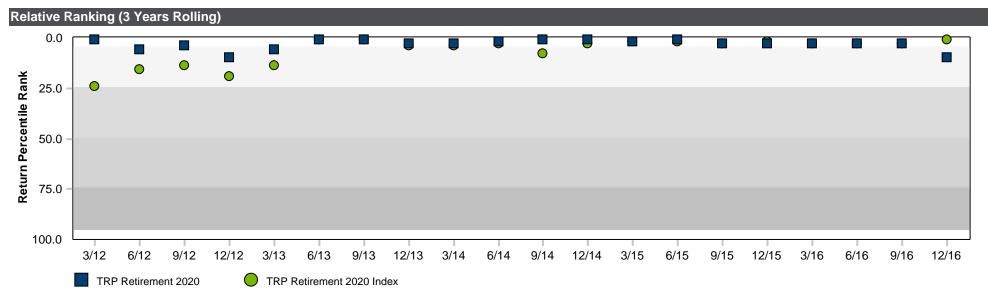
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2015	>TRP Retirement 2015 Index
TRP Retirement 2015	20	20	19	0	N/A	14
TRP Retirement 2015 Index	20	20	19	0	6	N/A



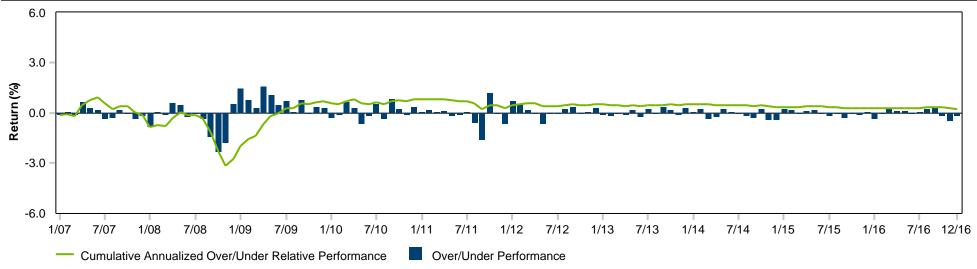


# TRP Retirement 2020 12/31/16



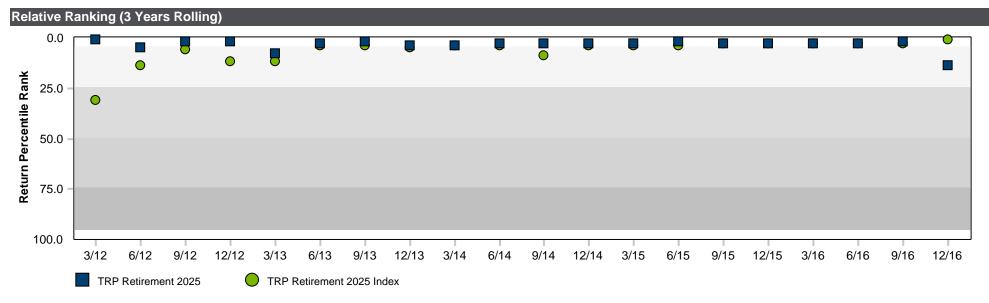
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2020	>TRP Retirement 2020 Index
TRP Retirement 2020	20	20	20	0	N/A	16
TRP Retirement 2020 Index	20	20	20	0	4	N/A



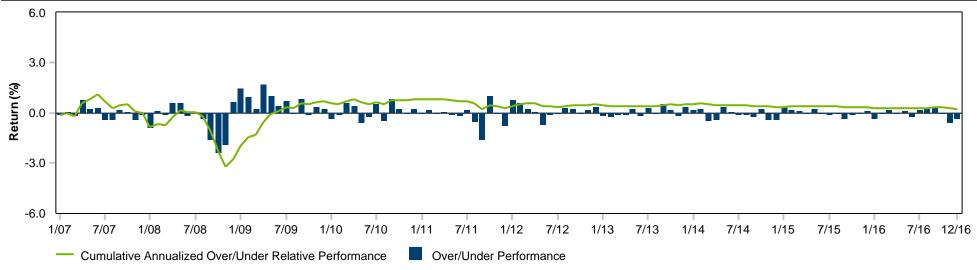


# TRP Retirement 2025 12/31/16



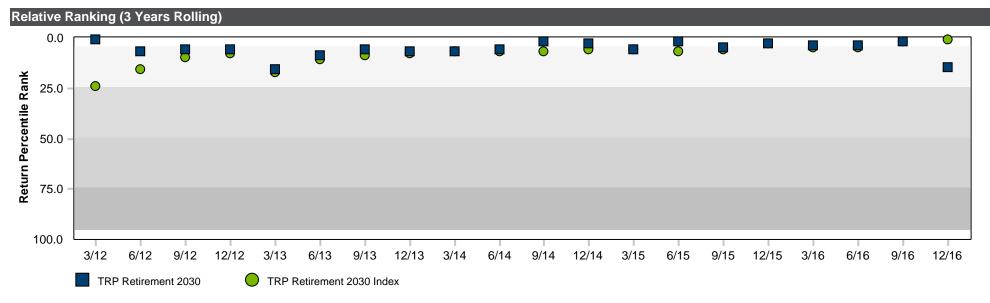
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2025	>TRP Retirement 2025 Index
TRP Retirement 2025	20	20	20	0	N/A	18
TRP Retirement 2025 Index	20	20	19	0	2	N/A



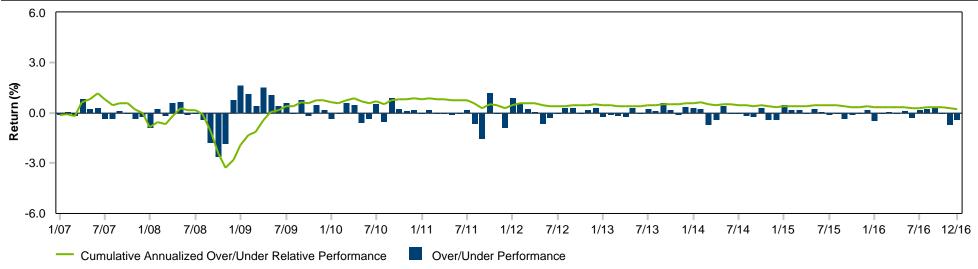


# TRP Retirement 2030 12/31/16



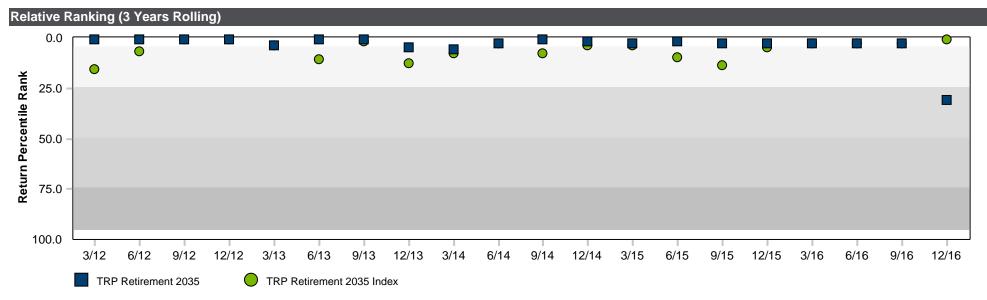
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2030	>TRP Retirement 2030 Index
TRP Retirement 2030	20	20	20	0	N/A	19
TRP Retirement 2030 Index	20	20	20	0	1	N/A



