

# MANAGER SEARCH REPORT

## City of Los Angeles

Passive Bond, Passive Large Cap Equity, Passive Mid Cap Equity, Passive Small Cap Equity

January 2015



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## Introduction

Mercer has been appointed by City of Los Angeles to assist in the evaluation and selection of a Passive Bond, Passive Large Cap Equity, Passive Mid Cap Equity, and Passive Small Cap Equity investment manager. The Board approved a new investment search policy as well as timetable for the implementation of searches over the next several years. Per this timetable, in 2015, searches for all of the Plan's passive investment managers will be conducted.

The investment managers in this report are the remaining candidates selected from a large field of investment managers that submitted information to Mercer's proprietary Global Investment Manager Database (GIMD) and from Lipper Investment Management. GIMD stores all types of manager information: firm-wide demographic details, investment product details, performance, and Mercer research such as our meeting notes, news items and manager ratings. There are over 5,300 investment managers in our database that manage more than 26,600 different investment strategies.

This report presents information on each firm covering organizational data and management style, as well as a quantitative analysis of historical performance. Return history information is provided through September 30, 2014. Returns for periods greater than one year are annualized. Portfolio characteristics are representative of a typical portfolio submitted by the investment manager as of September 30, 2014.

## Summary and Screening Process

The universe of investment options to be considered included the Mercer IC's proprietary institutional Global Investment Management Database (GIMD) and Lipper Investment Management. Mercer IC utilized the Manager Performance Analytics System (MPA) to further analyse the data. Data is as of September 30, 2014, unless otherwise stated. All selected funds must be able to facilitate daily pricing and liquidity requirements.

The funds profiled in this report were selected as being the most suitable based on our recommended minimum qualifications for each of the searches which follow the principles outlined in the City of Los Angeles Investment Policy Statement's Investment Selection and Termination section. These recommended minimum qualification screens are tailored to each specific mandate and are based on our expertise conducting similar searches. These minimum requirements broadly establish that prospective investment strategies are accessible in the recommended investment vehicle type; they are passively managed, seek to track closely the performance and characteristics of their respective indices; hold a sufficient, yet not too small, amount of assets so that the Plan would not represent a significant percentage (more than 20%) of the particular strategy total assets; and maintain investment expenses that are low to minimize net tracking error.

The Mercer Manager Search Process combines both quantitative and qualitative phases in an effort to identify worthy contenders. Mercer maintains Research Qualified Lists by asset class and manager style. These lists represent Mercer IC's best thinking on which managers have the highest probability of future success. The lists are proprietary and the process is dynamic in nature; and involves a unique blend of the combined knowledge of multiple investment consultants and over 100 manager research staff worldwide. Representatives from each of these groups make up the Manager Rating Committee. The Manager Rating Committee has the ultimate responsibility of deciding which managers and strategies are placed on the Mercer IC Manager Research Qualified Lists.

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For Mercer's conflict of interest disclosures, contact your Mercer representative or see [www.mercer.com/conflictsofinterest](http://www.mercer.com/conflictsofinterest).

## Universe Notes

Mercer's universes are intended to provide collective samples of strategies that best allow for robust peer group comparisons over a chosen timeframe. Mercer does not assert that the peer groups are wholly representative of and applicable to all strategies available to investors.

### Risk Warnings

The value of your investments can go down as well as up, and you may not get back the amount you have invested. Investments denominated in a foreign currency will fluctuate with the value of the currency. Certain investments, such as securities issued by small capitalization, foreign and emerging market issuers, real property, and illiquid, leveraged or high-yield funds, carry additional risks that should be considered before choosing an investment manager or making an investment decision.

Style analysis graph time periods may differ reflecting the length of performance history available. Funds with three years or fewer of performance history will not appear in the style analysis section.

Investment advisory services provided by Mercer Investment Consulting, Inc.

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## Passive Bond

### Screening Process

The table on the next page shows the candidates considered for this passive bond fund manager search. The estimated mandate size is \$178 million<sup>1</sup> and the recommended vehicle type is mutual fund.

Search minimum criteria used in the screening:

- Availability in mutual fund vehicle
- Vehicle open to new investors
- Vehicle compatible with Empower platform
- Strategy track record of 5 years or longer (specific vehicle may be shorter)
- Tracks the Barclays US Aggregate Bond Index
- Annualized tracking error<sup>2</sup> relative to the benchmark should be within +/- 0.30% over the 7- and 10-year periods (or longest available)
- Minimum assets under management in strategy (all share classes) of \$1.5 billion or greater
- Investment expense ratio equal to or less than 0.20%

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<sup>1</sup> As of 6/30/2014.

<sup>2</sup> Tracking error for these purposes is defined as the benchmark return less the subject fund return.





## Passive Bond

### Candidates

<b>Firm</b>	<b>Fund</b>	<b>Benchmark</b>
BlackRock	BlackRock Bond Index Fund K	Barclays US Aggregate Bond
Dreyfus/ Mellon Capital Management <sup>1</sup>	Dreyfus Bond Market Index Fund Basic	Barclays US Aggregate Bond
Northern Trust Asset Management	Northern Bond Index Fund	Barclays US Aggregate Bond
Principal Financial Group	Principal Bond Market Index Fund Inst	Barclays US Aggregate Bond
State Street Global Advisors	State Street Aggregate Bond Index Portfolio	Barclays US Aggregate Bond
TIAA-CREF	TIAA-CREF Bond Index Fund Inst	Barclays US Aggregate Bond
Vanguard Group	Vanguard Total Bond Market Index Fund Inst Plus	Barclays US Aggregate Float Adj

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<sup>1</sup> Investment professionals from Mellon Capital Management Corporation are dual employees of Dreyfus and Mellon Capital, and apply Mellon Capital's proprietary investment process in managing the Fund for Dreyfus. Mellon Capital is a wholly owned indirect subsidiary of BNY Mellon. Dreyfus is a wholly owned subsidiary of BNY Mellon.

## Passive Bond

### **Benchmark Descriptions**

#### **Barclays U.S. Aggregate Bond**

The Barclays U.S. Aggregate Bond Index covers the U.S. investment-grade, fixed-rate bond market and includes government and corporate bonds, agency mortgage pass-through securities, asset-backed issues, and ERISA-qualified CMBS. Price, coupon and total return are reported on a month-end to month-end basis. All returns are market value-weighted inclusive of accrued income.

#### **Barclays U.S. Aggregate Float Adj**

The underlying constituents of this alternative weight index will be the same as the flagship US Aggregate Index and conform to the same general index conventions (i.e., rules based, market value weighted, monthly reset, etc). The only difference is that this index will deduct net Federal Reserve holdings of US agencies and MBS passthroughs held in Federal Reserve System Open Market Account (SOMA) accounts. Both indices will exclude Federal Reserve holdings of US Treasuries.

## Passive Bond

### Overview

Fund	Portfolio Manager	Portfolio Manager Tenure	Index Technique	Targeted Tracking Error	Securities Lending	Mercer Preferred Index Fund Provider
BlackRock	Scott Radell James Mauro	2009 2011	Sampling	5-10 bps	Yes	
Dreyfus	Nancy Rogers Zandra Zelaya	2010 2013	Sampling	10 bps	Yes	
Northern	Louis D'Arienzo Brandon P. Ferguson	2003 2007	Sampling	N/A <sup>1</sup>	No	✓
Principal	David C. Kwan Zandra Zelaya Gregory A. Lee	2009 2009 2010	Sampling	15 bps	No	
State Street	Mahesh Jayakumar Karen Tsang	2014 2014	Sampling	N/A	Yes	✓
TIAA-CREF	Kevin Chen James Tsang	2009 2011	Sampling	17 bps <sup>2</sup>	No	
Vanguard	Joshua C. Barrickman	2013	Sampling	N/A <sup>3</sup>	No	✓

<sup>1</sup> Data is not publicly disclosed.

<sup>2</sup> Actual 3-year tracking error.

<sup>3</sup> Vanguard does not set specific tracking error targets for funds. When invested in Vanguard index funds, shareholders should expect a return that closely approximates the funds' respective index return, less management fees and an allowance for transaction costs.

## Passive Bond

### Characteristics as of 9/30/2014

Fund	Strategy Assets (\$MM)	Strategy Inception	Mutual Fund Assets (\$MM)	Mutual Fund Inception	Ticker	Net Expense Ratio <sup>1</sup>	On Empower Platform	Revenue Sharing	Net Expense Ratio less Revenue Sharing
BlackRock	58,691	Jul-93	152	Jul-93	WFBIX	0.12%	Yes	0.00%	0.12%
Dreyfus	29,834 <sup>2</sup>	Jun-90	2,072	Nov-93	DBIRX	0.15%	Yes	0.00%	0.15%
Northern	27,727	Jun-87	2,300	Feb-07	NOBOX	0.16%	Yes	0.06%	0.10%
Principal	29,834 <sup>3</sup>	Dec-09	114	Dec-09	PNIIIX	0.24% <sup>4</sup>	Yes	0.10%	0.14%
State Street	38,009	Aug-96	76	Sep-14	SSFEX	0.09%	No <sup>5</sup>	0.00%	0.09%
TIAA-CREF	5,474	Sep-09	5,474	Sep-09	TBIIX	0.12%	Yes	0.00%	0.12%
Vanguard	132,700	Dec-86	132,700	Dec-86	VBMPX	0.05%	Yes	0.00%	0.05%

<sup>1</sup> Some expense ratios may currently have an expense cap or fee waiver that can be changed by the manager at any time.

<sup>2</sup> Reflects the strategy AUM by Mellon Capital Management, the sub-advisor.

<sup>3</sup> Reflects the strategy AUM by Mellon Capital Management, the sub-advisor.

<sup>4</sup> As of 12/31/2014.