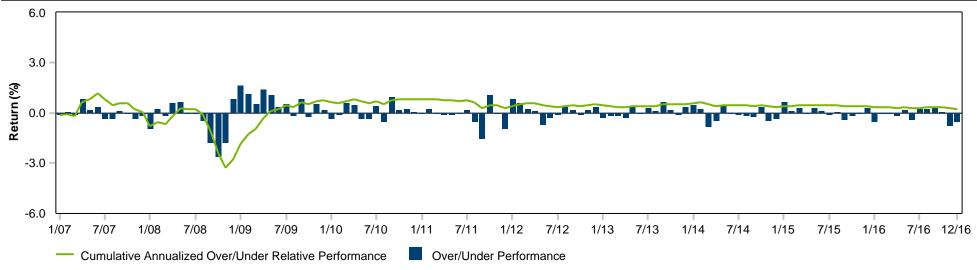


# TRP Retirement 2035 12/31/16



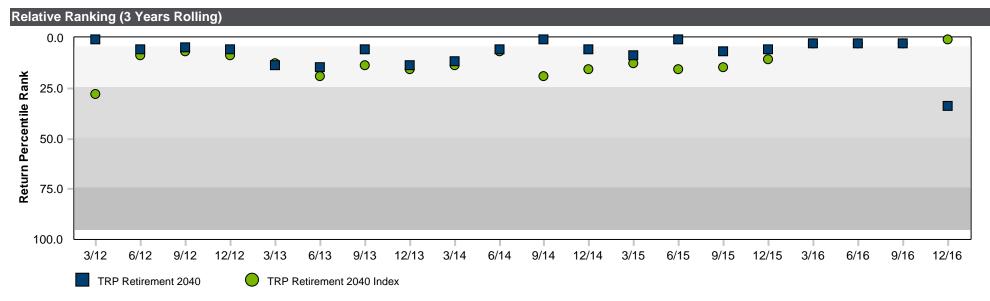
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2035	>TRP Retirement 2035 Index
TRP Retirement 2035	20	20	19	0	N/A	18
TRP Retirement 2035 Index	20	20	20	0	2	N/A



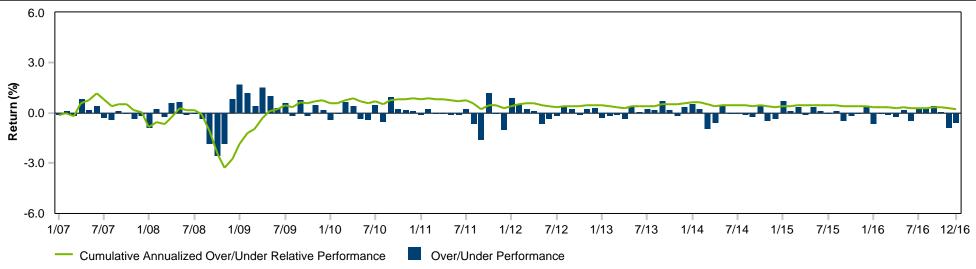


# TRP Retirement 2040 12/31/16



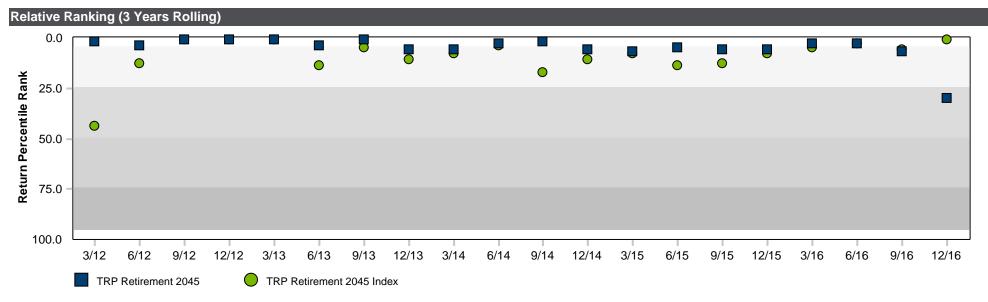
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2040	>TRP Retirement 2040 Index
TRP Retirement 2040	20	20	19	0	N/A	17
TRP Retirement 2040 Index	20	20	19	0	3	N/A



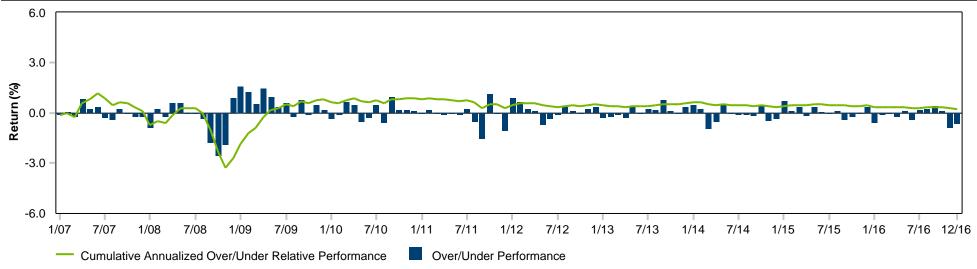


# TRP Retirement 2045 12/31/16



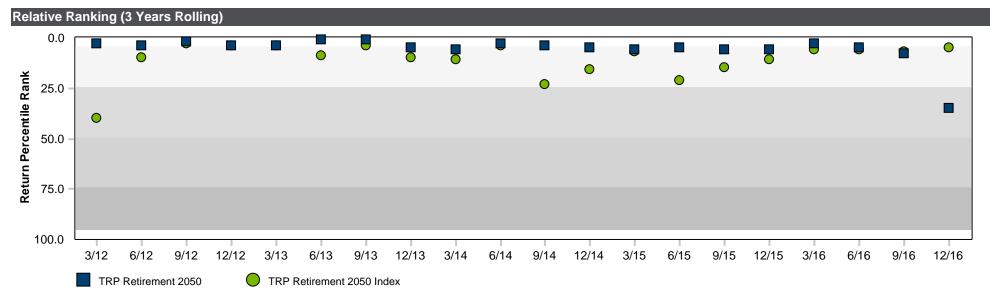
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2045	>TRP Retirement 2045 Index
TRP Retirement 2045	20	20	19	0	N/A	17
TRP Retirement 2045 Index	20	20	19	0	3	N/A



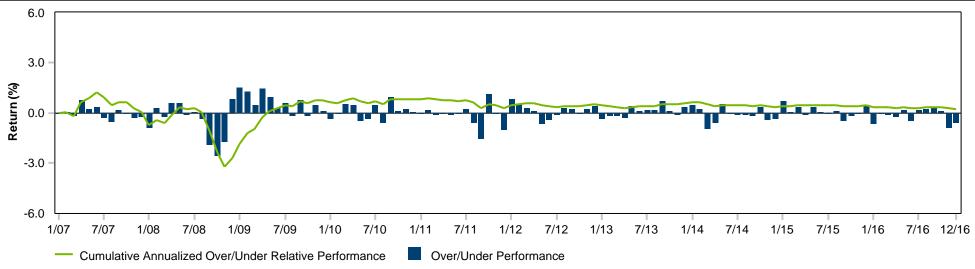


# TRP Retirement 2050 12/31/16



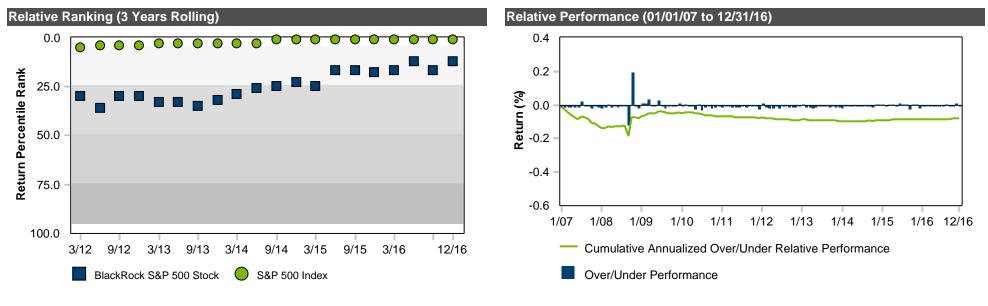
#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>TRP Retirement 2050	>TRP Retirement 2050 Index
TRP Retirement 2050	20	20	19	0	N/A	17
TRP Retirement 2050 Index	20	20	19	0	3	N/A



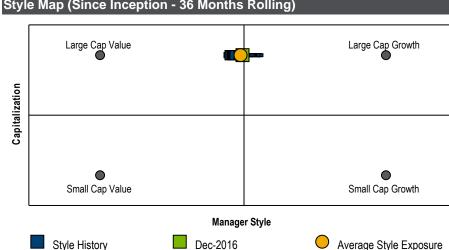


## BlackRock S&P 500 Stock 12/31/16

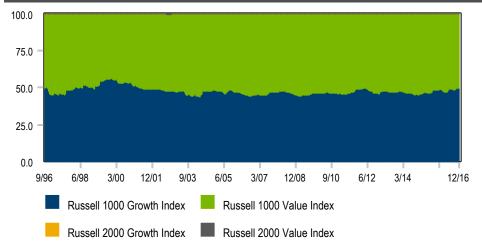


#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>BlackRock S&P 500 Stock	>S&P 500 Index
BlackRock S&P 500 Stock	20	20	11	0	N/A	0
S&P 500 Index	20	20	20	0	20	N/A

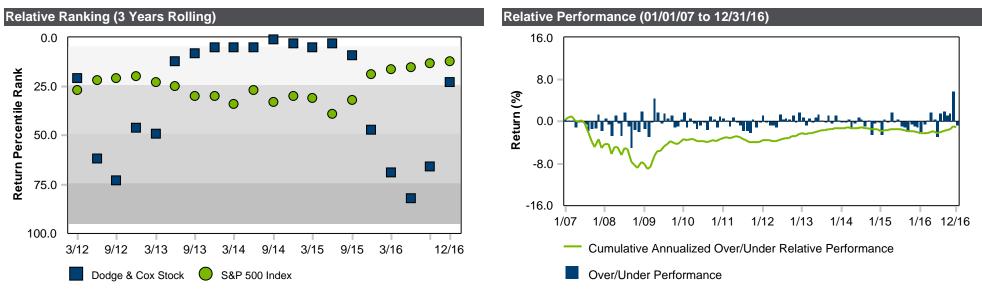


#### Style Map (Since Inception - 36 Months Rolling)





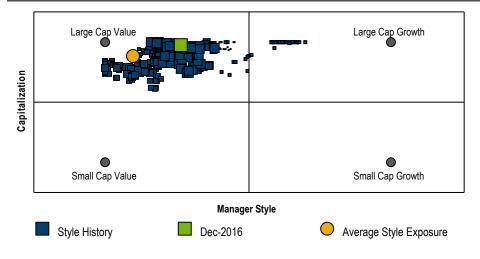
## Dodge & Cox Stock 12/31/16

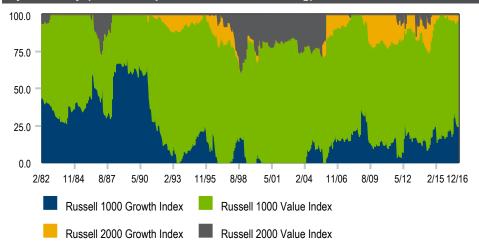


## Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>Dodge & Cox Stock	>S&P 500 Index
Dodge & Cox Stock	20	15	12	1	N/A	11
S&P 500 Index	20	20	10	0	9	N/A

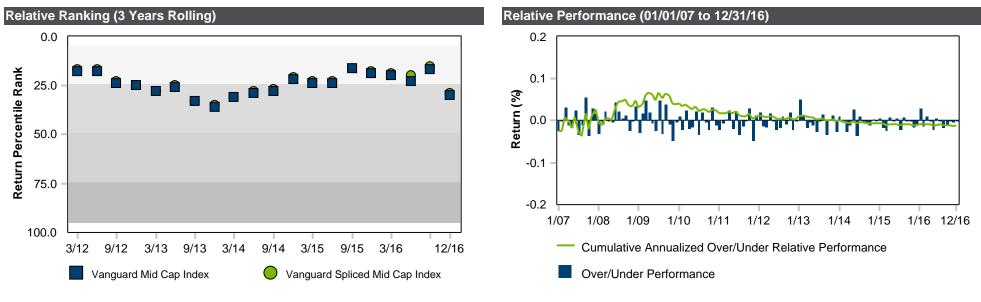
#### Style Map (Since Inception - 36 Months Rolling)







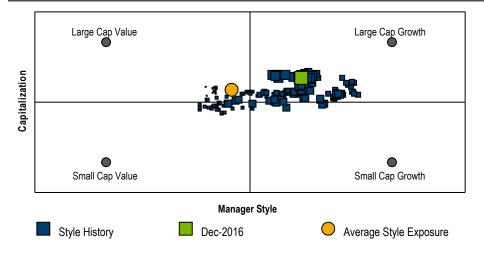
# Vanguard Mid Cap Index 12/31/16

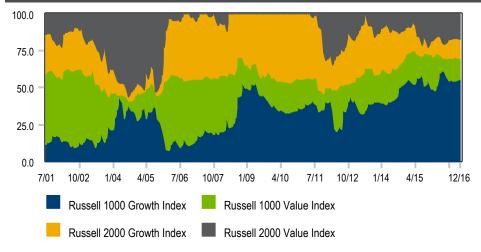


#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>Vanguard Mid Cap Index	>Vanguard Spliced Mid Cap Index
Vanguard Mid Cap Index	20	20	12	0	N/A	0
Vanguard Spliced Mid Cap Index	20	20	13	0	20	N/A

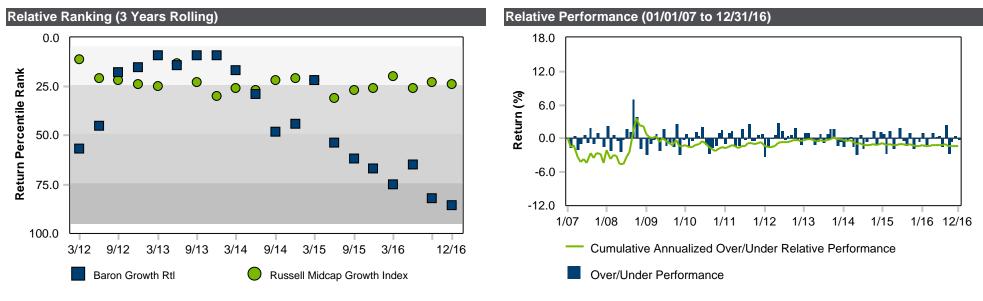
### Style Map (Since Inception - 36 Months Rolling)