<sup>5</sup> Currently being negotiated

## Passive Bond

### Portfolio Statistics as of 9/30/2014

Fund	Number of Securities	Yield to Maturity (%)	Years to Maturity	Average Coupon (%)	Average Quality	Effective Duration (yrs)	% Off Benchmark Exposure	% Cash
BlackRock	1,904	2.3	7.2	3.1	AA	5.2	1%	1%
Dreyfus	1,707	2.4	7.7	3.4	AA1/AA2	5.6	3%	3%
Northern	2,918	2.2	7.1	N/A <sup>1</sup>	AA	5.2	0%	0%
Principal	1,180	2.3	7.7	3.4	AA	5.4	0%	0%
State Street	462	N/A	7.7	N/A	AA2	5.6	N/A	N/A
TIAA-CREF	4,985	2.3	7.3	3.0	AA1/AA2	5.6	1%	1%
<b><i>Barclays US Aggregate Bond</i></b>	<b>8,958</b>	<b>2.4</b>	<b>7.7</b>	<b>3.3</b>	<b>AA1/AA2</b>	<b>5.6</b>	<b>N/A</b>	<b>N/A</b>
Vanguard	7,584	2.2	7.8	3.4	N/A <sup>2</sup>	5.7	0%	0%
<b><i>Barclays US Agg Float Adj</i></b>	<b>8,958</b>	<b>2.4</b>	<b>7.7</b>	<b>3.3</b>	<b>AA1/AA2</b>	<b>5.6</b>	<b>N/A</b>	<b>N/A</b>

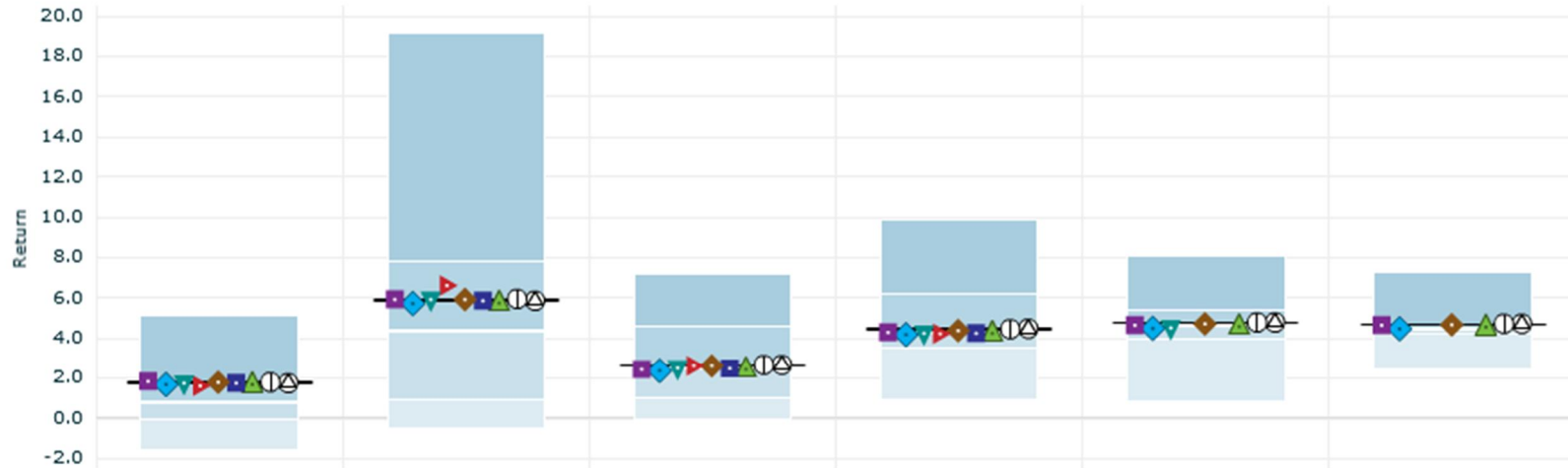
<sup>1</sup> Data is not publicly disclosed.

<sup>2</sup> Vanguard does not provide average credit quality for fixed income portfolios.

## Passive Bond

Return in \$US (after fees) over 3 mths, 1 yr, 3 yrs, 5 yrs, 7 yrs, 10 yrs ending December-14

Comparison with the Mutual Fund US Fixed Index universe (Percentile Ranking)



	3 mths (%)	1 yr (%)	3 yrs (%pa)	5 yrs (%pa)	7 yrs (%pa)	10 yrs (%pa)
BlackRock	1.8 (20)	5.9 (37)	2.4 (53)	4.3 (47)	4.7 (46)	4.7 (25)
Dreyfus	1.7 (32)	5.7 (45)	2.4 (55)	4.2 (58)	4.5 (58)	4.5 (50)
Northern	1.8 (27)	5.9 (38)	2.5 (47)	4.2 (53)	4.5 (56)	-
Principal	1.6 (34)	6.6 (30)	2.6 (43)	4.2 (56)	-	-
SSgA Comp.	1.8 (24)	5.9 (37)	2.6 (43)	4.4 (46)	4.7 (41)	4.7 (25)
TIAA-CREF	1.7 (27)	5.9 (40)	2.5 (49)	4.3 (49)	-	-
Vanguard	1.7 (32)	5.8 (44)	2.5 (52)	4.2 (54)	4.6 (53)	4.6 (30)
BCUSAG	1.8 (24)	6.0 (36)	2.7 (43)	4.5 (45)	4.8 (39)	4.7 (25)
SplicedFIAdj	1.8 (26)	5.9 (41)	2.7 (43)	4.5 (45)	4.8 (38)	4.7 (25)
5th Percentile	5.1	19.2	7.2	9.8	8.1	7.3
Upper Quartile	1.8	7.8	4.6	6.2	5.4	4.7
Median	0.9	4.4	2.5	4.3	4.6	4.5
Lower Quartile	0.0	1.0	1.1	3.5	4.0	4.2
95th Percentile	-1.5	-0.5	0.0	1.0	0.8	2.4
Number	177	164	117	92	58	21

The information contained within the exhibit was derived by Mercer using content supplied by Lipper, a Thomson Reuters Company.



## Passive Bond

### Performance as of 12/31/2014

Fund	One Quarter	One Year	Three Years	Five Years	Seven Years	Ten Years
BlackRock Bond Index Fund K	1.8	5.9	2.4	4.3	4.7	4.7
Dreyfus Bond Market Index Fund Basic	1.7	5.7	2.4	4.2	4.5	4.5
Northern Bond Index Fund	1.8	5.9	2.5	4.2	4.5	--
Principal Bond Market Index Fund Inst	1.6	6.6	2.6	4.2	--	--
State Street Aggregate Bond Index Portfolio <sup>1</sup>	1.8	5.9	2.6	4.4	4.7	4.7
TIAA-CREF Bond Index Fund Inst	1.7	5.9	2.5	4.3	--	--
<b><i>Barclays US Aggregate Bond</i></b>	<b>1.8</b>	<b>6.0</b>	<b>2.7</b>	<b>4.5</b>	<b>4.8</b>	<b>4.7</b>
Vanguard Total Bond Market Index Fund Inst Plus <sup>2</sup>	1.7	5.8	2.5	4.2	4.6	4.6
<b><i>Spliced Barclays USAgg Float Adj<sup>3</sup></i></b>	<b>1.8</b>	<b>5.9</b>	<b>2.7</b>	<b>4.5</b>	<b>4.8</b>	<b>4.7</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the net-of-fee composite through September 30, 2014, and the actual fund thereafter. The composite does not include any mutual fund performance.

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Investor share class (expense ratio: 0.20%).

<sup>3</sup> Vanguard Total Bond Market is benchmarked against Barclays US Aggregate Bond Index through December 31, 2009 and Barclays US Aggregate Float Adjusted Index thereafter.

## Passive Bond

### Calendar Year Performance

Fund	2007	2008	2009	2010	2011	2012	2013	2014
BlackRock Bond Index Fund K	7.2	5.9	5.2	6.8	7.5	3.9	-2.4	5.9
Dreyfus Bond Market Index Fund Basic	7.1	5.8	4.7	6.2	7.7	3.9	-2.3	5.7
Northern Bond Index Fund	--	5.8	4.6	6.2	7.6	4.1	-2.3	5.9
Principal Bond Market Index Fund Inst	--	--	--	5.9	7.5	3.9	-2.4	6.6
State Street Aggregate Bond Index Portfolio <sup>1</sup>	6.9	5.3	5.9	6.5	7.7	4.2	-2.1	5.9
TIAA-CREF Bond Index Fund Inst	--	--	--	6.3	7.6	4.1	-2.3	5.9
<b><i>Barclays US Aggregate Bond</i></b>	<b>7.0</b>	<b>5.2</b>	<b>5.9</b>	<b>6.6</b>	<b>7.9</b>	<b>4.2</b>	<b>-2.0</b>	<b>6.0</b>
Vanguard Total Bond Market Index Fund Inst Plus <sup>2</sup>	6.9	5.1	5.9	6.4	7.6	4.0	-2.3	5.8
<b><i>Spliced Barclays USAgg Float Adj<sup>3</sup></i></b>	<b>7.0</b>	<b>5.2</b>	<b>5.9</b>	<b>6.6</b>	<b>7.9</b>	<b>4.3</b>	<b>-2.0</b>	<b>5.9</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the net-of-fee composite through September 30, 2014, and the actual fund thereafter. The composite does not include any mutual fund performance.

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Investor share class (expense ratio: 0.20%).

<sup>3</sup> Vanguard Total Bond Market is benchmarked against Barclays US Aggregate Bond Index through December 31, 2009 and Barclays US Aggregate Float Adjusted Index thereafter.



## Passive Bond

### Tracking Error vs. Respective Benchmark as of 12/31/2014

Fund	One Year	Three Years	Five Years	Seven Years	Ten Years
BlackRock Bond Index Fund K	0.1	0.1	0.2	0.3	0.3
Dreyfus Bond Market Index Fund Basic	0.1	0.1	0.1	0.4	0.3
Northern Bond Index Fund	0.1	0.1	0.2	0.4	--
Principal Bond Market Index Fund Inst	0.9	0.5	0.5	--	--
State Street Aggregate Bond Index Portfolio <sup>1</sup>	0.0	0.0	0.0	0.1	0.1
TIAA-CREF Bond Index Fund Inst	0.1	0.1	0.1	--	--
Vanguard Total Bond Market Index Fund Inst Plus <sup>2</sup>	0.1	0.1	0.2	0.2	0.2