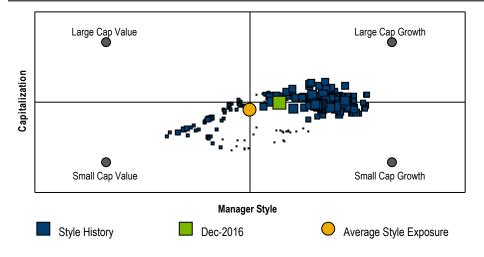
## Baron Growth Rtl 12/31/16

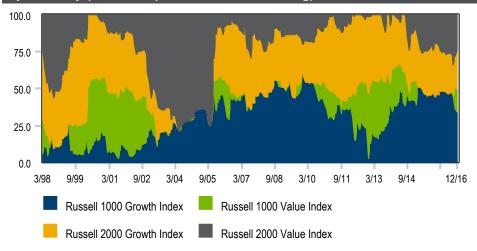


#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>Baron Growth Rtl	>Russell Midcap Growth Index
Baron Growth Rtl	20	12	8	2	N/A	6
Russell Midcap Growth Index	20	20	13	0	14	N/A

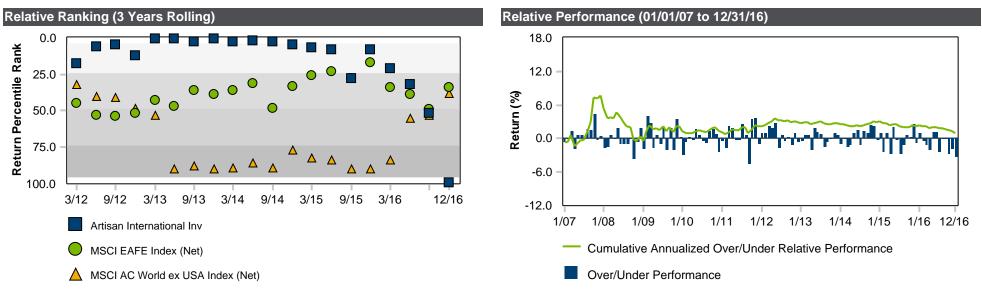
#### Style Map (Since Inception - 36 Months Rolling)







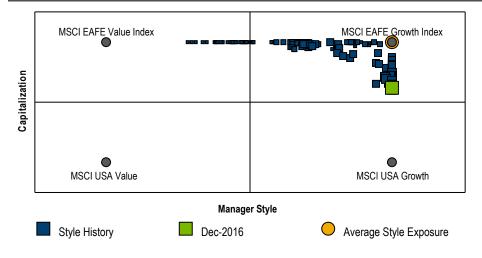
## Artisan International Inv 12/31/16

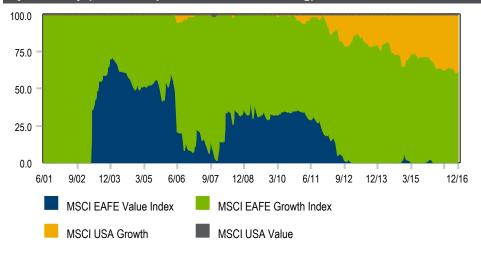


#### Relative Ranking vs. Peers (3 Years Rolling)

	Number of Observations	>=Median	Top Quartile	Bottom Quartile	>Artisan International Inv	>MSCI EAFE Index (Net)	>MSCI AC World ex U
Artisan International Inv	20	18	16	1	N/A	18	19
MSCI EAFE Index (Net)	20	17	2	0	2	N/A	16
MSCI AC World ex USA Index (Net)	20	5	0	12	1	4	N/A

#### Style Map (Since Inception - 36 Months Rolling)







ax County Public Schools As of December 31, 2016 Cost Analysis							
Fund Name	Peer Group	Fund's Expense					
		Ratio	Median	Median	Average	Average	Difference
U.S FIXED INCOME		2			4		
Great West Portfolio Fund	Stable Value	0.89% <sup>3</sup>	N/A	N/A	0.62% <sup>4</sup>	N/A	N/A
PIMCO Total Return Adm	US Broad Market Core Fixed	0.72%	0.50%	0.43%	0.54%	0.41%	0.18%
PIMCO Inflation Response MultiAsst Inst	Flexible Portfolio	0.86%	0.93%	0.60%	0.99%	0.87%	-0.13%
TARGET DATE							
T. Rowe Price Retirement 2005	Mixed Asset Target Today <sup>5</sup>	0.60%	0.56%	0.49%	0.55%	0.52%	0.05%
T. Rowe Price Retirement 2010	Mixed Asset Target 2010 <sup>5</sup>	0.59%	0.56%	0.58%	0.57%	0.57%	0.02%
T. Rowe Price Retirement 2015	Mixed Asset Target 2015 <sup>5</sup>	0.62%	0.59%	0.62%	0.60%	0.60%	0.02%
T. Rowe Price Retirement 2020	Mixed Asset Target 2020 <sup>5</sup>	0.66%	0.62%	0.66%	0.61%	0.63%	0.05%
T. Rowe Price Retirement 2025	Mixed Asset Target 2025 <sup>5</sup>	0.69%	0.65%	0.60%	0.64%	0.66%	0.05%
T. Rowe Price Retirement 2030	Mixed Asset Target 2030 <sup>5</sup>	0.72%	0.69%	0.72%	0.68%	0.69%	0.04%
T. Rowe Price Retirement 2035	Mixed Asset Target 2035 <sup>5</sup>	0.74%	0.70%	0.74%	0.69%	0.70%	0.05%
T. Rowe Price Retirement 2040	Mixed Asset Target 2040 <sup>5</sup>	0.76%	0.74%	0.64%	0.70%	0.70%	0.06%
T. Rowe Price Retirement 2045	Mixed Asset Target 2045 <sup>5</sup>	0.76%	0.71%	0.75%	0.71%	0.70%	0.05%
T. Rowe Price Retirement 2050	Mixed Asset Target 2050 <sup>5</sup>	0.76%	0.74%	0.75%	0.75%	0.70%	0.01%
T. Rowe Price Retirement 2055	Mixed Asset Target 2055+ <sup>5</sup>	0.76%	0.70%	0.64%	0.71%	0.71%	0.05%
U.S. EQUITY							
BlackRock S&P 500 Stock	S&P 500 Index Funds (Passive)	0.04%	0.20%	0.05%	0.27%	0.08%	-0.23%
Dodge & Cox Stock	U.S. Large Cap Core Equity	0.52%	0.81%	0.57%	0.84%	0.57%	-0.32%
Vanguard Mid Cap Index	U.S. Mid Cap Equity	0.07%	0.97%	0.75%	0.99%	0.80%	-0.92%
Baron Growth Inst	U.S. Mid Cap Growth Equity	1.04%	0.99%	0.62%	0.99%	0.75%	0.05%
INTERNATIONAL EQUITY							
Artisan International Inv	International Equity All <sup>6</sup>	1.17%	0.99%	0.10%	0.99%	0.74%	0.18%

<sup>1</sup> All information, unless noted otherwise, was created using Morningstar audited expense ratio data as of December 31, 2015. Since mutual fund expense ratios do not change frequently, AHIC believes this study to be a relevant comparison for up to a year, at which time the data will be updated. For complete information on AHIC methodologies and additional information on the expense ratio distributions, contact your AHIC consultant. Mutual fund expense peer groups were constructed by Investment Metrics, and are consistent with the peer groups shown in other exhibits comparing performance, risk-metrics and a multitude of other characteristics.

<sup>2</sup> Difference column represents the difference between the fund's expense ratio and the Peer Group's average expense ratio.

<sup>3</sup> In lieu of an expense ratio, Great West assumes a margin of 89 basis points on the Portfolio Fund. This reflects the gross investment yield of the assets minus the crediting rate and cost of maintaining regulatory capital requirements.

<sup>4</sup> Stable value fund average calculated using Hueler Universe data for a mandate size of \$1 million in assets.

<sup>5</sup> Mixed Asset peer groups utilize prospectus net expense ratio information due to the nature of the asset class and common use of a Fund of Fund structure.

<sup>6</sup> Combines multiple Investment Metrics peer groups.





# Manager Research



# Flash Report

## T. Rowe Price Retirement Date Fund—New Pricing

### Recommendation

Aon Hewitt Investment Consulting's ("AHIC") overall "Buy" rating and component ratings for the Retirement Date Series remain unchanged following the pricing changes announced by T. Rowe Price on January 17, 2017.

## Background

On January 17, 2017, T. Rowe Price announced several changes in the pricing of the target date suites.

The changes include:

- Lower expense ratios for the Retirement I Funds so that the fees are uniformly 15 bps lower than the Investor share class
- Lower trustee fees for the Retirement Trusts
- Reduction of the investment minimums to \$20 million from the previous \$50 million for the Retirement Trusts
- New Retirement Trusts breakpoints added for investments between \$100 million and \$500 million

The pricing changes on the Retirement I Funds became effective on December 1, 2016. The reduced investment minimum for the Retirement Trusts became effective as of January 1, 2017, and the new fees for the Retirement Trusts are effective April 1, 2017. Clients currently invested in a trust where a new breakpoint has been created will receive communication from T. Rowe Price in the coming weeks outlining the changes.

Vintage	Retirement Funds Expense Ratio	Retirement Funds Expense Ratio
2005	0.60%	0.45%
2010	0.59%	0.44%
2015	0.62%	0.47%
2020	0.66%	0.51%
2025	0.69%	0.54%
2030	0.72%	0.57%
2035	0.74%	0.59%
2040	0.76%	0.61%
2045	0.76%	0.61%
2050	0.76%	0.61%
2055	0.76%	0.61%
2060	0.76%	0.61%

Retirement Trusts	Current	New
<\$100MM	54 bps	46 bps
\$100MM-\$500MM	54 bps	43 bps
\$500M\$1B	49 bps	40 bps
\$1B\$2B	45 bps	38 bps
\$2B\$3B	40 bps	36 bps
\$3B-\$4B	38 bps	35 bps



## Disclaimer

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The Aon Centre The Leadenhall Building 122 Leadenhall Street London EC3V 4AN

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# Aon InBrief: Dodge & Cox

Dodge & Cox U.S. Equity

Review Date	Overall Rating	Previous Overall Rating
February 2017	Buy	No Change

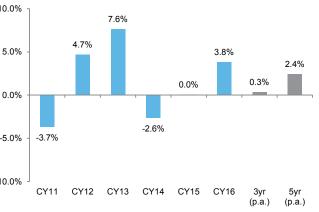
## **Overall Rating**

This strategy continues to be an attractive option for clients that seek an equity strategy with a slight value tilt and a high probability of outperforming the benchmark over a full market cycle. We have high conviction in Dodge & Cox's approach to research and portfolio construction and believe that it is well-positioned to continue adding value versus peers in its strategy universe.

#### **Component Ratings**

	Rating	Previous Rating	Aon InForm Assessment
Business	4	No Change	✓
Staff	4	No Change	✓
Process	3	No Change	✓
Risk	3	No Change	Ъ
ODD	Pass	No Change	-
Performance	3	No Change	$\checkmark$
T&C	3	No Change	✓

#### Relative Performance to 31 Dec 2016



Composite performance (USD) is gross of fees relative to Russell 1000 Value. CY = calendar year. Source: eVestment

## Firm and Strategy Summary

Head Office Location	San Francisco, CA, US	Parent Name	Employee Owned		
Firm AUM	\$275.9 billion	Investment Staff	~60		
Equity AUM	\$147.8 billion	Equity Staff	~40		
Team Location	San Francisco, CA, US	Team Head	Team Managed		
Strategy Inception	January 1965	Strategy Size	\$84.0 billion		
Number of Holdings	60 - 100	Annual Turnover	20 - 30%		
Benchmark	Russell 1000 Value Index				
Performance Objective	Outperform the index over a market cycle				
Risk Tolerance Target	Unconstrained				
Nata: ALIM data as of 24 Decemb	an 2010 Death manfammana is no suran	where of furthing we could a			

Note: AUM data as of 31 December 2016. Past performance is no guarantee of future results.



# Investment Manager Evaluation

	Rating Sheet					
Factor	Rating	Previous Rating	Comments			
Business	4	No Change	We continue to have an above average opinion of the firm's overall business, which has remained stable. Asset flows across strategies have remained steady and the approach to product development has been conservative, as reflected by the firm's desire to maintain products that are well-aligned with the investment teams' capabilities. In addition, we have a favorable view of the firm's structure, which promotes a wide distribution of ownership and leadership opportunities.			
Investment Staff	4	No Change	We believe the Investment Policy Committee (IPC) and industry analysts to be of a very high caliber. In addition to experiencing little turnover historically, the team has continued to demonstrate deep sector- and stock-specific expertise as well as a best-in-class approach to valuation and fundamental analysis. The firm continues to increase capabilities through the steady addition of staff members of the same high competency as those currently on the team.			
Investment Process	3	No Change	The process is centered on the concept of a "360 degree" review of companies, which involves a thorough vetting of company management, financial modeling of all portfolio candidates, and an extensive review of financial and corporate governance documentation. The depth of the team's sector and stock-specific expertise, coupled with the team's integration of the fixed income analysis, are factors that we view positively. However, the stock approval process, which requires the approval of all members of the Investment Policy Committee, is an area of continued monitoring. While this approval process insures a thorough vetting of ideas, it also risks potential losses of efficiency and accountability.			
Risk Management	3	No Change	Dodge & Cox developed a proprietary risk model to better assess risk from a portfolio and individual stock basis. This output is formally utilized in portfolio construction decisions made by the Investment Policy Committee. We view the increased risk awareness favorably.			
Operational Due Diligence	Pass	No Change	All systems, policies, and procedures are adequate.			

Rating Sheet				
Factor	Factor Rating Previous Comments			
Performance Analysis	3	No Change	Given that the strategy's investment approach focuses on companies with average to below-average valuations, we would expect some underperformance as valuation disparities widen. The market environment most conducive to the process is when these disparities narrow.	
Terms & Conditions	3	No Change	Fees for both the mutual fund (DODGX) and separate account are highly attractive for an institutional large cap value manager. Client service has remained satisfactory.	
Overall Rating	Buy	No Change	This strategy continues to be an attractive option for clients that seek an equity strategy with a slight value tilt and a high probability of outperforming the benchmark over a full market cycle. We have high conviction in Dodge & Cox's approach to research and portfolio construction and believe that it is well-positioned to continue adding value versus peers in its strategy universe.	

# Manager Updates and Monitoring

#### **Major Developments**

#### **Changes within the Investment Policy Committee**

There have been a number of changes, both recent and upcoming, within the Investment Policy Committee, which is the decision making body for the US equity strategy. The following should be noted:

- Kathleen G. McCarthy, Vice President, joined the IPC effective January 15, 2016. Ms. McCarthy joined Dodge & Cox in 2007 and is a shareholder of the firm
- Gregory Serrurier, member of both the IPC and GSIPC (the decision making bodies responsible for the US Equity and International Equity strategies, respectively), retired from the firm on June 30, 2016.
   Mr. Serrurier joined Dodge & Cox in 1984 and had over 30 years of investment experience. Prior to his retirement on June 30, 2016, Mr Serrurier transitioned off of his roles within the IPC and IIPC on March 31, 2016.
- Former Chairman, John Gunn, transitioned from his responsibilities on the IPC on May 1, 2016. He retired from the firm on December 31, 2016.