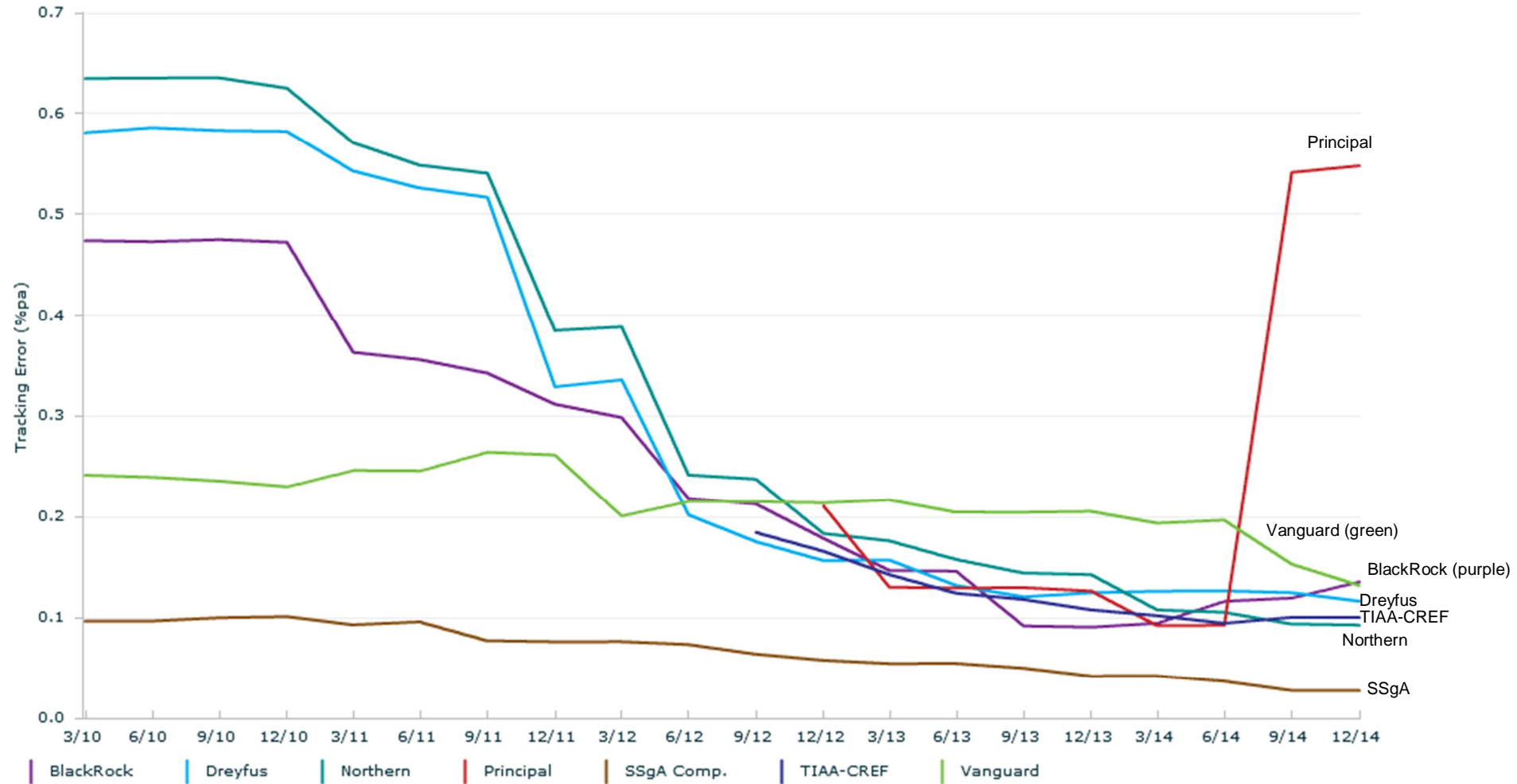
This table presents the tracking ability of the manager versus their respective index covering the time periods indicated above. Tracking error is the annualized standard deviation of quarterly excess returns.

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the net-of-fee composite through September 30, 2014, and the actual fund thereafter. The composite does not include any mutual fund performance.

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Investor share class (expense ratio: 0.20%).

## Passive Bond

Rolling 3 yr Tracking Error vs. Barclays US Aggregate in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)



The information contained within the exhibit was derived by Mercer using content supplied by Lipper, a Thomson Reuters Company.

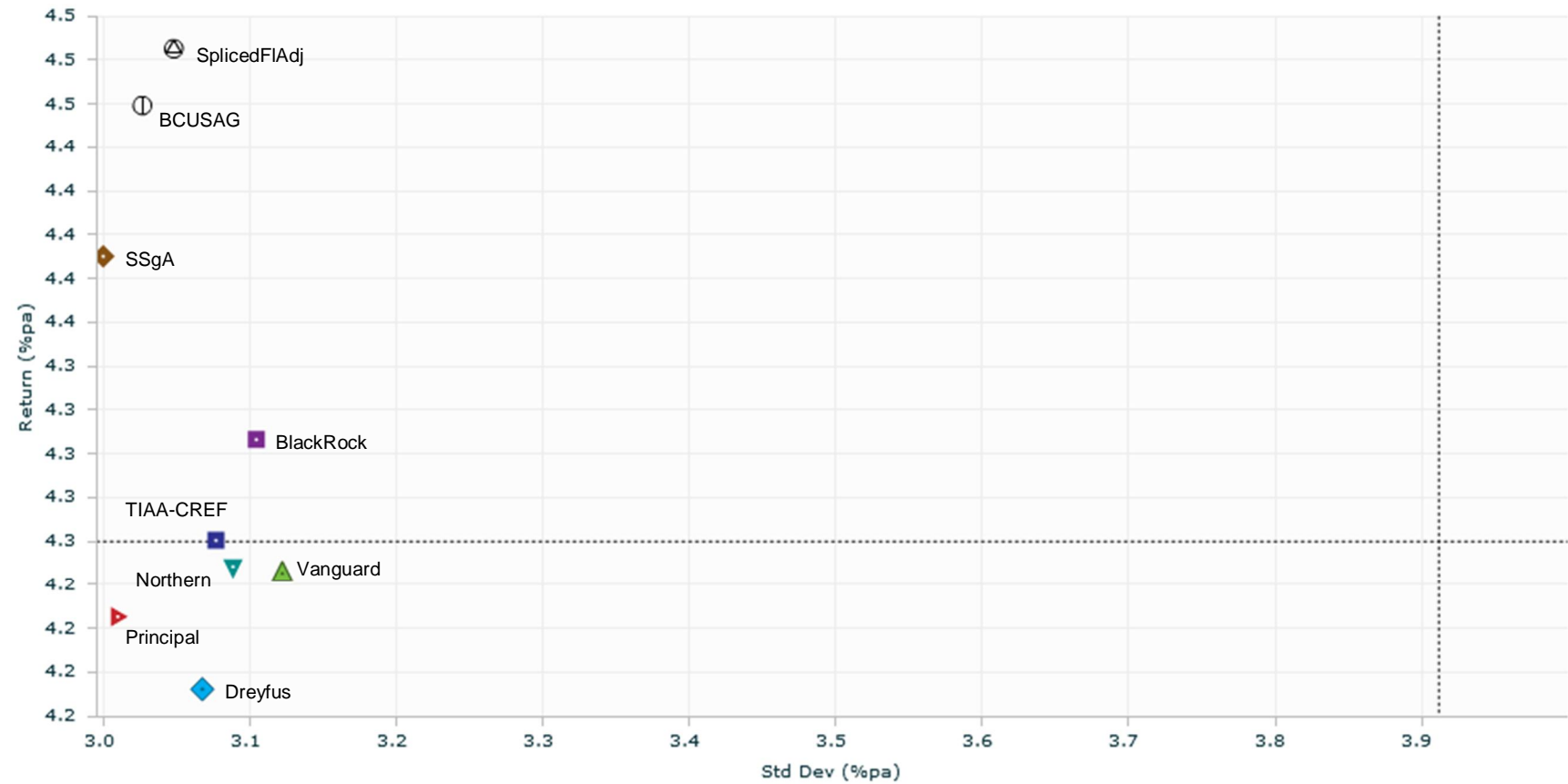
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## Passive Bond

Return and Std Deviation in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)

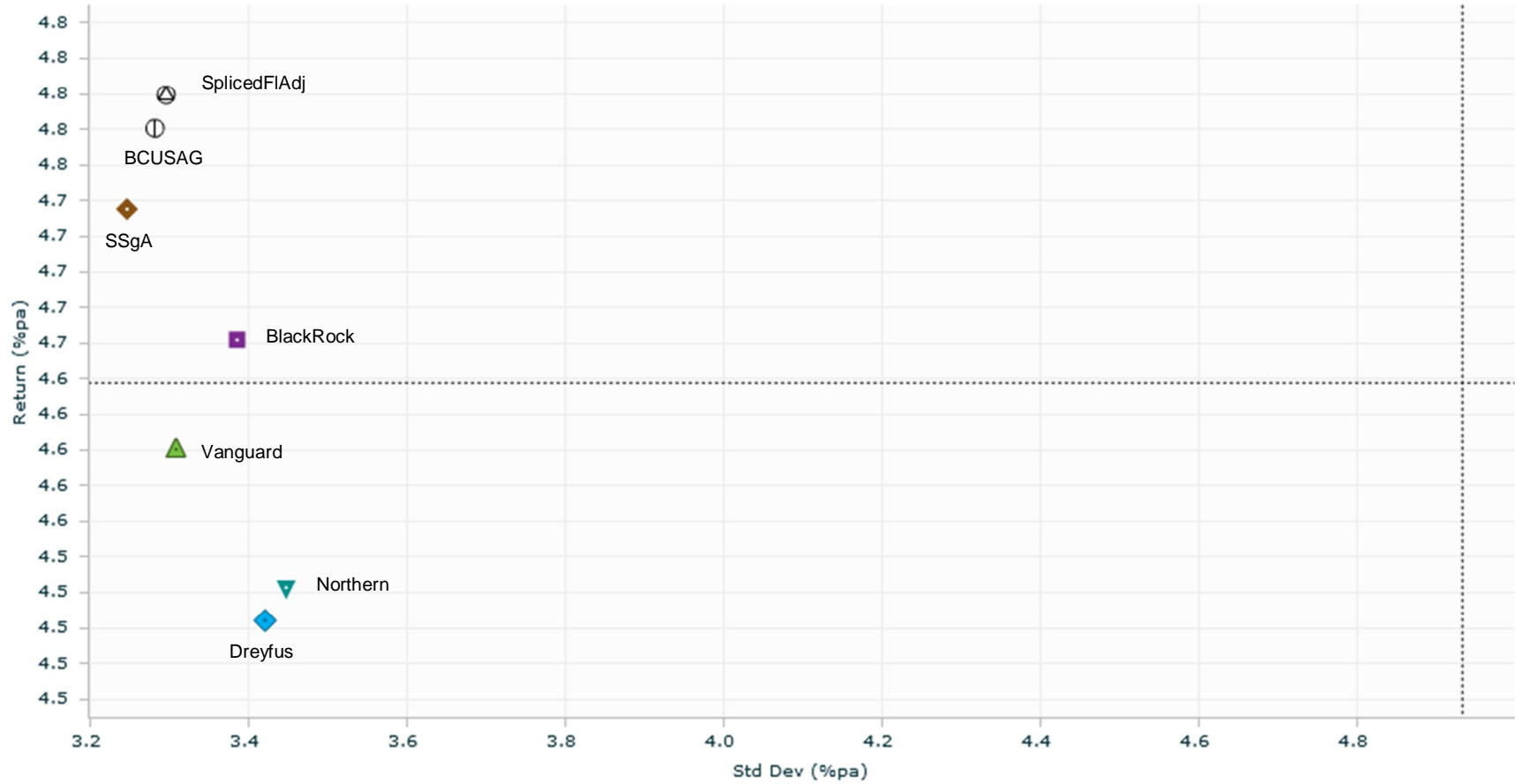
Comparison with the Mutual Fund US Fixed Index universe



## Passive Bond

Return and Std Deviation in \$US (after fees) over 7 yrs ending December-14 (quarterly calculations)

Comparison with the Mutual Fund US Fixed Index universe



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## Passive Large Cap Equity

### Screening Process

The table on the next page shows the candidates considered for this passive large cap equity fund manager search. The estimated mandate size is \$1,644 million<sup>1</sup> and the recommended vehicle type is mutual fund.

Search minimum criteria used in the screening:

- Availability in mutual fund vehicle
- Vehicle open to new investors
- Vehicle compatible with Empower platform
- Strategy track record of 5 years or longer (specific vehicle may be shorter)
- Tracks the S&P 500 Index
- Annualized tracking error<sup>2</sup> relative to the benchmark should be within +/- 0.30% over the 7- and 10-year periods (or longest available)
- Minimum assets under management in strategy (all share classes) of \$10 billion or greater
- Investment expense ratio equal to or less than 0.10%

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<sup>1</sup> As of 6/30/2014.