#### **Key Monitoring Points**

There are no key monitoring points to note at this time.

#### **Aon InForm Assessment**

The Aon InForm assessment of this strategy is summarized in the sections below. Where this raises an alert, denoted by a flag ( $\bowtie$ ), we have added further clarification where we believe the points raised are material or worth highlighting.

 Risk: Concentrated portfolios, such as this strategy, can yield higher volatility over time compared to more diversified peers. However, as demonstrated by our fundamental rating of "3" for this sub-category, we continue to believe that the appropriate tools and methods for measuring risk are utilized in a meaningful way and have been impactful on the portfolio construction process.

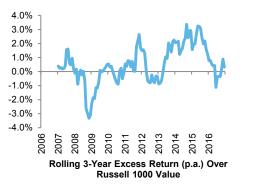
# Aon InForm Assessment to 31 Dec 2016

Business (✔)	Value	Current Quarter	Movement since last quarter
Employee Ownership	100.0%	✓	=
Last Change of Ownership		-	-
Institutional Client Base (Product)	75.6%	✓	=
Firm Net Asset Flow	\$5.2 billion	✓	=
Firm Gross Asset Outflow	-0.3%	$\checkmark$	=
Product Net Asset Flow	\$1.3 billion	$\checkmark$	=
Product Gross Asset Outflow	-0.3%	$\checkmark$	=
Product Importance to Firm	30.4%	$\checkmark$	=
Asset Class Importance to Firm	53.6%	✓	=
Investment Staff (✔)	Value	Current Quarter	Movement since last quarter
Team Size	Portfolio Managers: 10 Analysts: 27	✓	=
Staff Turnover	Portfolio Managers: 5.8% Analysts: 0.0%	✓	=
Experience	Portfolio Managers: 25 years Analysts: 16 years	✓	=
Investment Process (✓)	Value	Current Quarter	Movement since last quarter
Active Risk / Tracking Error	4.6	✓	=
Investment Process Consistency	16.9	✓	=
Style Consistency - Market Capitalization	\$39.8 billion	✓	=
Style Consistency - Value (Price-to-book)	2.0	$\checkmark$	7
Cash Allocation	5.1%	þ	=
Risk Management (わ)	Value	Current Quarter	Movement since last quarter
Maximum Drawdown	13.3%	þ	=
Downside Capture Volatility	9.0%	Ъ	=

# Aon InForm Assessment to 31 Dec 2016 (Continued)

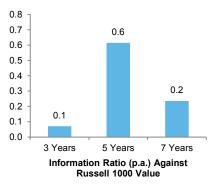
Performance Analysis (✔)	Value	Current Quarter	Movement since last quarter
Excess Return	0.9%	✓	7
Risk Adjusted Return	0.2	✓	7
Consistency of Outperformance vs Benchmark	68.3%	✓	=
Consistency of Outperformance vs Peers	52.5%	Þ	=

**Historical Consistency** 





Historical Risk-Adjusted Return



Source: eVestment

Terms & Conditions (✔)	Value	Current Quarter	Movement since last quarter
Management Fee	50 bps*	✓	=

\*Fee and assessment reflect segregated account sliding schedule at \$50 million.

Operations*	
Is the firm affiliated with a Broker/Dealer?	No
GIPS (Global Investment Performance Standards) Compliant?	Yes
Errors & Omissions Insurance?	Yes
Fiduciary Liability Insurance?	Yes

Note: The Aon InForm Assessment is based on data as of 31 December 2016 (obtained on 31 January 2017 from eVestment) unless stated differently. Product data completion is 100.0% and peer group average data completion is 83.4%. Changes in manager or peer group data completion may impact the Aon InForm Assessment. \*The output to the questions above (Operations section) is self-reported by the manager and obtained through eVestment and is provided for informational purposes only. **Past performance is no guarantee of future results**.

# **Glossary – Equity Manager Model Description**

The below table provides a more detailed description of the factors used in the above Aon InForm Assessment. Consultants will be pleased to answer questions should you require further information in relation to this report.

Factor Business	Description
Employee Ownership	Percentage of firm ownership held by staff
Last Change of Ownership	Date of most recent ownership change
Institutional Client Base (Product)	Percentage of assets under management ("AUM") held by institutional investors (pension funds, sovereign wealth funds, insurance companies, endowments, foundations etc.) at the product level
Firm and Product Net Asset Flow	Net asset flow over the last three years at the firm and product level. Product level factor incorporates an assessment relating to the strategy's capacity.
Firm and Product Gross Asset Outflow	Average gross asset outflow over the last three years at the firm and product level
Product and Asset Class Importance to Firm	The asset class and product AUM in relation to the firm level AUM

Investment Staff	
Team Size	The manager's investment related resources across various functions
Staff Turnover	Percentage of investment staff turnover (average over the last three years)
Experience	Number of years' worth of investment experience across various functions

Investment Process	
Active Risk / Tracking Error	Illustrates the product's tracking error i.e. how closely a manager follows its benchmark
Investment Process Consistency	Volatility of the product's performance relative to its peer group
Style Consistency	Displays the Market Capitalization and Price-to-Book of the product's underlying holdings and assesses if this is in line with its peers
Cash Allocation	Highest cash allocation over the past 3 years as a percentage of the portfolio
Risk Management	
Maximum Drawdown	Measures the distance between the peak and trough of the product's performance
Downside Capture Volatility	Degree of volatility of the product's long term downside capture. Downside capture relates to the manager's losses when its benchmark is down.

Performance Analysis	
Excess Return	Compares the excess return of the product against the manager's benchmark (longest available of 1, 2, 3, 5 or 7-years)
Risk Adjusted Return	Displays the Sharpe Ratio or Information Ratio (depending on the product's tracking error). These measures are different ways of assessing the product's return after adjusting for the level of risk taken.
Consistency of Outperformance	Looks at long term consistency of excess return in relation to the product's benchmark and peers
Terms & Conditions	
Management Fee	Management fee level relative to the product's peer group
Operations	
Operations Factors	These factors look across a number of non-investment related areas such as operational infrastructure, compliance and industry best practice

# **Ratings Explanation**

Below we describe the criteria which we use to rate fund management organizations and their specific investment products. Our manager research process assesses each component using both our qualitative and Aon InForm criteria. With the exception of Operational Due Diligence ("ODD"), each component is assessed as follows:

Qualitative Outcome	Aon InForm Outcome	
1 = Weak	✓	Pass: This component in isolation meets or exceed our desired criteria
2 = Average	Ъ	Alert: This component in isolation does not meet our desired criteria, or the lack of data on this component means that we are not able to judge whether
3 = Above Average		it meets our desired criteria
4 = Strong	-	<b>Not assessed</b> : There is a lack of data, which means that we are not able to assess this component, however we do not consider this in isolation to justify an Alert
	7	Component has improved over the quarter
	=	Component remains broadly unchanged over the quarter
	ų	Component has worsened over the quarter

The ODD factor is assigned a rating and can be interpreted as follows:

Overall ODD Rating	What does this mean?
A1	No material operational concerns – the firm's operations largely align with a well- controlled operating environment.
A2	The firm's operations largely align with a well-controlled operating environment, with limited exceptions – managers may be rated within this category due to resource limitations or where isolated areas do not align with best practice.
Conditional Pass ("CP")	Specific operational concerns noted that the firm has agreed to address in a reasonable timeframe; upon resolution, we will review the firm's rating.
F	Material operational concerns that introduce the potential for economic or reputational exposure exist – we recommend investors do not invest and/or divest current holdings.

Aon Hewitt previously assigned ODD ratings of pass, conditional pass, or fail for the ODD factor. We are in the process of refreshing all ODD ratings to the new terminology. During the transition period, the prior ratings, as follows, may persist in some deliverables until the ODD factor rating is converted to the above noted letter ratings.

- Pass Our research indicates that the manager has acceptable operational controls and procedures in place.
- Conditional Pass We have specific concerns that the manager needs to address within a reasonable established timeframe.
- **Fail** Our research indicates that the manager has critical operational weaknesses and we recommend that clients formally review the appointment.

An overall rating is then derived taking into account both the above outcomes for the product. The overall rating can be interpreted as follows:

<b>Overall Rating</b>	What does this mean?
Buy	We recommend clients invest with or maintain their existing allocation to our Buy rated high conviction products
Buy (Closed)	We recommend clients invest with or maintain their existing allocation to our Buy rated high conviction products, however it is closed to new investors
Qualified	A number of criteria have been met and we consider the investment manager to be qualified to manage client assets
Sell	We recommend termination of client investments in this product
In Review	The rating is under review as we evaluate factors that may cause us to change the current rating

The comments and assertions reflect our views of the specific investment product and our opinion of its quality. Differences between the qualitative and Aon InForm outcome can occur and if meaningful these will be explained within the Key Monitoring Points section. Although the Aon InForm Assessment forms a valuable part of our manager research process, it does not automatically alter the overall rating where we already have a qualitative assessment. Overall rating changes must go through our qualitative manager vetting process. Similarly, we will not issue a Buy recommendation before fully vetting the manager on a qualitative basis.

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# Aon InBrief: PIMCO

# Core Plus - Total Return Full Authority

Review Date	Overall Rating	Previous Overall Rating
February 2017	Buy	No Change

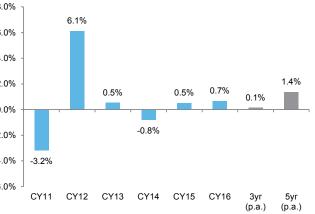
## **Overall Rating**

PIMCO is a substantial and well-resourced fixed income manager with a good long-term record in delivering on its performance objectives. PIMCO proactively rewards its top performing staff and has supplemented this with competitive performance related awards. Their portfolio managers are high caliber investors that we believe will deliver on the performance objectives of the strategy going forward.

## **Component Ratings**

	Rating	Previous Rating	Aon InForm Assessment
Business	3	No Change	✓
Staff	3	No Change	Ъ
Process	3	No Change	Ъ
Risk	4	No Change	✓
ODD	A1 Pass	No Change	-
Performance	3	No Change	Ъ
T&C	2	No Change	Ъ

#### Relative Performance to 31 Dec 2016



Composite performance (USD) is gross of fees relative to Bloomberg Barclays US Aggregate. CY = calendar year. Source: eVestment

# Firm and Strategy Summary

Head Office Location	Newport Beach, CA, US	Parent Name	Allianz Asset Management of America L.P.
Firm AUM	\$1,467.0 billion	Investment Staff	696
Fixed Income AUM	\$1,398.1 billion	Fixed Income Staff	687
Team Location	Newport Beach, CA, US	Team Head	Scott Mather, Mark Kiesel, Mihir Worah
Strategy Inception	March 1971	Strategy Size	\$154.7 billion
Benchmark	Bloomberg Barclays US Aggre	egate	
Performance Objective	100 – 150 bps p.a.		
Risk Tolerance Target	150 – 250 bps p.a.		
Opportunity Set	Government Bonds, Agencie Securitized Assets, EMD, Loa	•	ent Grade Credit, High Yield, Currency and Derivatives

Note: AUM data as of 31 December 2016. Staff data as of 30 September 2016. Past performance is no guarantee of future results.



# **Investment Manager Evaluation**

Rating Sheet			
Factor	Rating	Previous Rating	Comments
Business	3	No Change	PIMCO is majority-owned by Allianz SE. It enjoys significant independence and has remained consistently profitable over time. PIMCO continues to diversify its book of business away from its flagship total return strategies by supporting more specialized fixed income strategies. We believe the departure of Bill Gross from PIMCO in 2014 will accelerate this diversification. We also think that the appointment of Dan Ivascyn as Group CIO reduces uncertainty over the future of PIMCO. The compensation of key senior professionals is at the high end of its peer group but, we believe, is aligned with clients' interests.
Investment Staff	3	No Change	PIMCO has appointed three managing directors as portfolio managers to this strategy. Scott Mather is the lead portfolio manager and is CIO of US Core Strategies. He is supported by Mark Kiesel (CIO of Global Credit) and Mihir Worah (CIO of Real Return and Asset Allocation). The portfolio management team is highly capable, well-tenured and experienced.
Investment Process	3	No Change	The process combines macro-economic views with credit research and seeks to add incremental value from positions taken across a wide range of bond markets. PIMCO is extremely innovative in seeking out new sources of value and exploiting these to increase the consistency of returns. The Investment Committee (IC)—made up of portfolio managers and the deputy CIOs—meets four times a week to formulate the firm's global investment views and to analyze ideas from both a top-down and bottom-up perspective.
Risk Management	4	No Change	Bill De Leon is PIMCO's Head of Risk Management. Risk management is a hallmark of PIMCO and is fully integrated within the investment team. The manager's focus on managing risk manifests itself in the design of the model portfolios, the portfolio construction process and the implementation phase.

Rating Sheet			
Factor	Rating	Previous Rating	Comments
Operational Due Diligence	A1 Pass	No Change	PIMCO is a global investment manager that has implemented institutional levels of infrastructure, controls, and oversight. The firm demonstrates a well-controlled operating environment, including appropriate governance and oversight structures, regulatory compliance capabilities, and technology and security protocols. Its controls and processes align with what AHIC would expect to see in a large multi-national manager.
Performance Analysis	3	No Change	The performance of the strategy compares favorably to the peer group. While the portfolio composition deviates significantly from the benchmark, its statistical risk measures are consistent with the return objective and its investment guidelines. PIMCO has demonstrated the ability to meet or exceed its return objectives on a risk-adjusted basis over most trailing periods.
Terms & Conditions	2	No Change	PIMCO has a large staff of dedicated and knowledgeable client service professionals resulting in positive feedback from clients. PIMCO's fees are average relative to the peer group.
Overall Rating	Buy	No Change	PIMCO is a substantial and well-resourced fixed income manager with a good long-term record in delivering on its performance objectives. PIMCO proactively rewards its top performing staff and has supplemented this with competitive performance related awards. Their portfolio managers are high caliber investors that we believe will deliver on the performance objectives of the strategy going forward.