<sup>2</sup> Tracking error for these purposes is defined as the benchmark return less the subject fund return.



## Passive Large Cap Equity

Fund	Passive U.S. Large Cap Equity Mutual Fund	Open to the City & Compatible with Empower	Track Record 5 years or longer	Tracks S&P 500 Index	7-Year Tracking Error within +/- 0.30%	Strategy AUM \$10B or greater	Expense Ratio 0.10% or less	Meets all minimum requirements?
Nuveen Equity Index	Yes	Yes	Yes	Yes	Yes	No		No
PNC S&P 500 Index	Yes	Yes	Yes	Yes	Yes	No		No
Principal LargeCap S&P 500 Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prudential Stock Index <i>sub-advised by Quantitative Management Associates</i>	Yes	Yes	Yes	Yes	Yes	Yes	No	No
QS Batterymarch S&P 500 Index	Yes	Yes	Yes	Yes	Yes	No		No
Rydex S&P 500 Fund	Yes	Yes	Yes	Yes	Yes	No		No
Schwab S&P 500 Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SEI Inst Mgd S&P 500 Index	Yes	Yes	Yes	Yes	Yes	Yes	No	No
State Street Equity 500 Index II Portfolio	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
T Rowe Price Equity Index 500	Yes	Yes	Yes	Yes	Yes	Yes	No	No
TIAA-CREF S&P 500 Index	Yes	Yes	Yes	Yes	Yes	No		No
Vanguard Institutional Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Victory Munder Index 500 <i>sub-advised by World Asset Management</i>	Yes	Yes	Yes	Yes	Yes	No		No
Wells Fargo Advantage Index <i>sub-advised by Golden Capital Management</i>	Yes	Yes	Yes	Yes	Yes	No		No

## Passive Large Cap Equity

### Candidates

<b>Firm</b>	<b>Fund</b>	<b>Benchmark</b>
BlackRock	BlackRock S&P 500 Stock Fund K	S&P 500
Northern Trust Asset Management	Northern Stock Index Fund	S&P 500
Principal Financial Group	Principal LargeCap S&P 500 Index Fund Inst	S&P 500
Charles Schwab Investment Management	Schwab S&P 500 Index Fund	S&P 500
State Street Global Advisors	State Street Equity 500 Index II Portfolio	S&P 500
Vanguard Group	Vanguard Institutional Index Fund Inst Plus	S&P 500



## Passive Large Cap Equity

### **Benchmark Description**

#### **S&P 500**

The S&P 500 index contains a representative sample of common stocks that trade on the New York and American Stock Exchanges and some over-the-counter stocks. The index represents about 86% of the market value of all the issues traded on the NYSE.

The index does not contain the 500 largest stocks. It has many relatively small companies in it because it is constructed of industry groups. Standard and Poor's first identifies important industry categories and allocates a representative sample of stocks to each group. The companies chosen to be in the S&P 500 generally do have the largest market values within their industry group.

The industry categories are grouped into ten sectors: Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, Telecommunication Services and Utilities. The index is weighted by market capitalization and calculated on a total return basis with dividends reinvested.

## Passive Large Cap Equity

### Overview

Fund	Portfolio Manager	Portfolio Manager Tenure	Index Technique	Targeted Tracking Error	Securities Lending	Mercer Preferred Index Fund Provider
BlackRock	Christopher Bliss Alan Mason Greg Savage	2009 2014 2008	Full Replication	0-5 bps	Yes	✓
Northern	Brent Reeder	2006	Replication/ Optimization <sup>1</sup>	N/A <sup>2</sup>	No	✓
Principal	Thomas L. Kruchten	2011	Full Replication	8 bps	No	
Schwab	Agnes Hong Ferian Juwono	2012 2013	Full Replication	N/A <sup>3</sup>	Yes	
State Street	John A. Tucker Karl Scheider Mike Feehily	2014 2014 2014	Full Replication	N/A	Yes	✓
Vanguard	Donald M. Butler	2000	Full Replication	N/A <sup>4</sup>	Yes	✓

<sup>1</sup> The fund's approach results in portfolios that are replicated where appropriate and optimized where sensible.

<sup>2</sup> Data is not publicly disclosed.

<sup>3</sup> CSIM does not publish tracking error targets for its funds.

<sup>4</sup> Vanguard does not set specific tracking error targets for funds. When invested in Vanguard index funds, shareholders should expect a return that closely approximates the funds' respective index return, less management fees and an allowance for transaction costs.

## Passive Large Cap Equity

Characteristics as of 9/30/2014

Fund	Strategy Assets (\$MM)	Strategy Inception	Mutual Fund Assets (\$MM)	Mutual Fund Inception	Ticker	Net Expense Ratio <sup>1</sup>	On Empower Platform	Revenue Sharing	Net Expense Ratio less Revenue Sharing
BlackRock	186,656	Dec-77	4,100	Jul-93	WFSPX	0.05%	Yes	0.00%	0.05%
Northern	138,553	Jun-77	6,000	Oct-96	NOSIX	0.10%	Yes	0.02%	0.08%
Principal	19,873	Dec-00	4,131	Mar-01	PLFIX	0.16%	Yes	0.10%	0.06%
Schwab	20,084	May-97	19,872	May-97	SWPPX	0.09%	Yes	0.02%	0.07%
State Street	356,825	Dec-78	1,488	Dec-94	SSSYX	0.06%	No <sup>2</sup>	0.00%	0.06%
Vanguard	399,400	Aug-76	242,500	Aug-76	VIIIIX	0.02%	Yes	0.00%	0.02%

<sup>1</sup> Some expense ratios may currently have an expense cap or fee waiver that can be changed by the manager at any time.

<sup>2</sup> Currently being negotiated

## Passive Large Cap Equity

### Portfolio Statistics as of 9/30/2014

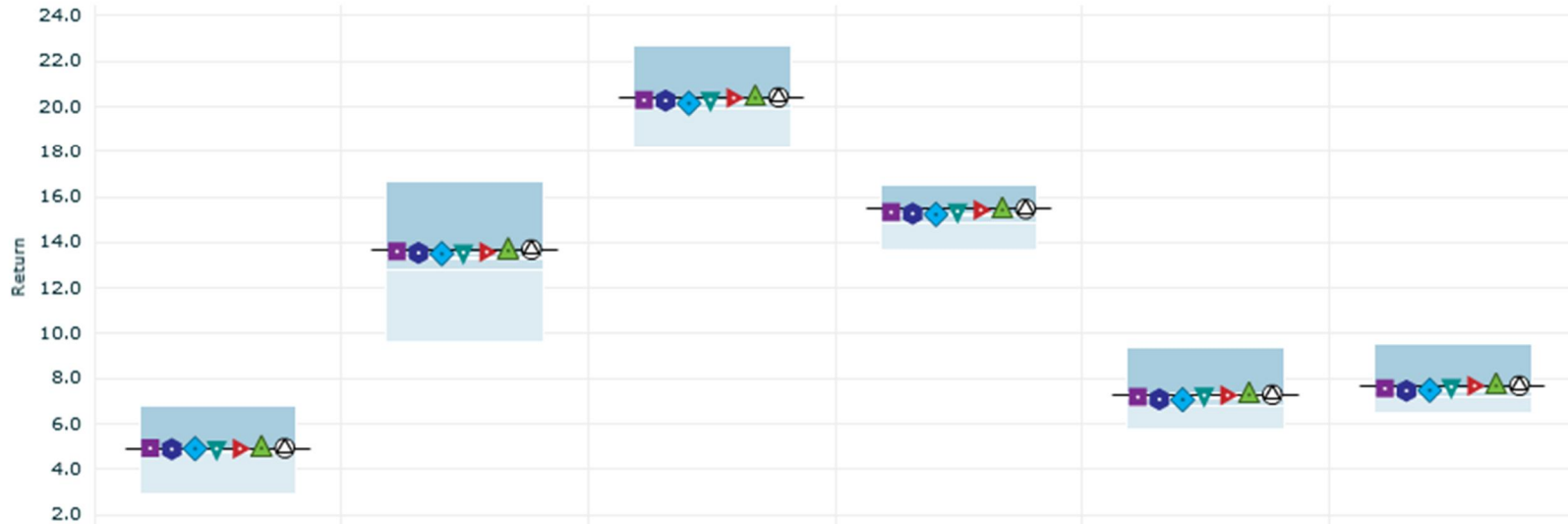
Fund	Number of Holdings	P/E	P/B	Weighted Average Market Cap (\$MM)	% Off Benchmark Exposure	% Cash
BlackRock	502	17.1x	2.4x	130,400	1%	1%
Northern	502	18.4x	2.7x	135,070	3%	3%
Principal	501	18.4x	2.6x	70,184 <sup>1</sup>	0%	0%
Schwab	504	18.9x	2.7x	130,636	0%	0%
State Street	503	16.6x	2.6x	130,601	N/A	N/A
Vanguard	504	19.1x	2.7x	138,540	0%	0%
<b>S&amp;P 500</b>	<b>502</b>	<b>18.3x</b>	<b>2.6x</b>	<b>130,655</b>	<b>N/A</b>	<b>N/A</b>

<sup>1</sup> Principal provided median market cap

## Passive Large Cap Equity

Return in \$US (after fees) over 3 mths, 1 yr, 3 yrs, 5 yrs, 7 yrs, 10 yrs ending December-14

Comparison with the Mutual Fund US Equity Large Cap Index universe (Percentile Ranking)



	3 mths (%)	1 yr (%)	3 yrs (%pa)	5 yrs (%pa)	7 yrs (%pa)	10 yrs (%pa)
BlackRock	4.9 (26)	13.6 (21)	20.3 (35)	15.3 (38)	7.2 (41)	7.6 (34)
Northern	4.9 (38)	13.5 (24)	20.3 (37)	15.3 (44)	7.1 (58)	7.5 (54)
Principal	4.9 (30)	13.5 (31)	20.2 (52)	15.2 (52)	7.1 (58)	7.5 (51)
Schwab	4.9 (32)	13.6 (23)	20.3 (32)	15.4 (32)	7.3 (33)	7.6 (25)
SSgA Comp	4.9 (32)	13.6 (23)	20.4 (25)	15.4 (29)	7.3 (32)	7.7 (24)
Vanguard	4.9 (25)	13.7 (18)	20.4 (25)	15.4 (30)	7.3 (31)	7.7 (24)
SP500	4.9 (25)	13.7 (17)	20.4 (24)	15.5 (26)	7.3 (32)	7.7 (24)
5th Percentile	6.8	16.7	22.7	16.5	9.4	9.5
Upper Quartile	4.9	13.5	20.4	15.5	7.4	7.6
Median	4.8	13.3	20.2	15.2	7.1	7.5
Lower Quartile	4.7	12.8	19.9	14.9	6.8	7.2
95th Percentile	2.9	9.7	18.2	13.7	5.8	6.5
Number	122	116	105	95	86	68

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## Passive Large Cap Equity

Performance as of 12/31/2014

Fund	One Quarter	One Year	Three Years	Five Years	Seven Years	Ten Years
BlackRock S&P 500 Stock Fund K	4.9	13.6	20.3	15.3	7.2	7.6
Northern Stock Index Fund	4.9	13.5	20.3	15.3	7.1	7.5
Principal LargeCap S&P 500 Index Fund Inst	4.9	13.5	20.2	15.2	7.1	7.5
Schwab S&P 500 Index Fund	4.9	13.6	20.3	15.4	7.3	7.6
State Street Equity 500 Index II Portfolio <sup>1</sup>	4.9	13.6	20.4	15.4	7.3	7.7
Vanguard Institutional Index Fund Inst Plus <sup>2</sup>	4.9	13.7	20.4	15.4	7.3	7.7
<b>S&amp;P 500</b>	<b>4.9</b>	<b>13.7</b>	<b>20.4</b>	<b>15.5</b>	<b>7.3</b>	<b>7.7</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the net-of-fee composite through August 31, 2014, and the actual fund thereafter. The composite does not include any mutual fund performance.