# Aon InForm Assessment to 31 Dec 2016

Business (✔)	Value	Current Quarter	Movement since last quarter
Employee Ownership		-	-
Last Change of Ownership		-	-
Institutional Client Base (Product)	85.9%	✓	=
Firm Net Asset Flow	-\$45.9 billion	Ъ	=
Firm Gross Asset Outflow	-3.6%	✓	=
Product Net Asset Flow	-\$20.9 billion	Ъ	=
Product Gross Asset Outflow	-1.8%	✓	=
Product Importance to Firm	10.5%	✓	=
Asset Class Importance to Firm	95.3%	✓	=

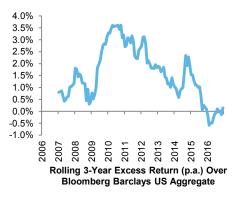
Investment Staff (わ)	Value	Current Quarter	Movement since last quarter
Team Size	Portfolio Managers: 235 Analysts: 117	✓	=
Staff Turnover	Portfolio Managers: 12.8% Analysts: 11.8%	Ъ	=
Experience	Portfolio Managers: 15 years Analysts: 13 years	Ъ	=
Investment Process (沿)	Value	Current	Movement since
Investment Process Consistency	11.8	Quarter	last quarter
Correlation of Excess Return to Benchmark	-0.1		=
	-0.1	•	-
Style Consistency – Modified Duration		-	-

Risk Management (✔)	Value	Current Quarter	Movement since last quarter
Maximum Drawdown	2.1%	✓	=
Downside Capture Volatility	21.0%	$\checkmark$	=

# Aon InForm Assessment to 31 Dec 2016 (Continued)

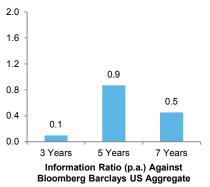
Performance Analysis (원)	Value	Current Quarter	Movement since last quarter
Excess Return	0.9%	Ъ	=
Risk Adjusted Return	0.5	Ъ	=
Consistency of Outperformance vs Benchmark	92.5%	✓	=
Consistency of Outperformance vs Peers	43.3%	þ	=

**Historical Consistency** 





Historical Risk-Adjusted Return



Source: eVestment

Terms & Conditions (원)	Value	Current Quarter	Movement since last quarter
Management Fee	44 bps*	Ъ	=

\*Fee and assessment reflect segregated account sliding schedule at \$50 million.

Operations*	
Is the firm affiliated with a Broker/Dealer?	Yes
GIPS (Global Investment Performance Standards) Compliant?	Yes
Errors & Omissions Insurance?	Yes
Fiduciary Liability Insurance?	Yes

Note: The Aon InForm Assessment is based on data as of 31 December 2016 (obtained on 2 February 2017 from eVestment) unless stated differently. Product data completion is 92.0% and peer group average data completion is 87.0%. Changes in manager or peer group data completion may impact the Aon InForm Assessment. \*The output to the questions above (Operations section) is self-reported by the manager and obtained through eVestment and is provided for informational purposes only. **Past performance is no guarantee of future results**.

# **Glossary – Fixed Income Manager Model Description**

The below table provides a more detailed description of the factors used in the above Aon InForm Assessment. Consultants will be pleased to answer questions should you require further information in relation to this report.

Factor Business	Description
Employee Ownership	Percentage of firm ownership held by staff
Last Change of Ownership	Date of most recent ownership change
Institutional Client Base (Product)	Percentage of assets under management ("AUM") held by institutional investors (pension funds, sovereign wealth funds, insurance companies, endowments, foundations etc.) at the product level
Firm and Product Net Asset Flow	Net asset flow over the last three years at the firm and product level. Product level factor incorporates an assessment relating to the strategy's capacity.
Firm and Product Gross Asset Outflow	Average gross asset outflow over the last three years at the firm and product level
Product and Asset Class Importance to Firm	The asset class and product AUM in relation to the firm level AUM

Investment Staff	
Team Size	The manager's investment related resources across various functions
Staff Turnover	Percentage of investment staff turnover (average over the last three years)
Experience	Number of years' worth of investment experience across various functions

Investment Process	
Investment Process Consistency	Volatility of the product's performance relative to its peer group
Correlation of Excess Return to Benchmark	Correlation of product's excess return (alpha) to its benchmark.
Style Consistency – Modified Duration	The Modified Duration of a product indicates how sensitive the product is relative to a change in interest rates. Our measure of Style Consistency measures the modified duration of the manager's portfolio relative to the product's stated mandate.
Risk Management	
Maximum Drawdown	Measures the distance between the peak and trough of the product's performance relative to its benchmark
Downside Capture Volatility	Degree of volatility of the product's long term downside capture. Downside capture relates to the manager's losses when its benchmark is down

Performance Analysis	
Excess Return	Compares the excess return of the product against the manager's benchmark (longest available of 1, 2, 3, 5 or 7-years)
Risk Adjusted Return	Displays the Information Ratio against the manager's benchmark (longest available of 1, 2, 3, 5 or 7-years). Information Ratio is a way of assessing the product's return after adjusting for the level of risk taken.
Consistency of Outperformance	Looks at long term consistency of excess return in relation to the product's benchmark and peers
Terms & Conditions	
Management Fee	Management fee level relative to the product's peer group
Operations	
Operations Factors	These factors look across a number of non-investment related areas such as operational infrastructure, compliance and industry best practice

# **Ratings Explanation**

Below we describe the criteria which we use to rate fund management organizations and their specific investment products. Our manager research process assesses each component using both our qualitative and Aon InForm criteria. With the exception of Operational Due Diligence ("ODD"), each component is assessed as follows:

Qualitative Outcome	Aon InForm Outcome	
1 = Weak	✓	Pass: This component in isolation meets or exceed our desired criteria
2 = Average	þ	<b>Alert</b> : This component in isolation does not meet our desired criteria, or the lack of data on this component means that we are not able to judge whether
3 = Above Average		it meets our desired criteria
4 = Strong	-	<b>Not assessed</b> : There is a lack of data, which means that we are not able to assess this component, however we do not consider this in isolation to justify an Alert
	7	Component has improved over the quarter
	=	Component remains broadly unchanged over the quarter
	4	Component has worsened over the quarter

The ODD factor is assigned a rating and can be interpreted as follows:

Overall ODD Rating	What does this mean?
A1	No material operational concerns – the firm's operations largely align with a well- controlled operating environment.
A2	The firm's operations largely align with a well-controlled operating environment, with limited exceptions – managers may be rated within this category due to resource limitations or where isolated areas do not align with best practice.
Conditional Pass ("CP")	Specific operational concerns noted that the firm has agreed to address in a reasonable timeframe; upon resolution, we will review the firm's rating.
F	Material operational concerns that introduce the potential for economic or reputational exposure exist – we recommend investors do not invest and/or divest current holdings.

Aon Hewitt previously assigned ODD ratings of pass, conditional pass, or fail for the ODD factor. We are in the process of refreshing all ODD ratings to the new terminology. During the transition period, the prior ratings, as follows, may persist in some deliverables until the ODD factor rating is converted to the above noted letter ratings.

- Pass Our research indicates that the manager has acceptable operational controls and procedures in place.
- Conditional Pass We have specific concerns that the manager needs to address within a reasonable established timeframe.
- **Fail** Our research indicates that the manager has critical operational weaknesses and we recommend that clients formally review the appointment.

An overall rating is then derived taking into account both the above outcomes for the product. The overall rating can be interpreted as follows:

<b>Overall Rating</b>	What does this mean?
Buy	We recommend clients invest with or maintain their existing allocation to our Buy rated high conviction products
Buy (Closed)	We recommend clients invest with or maintain their existing allocation to our Buy rated high conviction products, however it is closed to new investors
Qualified	A number of criteria have been met and we consider the investment manager to be qualified to manage client assets
Sell	We recommend termination of client investments in this product
In Review	The rating is under review as we evaluate factors that may cause us to change the current rating

The comments and assertions reflect our views of the specific investment product and our opinion of its quality. Differences between the qualitative and Aon InForm outcome can occur and if meaningful these will be explained within the Key Monitoring Points section. Although the Aon InForm Assessment forms a valuable part of our manager research process, it does not automatically alter the overall rating where we already have a qualitative assessment. Overall rating changes must go through our qualitative manager vetting process. Similarly, we will not issue a Buy recommendation before fully vetting the manager on a qualitative basis.

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