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.04%).

## Passive Large Cap Equity

### Calendar Year Performance

Fund	2007	2008	2009	2010	2011	2012	2013	2014
BlackRock S&P 500 Stock Fund K	5.4	-37.0	26.5	14.9	2.0	15.8	32.2	13.6
Northern Stock Index Fund	5.2	-37.2	26.2	14.8	1.9	15.9	32.2	13.5
Principal LargeCap S&P 500 Index Fund Inst	5.3	-37.2	26.4	14.8	2.0	15.7	32.1	13.5
Schwab S&P 500 Index Fund	5.5	-36.7	26.3	15.0	2.1	15.9	32.3	13.6
State Street Equity 500 Index II Portfolio <sup>1</sup>	5.5	-37.0	26.5	15.1	2.1	16.0	32.4	13.6
Vanguard Institutional Index Fund Inst Plus <sup>2</sup>	5.5	-37.0	26.6	15.0	2.1	16.0	32.3	13.7
<b>S&amp;P 500</b>	<b>5.5</b>	<b>-37.0</b>	<b>26.5</b>	<b>15.1</b>	<b>2.1</b>	<b>16.0</b>	<b>32.4</b>	<b>13.7</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the net-of-fee composite through August 31, 2014, and the actual fund thereafter. The composite does not include any mutual fund performance.

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.04%).

## Passive Large Cap Equity

### Tracking Error vs. Respective Benchmark as of 12/31/2014

Fund	One Year	Three Years	Five Years	Seven Years	Ten Years
BlackRock S&P 500 Stock Fund K	0.0	0.0	0.0	0.1	0.1
Northern Stock Index Fund	0.0	0.0	0.0	0.0	0.1
Principal LargeCap S&P 500 Index Fund Inst	0.1	0.1	0.1	0.1	0.1
Schwab S&P 500 Index Fund	0.0	0.1	0.1	0.2	0.1
State Street Equity 500 Index II Portfolio <sup>1</sup>	0.0	0.0	0.0	0.0	0.0
Vanguard Institutional Index Fund Inst Plus <sup>2</sup>	0.0	0.0	0.0	0.0	0.0

This table presents the tracking ability of the manager versus their respective index covering the time periods indicated above. Tracking error is the annualized standard deviation of quarterly excess returns.

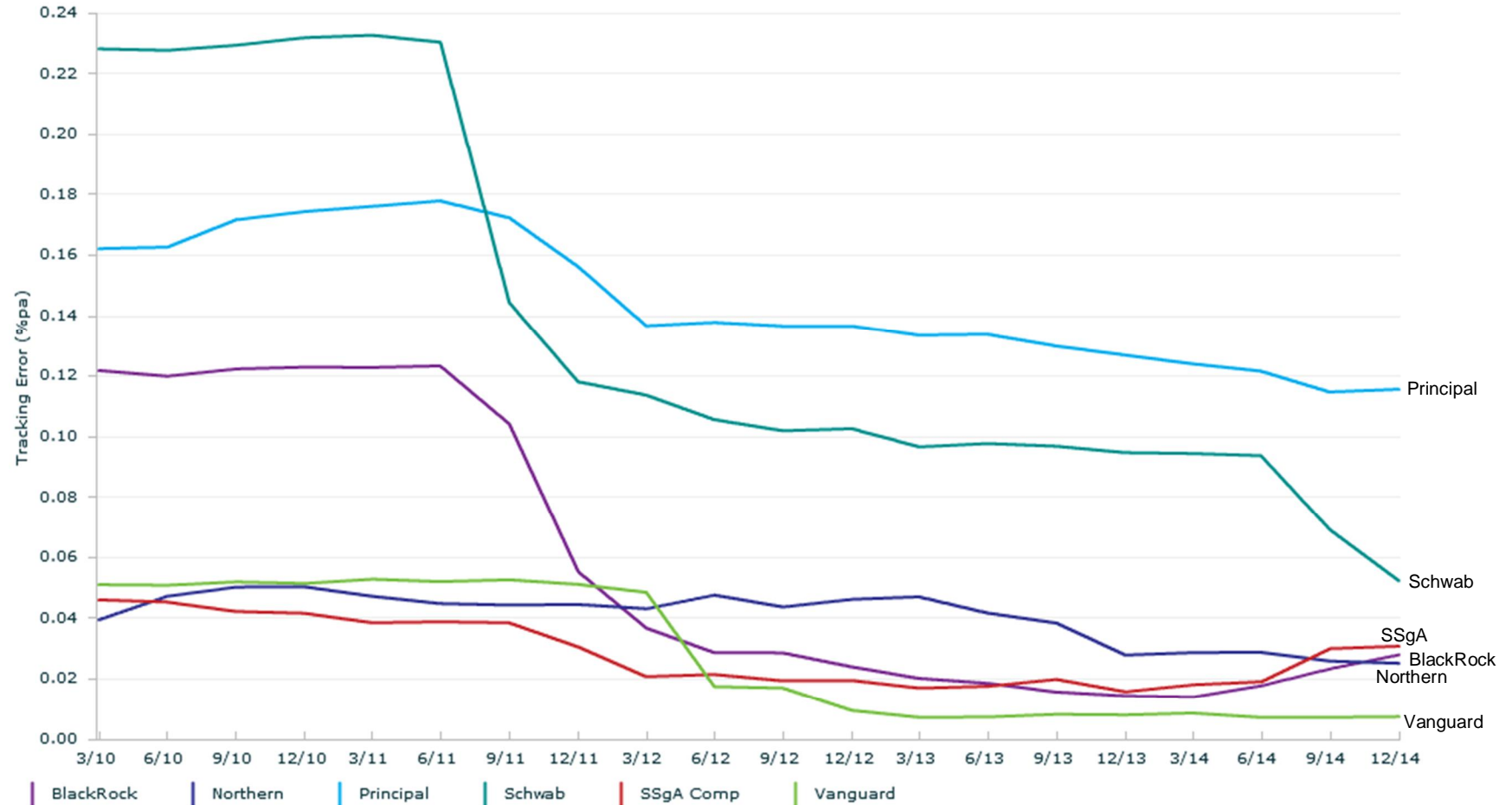
<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the net-of-fee composite through August 31, 2014, and the actual fund thereafter. The composite does not include any mutual fund performance.

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.04%).



## Passive Large Cap Equity

Rolling 3 yr Tracking Error vs. S&P 500 in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)



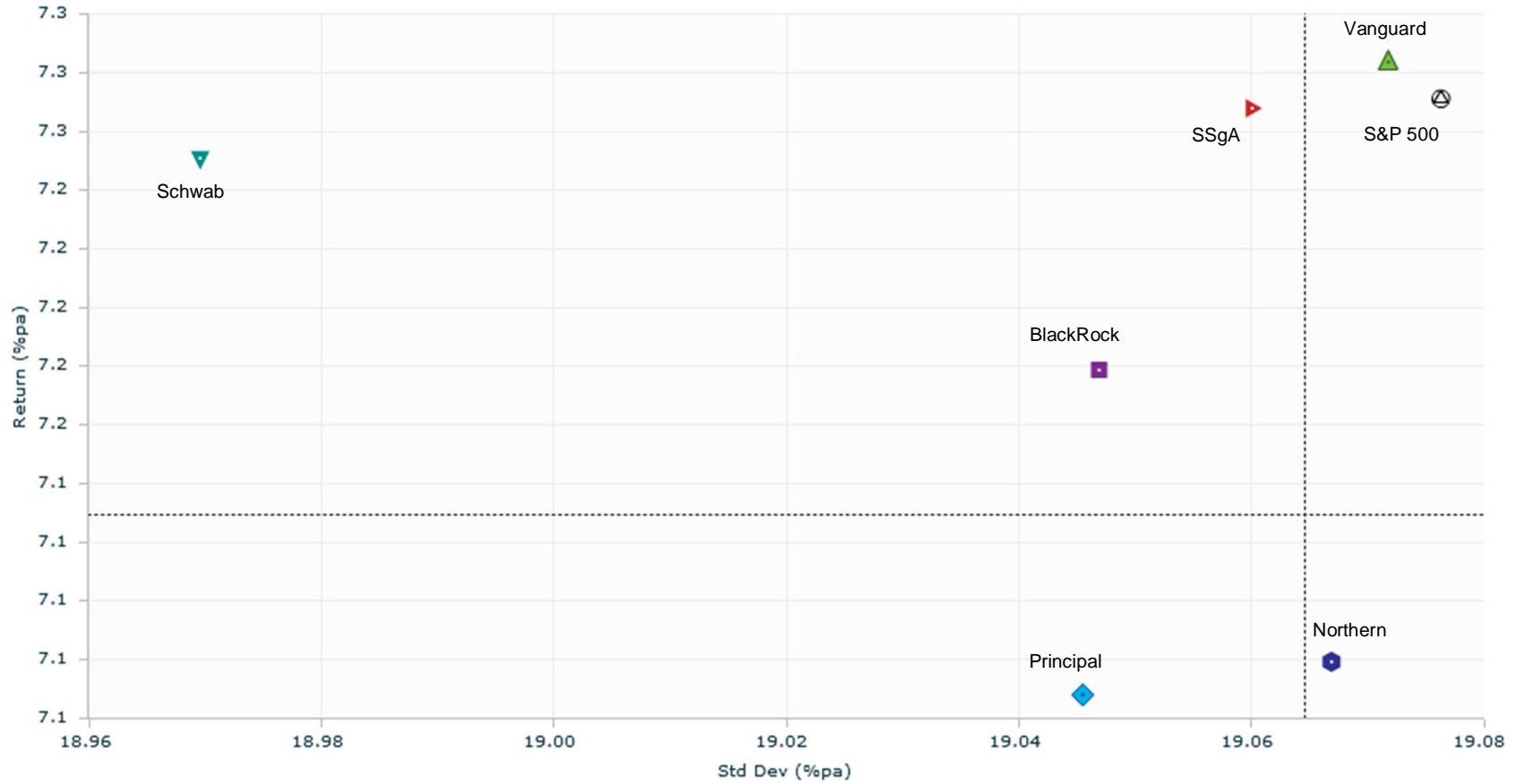
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## Passive Large Cap Equity

Return and Std Deviation in \$US (after fees) over 7 yrs ending December-14 (quarterly calculations)  
Comparison with the Mutual Fund US Equity Large Cap Index universe



# 4

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## Passive Mid Cap Equity

### Screening Process

The table on the next page shows the candidates considered for this passive mid cap equity fund manager search. The estimated mandate size is \$136 million<sup>1</sup> and the recommended vehicle type is mutual fund.

Search minimum criteria used in the screening:

- Availability in mutual fund vehicle
- Vehicle open to new investors
- Vehicle compatible with Empower platform
- Strategy track record of 3 years or longer (specific vehicle may be shorter)
- Tracks the Russell Mid Cap Index or a similar index (e.g., S&P MidCap 400 Index or CRSP US Mid Cap Index)
- Annualized tracking error<sup>2</sup> relative to the benchmark should be within +/- 0.30% over the 7- and 10-year periods (or longest available)
- Minimum assets under management in strategy (all share classes) of \$1 billion or greater
- Investment expense ratio equal to or less than 0.20%

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<sup>1</sup> As of 6/30/2014

<sup>2</sup> Tracking error for these purposes is defined as the benchmark return less the subject fund return

## Passive Mid Cap Equity

### Minimum Qualification Screening Process

Fund	Passive U.S. Mid Cap Equity Mutual Fund	Open to the City & Compatible with Empower	Track Record 3 years or longer	Tracks Russell Mid Cap Index or equivalent	7-Year Tracking Error within +/- 0.30%	Strategy AUM \$1B or greater	Expense Ratio 0.20% or less	Meets all minimum requirements?
Columbia Mid Cap Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dreyfus Mid Cap Index <i>sub-advised by Mellon Capital Management</i>	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Federated Mid-Capital Index	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Fidelity Spartan Mid Cap Index	Yes	No						No
Great-West S&P MidCap 400 Index <i>sub-advised by Mellon Capital Management</i>	Yes	No						No
MM S&P Mid Cap Index <i>sub-advised by Northern Trust Asset Management</i>	Yes	Yes	No					No
Mutual of America Institutional Mid-Cap Eq Idx	Yes	Yes	Yes	Yes	Yes	No		No
Nationwide Mid Cap Market Index <i>sub-advised by BlackRock</i>	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Northern Mid Cap Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nuveen Mid Cap Index	Yes	Yes	Yes	Yes	Yes	No		No
Principal MidCap S&P 400 Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ProFunds Mid-Cap	Yes	Yes	Yes	Yes	Yes	No		No
Shelton S&P MidCap Index	Yes	Yes	Yes	Yes	Yes	No		No
Vanguard Mid-Cap Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vanguard S&P Mid-Cap 400 Index	Yes	Yes	Yes	Yes	Yes	No		No

## Passive Mid Cap Equity

### Candidates

<b>Firm</b>	<b>Fund</b>	<b>Benchmark</b>
Columbia Management Investment Advisors	Columbia Mid Cap Index Fund R5	S&P Mid Cap 400
Northern Trust Asset Management	Northern Mid Cap Index Fund	S&P Mid Cap 400
Principal Financial Group	Principal MidCap S&P 400 Index Fund Inst	S&P Mid Cap 400
Vanguard Group	Vanguard Mid-Cap Index Fund Institutional Plus	CRSP US Mid Cap

## Passive Mid Cap Equity

### Benchmark Descriptions

#### Russell Midcap

The Russell MidCap Index measures the performance of the 800 smallest companies in the Russell 1000 which represent approximately 35% of the total market capitalization of the Russell 1000 index.

#### S&P Midcap 400

The S&P MidCap 400 Index consists of 400 domestic stocks which are chosen by a committee at Standard & Poor's based on market capitalization, liquidity and industry group representation. The index is made up of companies listed on the NYSE, NASDAQ, and AMEX. None of the companies within the S&P MidCap overlap with those included in the S&P 500 index. The index is market value-weighted.

#### CRSP US Mid Cap

The CRSP US Mid Cap Index targets inclusion of the U.S. companies that fall between the 70%-85% of investable market capitalization. The index includes securities traded on NYSE, NYSE Market, NASDAQ or ARCA. Ranking days, the days on which eligibility rules are applied and on which pro forma indexes are created, occur after the market close on the first Friday of March, June, September and December. Reconstitution occurs quarterly after the market close on the third Friday of March, June, September and December.

## Passive Mid Cap Equity

### Overview

Fund	Portfolio Manager	Portfolio Manager Tenure	Index Technique	Targeted Tracking Error	Securities Lending	Mercer Preferred Index Fund Provider
Columbia	Christopher Lo Vadim Shteyn	2014 2011	Replication <sup>1</sup>	N/A	Yes <sup>2</sup>	
Northern	Brent Reeder	2006	Replication/ Optimization <sup>3</sup>	N/A	No	✓
Principal	Thomas L. Kruchten	2011	Full Replication	15 bps	No	
Vanguard	Donald M. Butler	1998	Full Replication	N/A <sup>4</sup>	Yes	✓

<sup>1</sup> The Fund attempts to achieve at least a 95% correlation between the performance of the Index and the Fund's investment results, before fees and expenses.

<sup>2</sup> Securities lending is allowed in the fund, but not currently employed.

<sup>3</sup> The fund's approach results in portfolios that are replicated where appropriate and optimized where sensible.

<sup>4</sup> Vanguard does not set specific tracking error targets for funds. When invested in Vanguard index funds, shareholders should expect a return that closely approximates the funds' respective index return, less management fees and an allowance for transaction costs.

## Passive Mid Cap Equity

Characteristics as of 9/30/2014

Fund	Strategy Assets (\$MM)	Strategy Inception	Mutual Fund Assets (\$MM)	Mutual Fund Inception	Ticker	Net Expense Ratio <sup>1</sup>	On Empower Platform	Revenue Sharing	Net Expense Ratio less Revenue Sharing
Columbia	3,705	Mar-00	3,705	Mar-00	CPXRX	0.21%	Yes	0.10%	0.11%
Northern	8,258	Nov-91	1,300	Mar-05	NOMIX	0.15%	Yes	0.06%	0.09%
Principal	3,945	Dec-00	1,080	Mar-01	MPSIX	0.22%	Yes	0.10%	0.12%
Vanguard	53,313	May-98	53,313	May-98	VMCPX	0.06%	Yes	0.00%	0.06%

<sup>1</sup> Some expense ratios may currently have an expense cap or fee waiver that can be changed by the manager at any time.



## Passive Mid Cap Equity

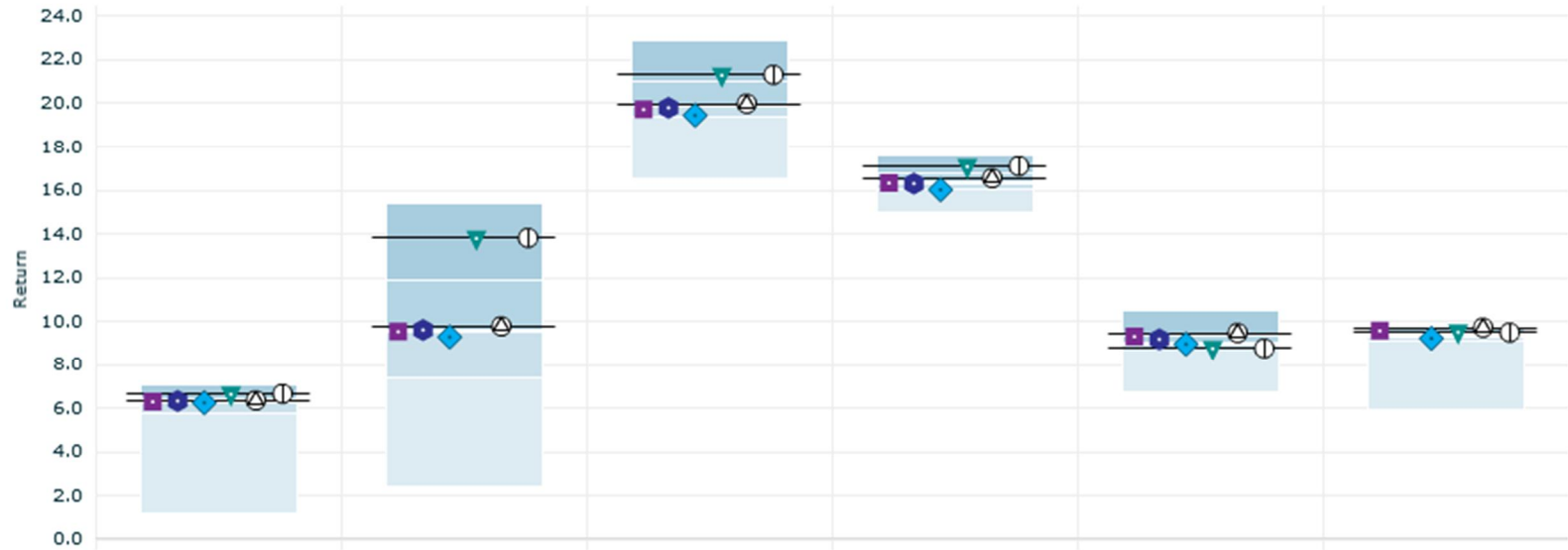
### Portfolio Statistics as of 9/30/2014

Fund	Number of Holdings	P/E	P/B	Weighted Average Market Cap (\$MM)	% Off Benchmark Exposure	% Cash
Columbia	401	19.7x	2.2x	5,039	2%	2%
Northern	401	20.5x	2.3x	5,113	2%	2%
Principal	400	20.0x	2.2x	4,521	0%	0%
<b><i>S&amp;P Mid Cap 400</i></b>	<b><i>400</i></b>	<b><i>20.4x</i></b>	<b><i>2.2x</i></b>	<b><i>5,031</i></b>	<b><i>N/A</i></b>	<b><i>N/A</i></b>
Vanguard	367	24.6x	2.7x	11,330	0%	0%
<b><i>CRSP US Mid Cap</i></b>	<b><i>367</i></b>	<b><i>24.6x</i></b>	<b><i>2.7x</i></b>	<b><i>11,333</i></b>	<b><i>N/A</i></b>	<b><i>N/A</i></b>

## Passive Mid Cap Equity

Return in \$US (after fees) over 3 mths, 1 yr, 3 yrs, 5 yrs, 7 yrs, 10 yrs ending December-14

Comparison with the Mutual Fund US Equity Mid Cap Index universe (Percentile Ranking)



	3 mths (%)	1 yr (%)	3 yrs (%pa)	5 yrs (%pa)	7 yrs (%pa)	10 yrs (%pa)
■ Columbia	6.3 (45)	9.5 (52)	19.7 (61)	16.3 (50)	9.3 (32)	9.6 (15)
● Northern	6.3 (36)	9.6 (44)	19.8 (55)	16.3 (52)	9.2 (35)	-
◆ Principal	6.2 (53)	9.3 (62)	19.5 (71)	16.0 (75)	9.0 (65)	9.2 (65)
▼ Vanguard	6.6 (19)	13.8 (12)	21.3 (16)	17.1 (15)	8.8 (77)	9.5 (19)
⊙ SP400MC	6.3 (29)	9.8 (38)	20.0 (44)	16.5 (42)	9.5 (21)	9.7 (5)
⊕ Spliced MC	6.7 (19)	13.8 (11)	21.3 (16)	17.1 (14)	8.8 (77)	9.5 (20)
5th Percentile	7.1	15.4	22.9	17.6	10.5	9.7
Upper Quartile	6.4	11.9	21.0	16.8	9.4	9.4
Median	6.2	9.5	19.9	16.3	9.0	9.3
Lower Quartile	5.8	7.4	19.4	16.0	8.8	9.1
95th Percentile	1.2	2.4	16.5	15.0	6.7	5.9
Number	54	53	50	41	41	27

The information contained within the exhibit was derived by Mercer using content supplied by Lipper, a Thomson Reuters Company.



## Passive Mid Cap Equity

Performance as of 12/31/2014

Fund	One Quarter	One Year	Three Years	Five Years	Seven Years	Ten Years
Columbia Mid Cap Index Fund R5 <sup>1</sup>	6.3	9.5	19.7	16.3	9.3	9.6
Northern Mid Cap Index Fund	6.3	9.6	19.8	16.3	9.2	--
Principal MidCap S&P 400 Index Fund Inst <sup>2</sup>	6.2	9.3	19.5	16.0	9.0	9.2
<b><i>S&amp;P Mid Cap 400</i></b>	<b>6.3</b>	<b>9.8</b>	<b>20.0</b>	<b>16.5</b>	<b>9.5</b>	<b>9.7</b>
Vanguard Mid-Cap Index Fund Institutional Plus <sup>3</sup>	6.6	13.8	21.3	17.1	8.8	9.5
<b><i>Vanguard Spliced Mid Cap Index<sup>4</sup></i></b>	<b>6.7</b>	<b>13.8</b>	<b>21.3</b>	<b>17.1</b>	<b>8.8</b>	<b>9.5</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Z share class (expense ratio: 0.21%).

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the R-5 share class (expense ratio: 0.43%).

<sup>3</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.08%).

<sup>4</sup> S&P MidCap 400 Index through May 16, 2003; MSCI US Mid Cap 450 Index through January 30, 2013; CRSP US Mid Cap Index thereafter.

## Passive Mid Cap Equity

### Calendar Year Performance

Fund	2007	2008	2009	2010	2011	2012	2013	2014
Columbia Mid Cap Index Fund R5 <sup>1</sup>	8.0	-36.1	37.1	26.4	-1.9	17.6	33.3	9.5
Northern Mid Cap Index Fund	7.6	-36.6	37.1	26.3	-2.1	17.8	33.2	9.6
Principal MidCap S&P 400 Index Fund Inst <sup>2</sup>	7.7	-36.6	36.7	26.0	-2.2	17.4	32.8	9.3
<b>S&amp;P Mid Cap 400</b>	<b>8.0</b>	<b>-36.2</b>	<b>37.4</b>	<b>26.6</b>	<b>-1.7</b>	<b>17.9</b>	<b>33.5</b>	<b>9.8</b>
Vanguard Mid-Cap Index Fund Institutional Plus <sup>3</sup>	6.2	-41.8	40.5	25.7	-2.0	16.0	35.2	13.8
<b>Vanguard Spliced Mid Cap Index<sup>4</sup></b>	<b>6.2</b>	<b>-41.8</b>	<b>40.5</b>	<b>25.7</b>	<b>-1.9</b>	<b>16.0</b>	<b>35.2</b>	<b>13.8</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Z share class (expense ratio: 0.21%).

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the R-5 share class (expense ratio: 0.43%).

<sup>3</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.08%).

<sup>4</sup> S&P MidCap 400 Index through May 16, 2003; MSCI US Mid Cap 450 Index through January 30, 2013; CRSP US Mid Cap Index thereafter.

## Passive Mid Cap Equity

### Tracking Error vs. Respective Benchmark as of 12/31/2014

Fund	One Year	Three Years	Five Years	Seven Years	Ten Years
Columbia Mid Cap Index Fund R5 <sup>1</sup>	0.0	0.1	0.1	0.1	0.1
Northern Mid Cap Index Fund	0.1	0.1	0.1	0.1	--
Principal MidCap S&P 400 Index Fund Inst <sup>2</sup>	0.0	0.1	0.1	0.1	0.1
Vanguard Mid-Cap Index Fund Institutional Plus <sup>3</sup>	0.0	0.0	0.0	0.1	0.1

This table presents the tracking ability of the manager versus their respective index covering the time periods indicated above. Tracking error is the annualized standard deviation of quarterly excess returns.

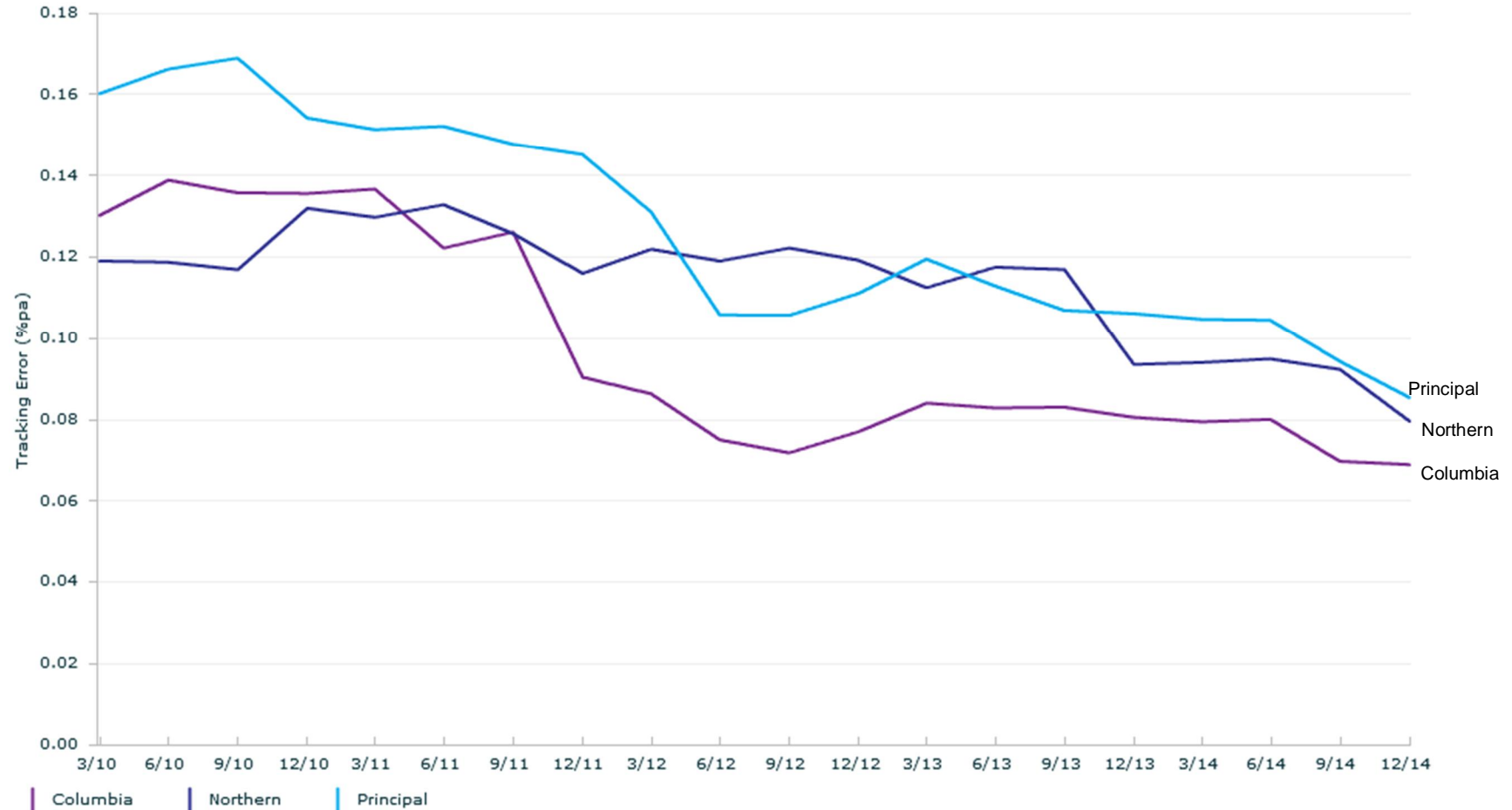
<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Z share class (expense ratio: 0.21%).

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the R-5 share class (expense ratio: 0.43%).

<sup>3</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.08%).

## Passive Mid Cap Equity

Rolling 3 yr Tracking Error vs. S&P 400 MidCap in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)



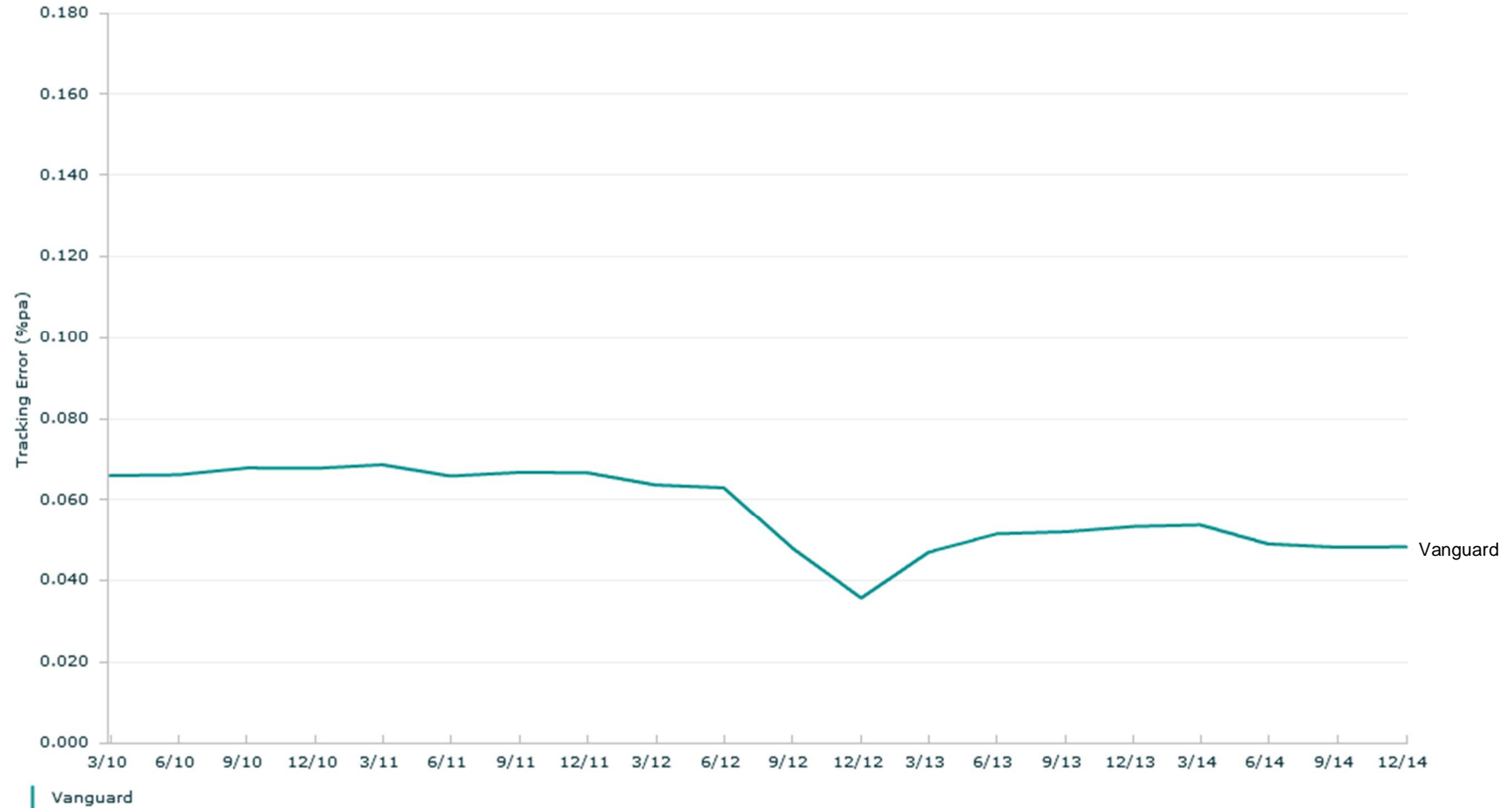
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## Passive Mid Cap Equity

Rolling 3 yr Tracking Error vs. Vanguard Spliced Mid Cap Index in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)



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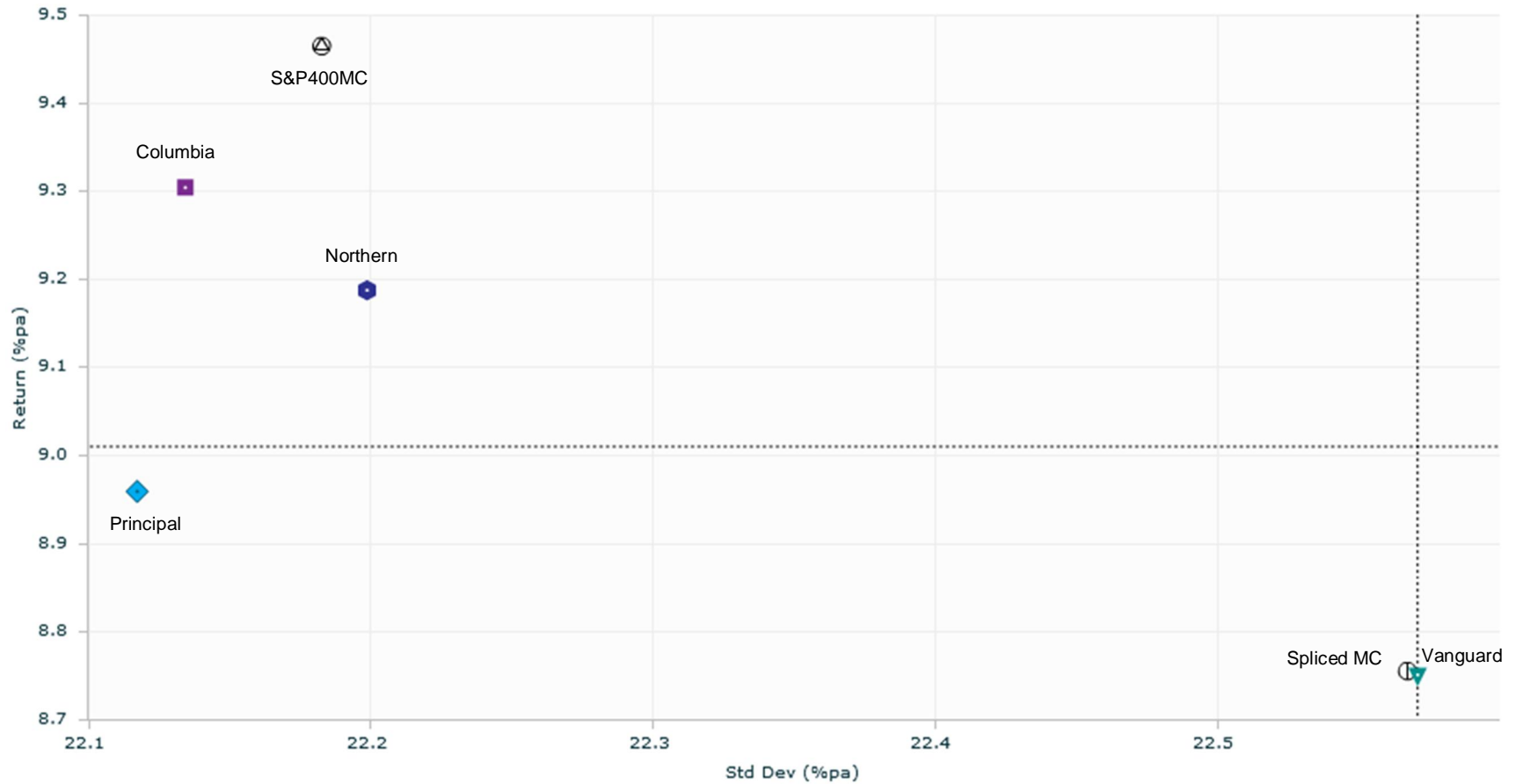
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## Passive Mid Cap Equity

Return and Std Deviation in \$US (after fees) over 7 yrs ending December-14 (quarterly calculations)

Comparison with the Mutual Fund US Equity Mid Cap Index universe





# 5

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## Passive Small Cap Equity

### Screening Process

The table on the next page shows the candidates considered for this passive small cap equity fund manager search. The estimated mandate size is \$106 million<sup>1</sup> and the recommended vehicle type is mutual fund.

Search minimum criteria used in the screening:

- Availability in mutual fund vehicle
- Vehicle open to new investors
- Vehicle compatible with Empower platform
- Strategy track record of 3 years or longer (specific vehicle may be shorter)
- Tracks the Russell 2000 Index or a similar index (e.g., S&P SmallCap 600 Index or CRSP US Small Cap Index)
- Annualized tracking error<sup>2</sup> relative to the benchmark should be within +/- 0.30% over the 7- and 10-year periods (or longest available)
- Minimum assets under management in strategy (all share classes) of \$1 billion or greater
- Investment expense ratio equal to or less than 0.25%

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<sup>1</sup> As of 6/30/2014

<sup>2</sup> Tracking error for these purposes is defined as the benchmark return less the subject fund return

## Passive Small Cap Equity

### Minimum Qualification Screening Process

Fund	Passive U.S. Small Cap Equity Mutual Fund	Open to the City & Compatible with Empower	Track Record 3 years or longer	Tracks Russell 2000 Index or equivalent	7-Year Tracking Error within +/- 0.30%	Strategy AUM \$1B or greater	Expense Ratio 0.25% or less	Meets all minimum requirements?
American Beacon Small Cap Index	Yes	No						No
BlackRock Small Cap Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Columbia Small Cap Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dreyfus SmallCap Stock Index <i>sub-advised by Mellon Capital Management</i>	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Fidelity Spartan Small Cap Index	Yes	No						No
Great-West S&P Small Cap 600 Index <i>sub-advised by Mellon Capital Management</i>	Yes	No						No
MM Russell 2000 Small Cap Index <i>sub-advised by Northern Trust Asset Management</i>	Yes	Yes	No					No
Nationwide Small Cap Index <i>sub-advised by BlackRock</i>	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Northern Small Cap Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nuveen Small Cap Index	Yes	Yes	Yes	Yes	Yes	No		No
Principal SmallCap S&P 600 Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ProFunds Small-Cap	Yes	Yes	Yes	Yes	Yes	No		No
Rydex Russell 2000 <i>sub-advised by Security Investors</i>	Yes	Yes	Yes	Yes	Yes	No		No
Schwab Small-Cap Index	Yes	Yes	Yes	Yes	No			No
Shelton S&P SmallCap Index	Yes	Yes	Yes	Yes	Yes	No		No
State Farm Small Cap Index <i>sub-advised by Northern Trust Asset Management</i>	Yes	Yes	Yes	Yes	Yes	Yes	No	No
TIAA-CREF Small-Cap Blend Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vanguard Russell 2000 Index	Yes	Yes	Yes	Yes	Yes	No		No



## Passive Small Cap Equity

### Candidates

<b>Firm</b>	<b>Fund</b>	<b>Benchmark</b>
BlackRock	BlackRock Small Cap Index Fund Class K	Russell 2000
Northern Trust Asset Management	Northern Small Cap Index Fund	Russell 2000
TIAA-CREF	TIAA-CREF Small-Cap Blend Index Fund Institutional	Russell 2000
Columbia Management Investment Advisors	Columbia Small Cap Index Fund R5	S&P Small Cap 600
Principal Financial Group	Principal SmallCap S&P 600 Index Fund Inst	S&P Small Cap 600
Vanguard Group	Vanguard Small-Cap Index Fund Inst Plus	CRSP US Small Cap

## Passive Small Cap Equity

### Benchmark Descriptions

#### **Russell 2000**

The Russell 2000 is intended to be a small capitalization market proxy. The index currently consists of approximately the 2,000 smallest stocks in the Russell 3000, representing approximately 10% of the total U.S. equity market. The index is restated annually based on May 31 market capitalization rankings.

#### **S&P Small Cap 600**

The S&P SmallCap 600 index is designed to be a benchmark of small capitalization stock performance and an investable portfolio for passive replication purposes. S&P began development of the index by surveying active and passive small cap managers, quantitative research analysts, academics and traders to determine a small cap market value definition.

S&P converted this market capitalization range into percentiles of the entire stock market in order to account for fluctuations in performance over time. The \$600 million level converted into the 50th percentile and the \$80 million lower level became the 83rd percentile. This percentile range was used to select the index back history and is used to select future index constituents.

S&P applied the target percentile range to their Index Selection Database to create a small cap universe of 1,850 stocks. The following screens were then used to select the 600 companies: 1. Companies must trade on the New York, NASDAQ or American stock exchanges, 2. Companies must have a trading history of at least six months, 3. Stocks that do not trade on any three days during a 12-month period are removed, 4. Companies with stock prices below \$1.00 are removed, 5. Share turnover has to exceed 20% on an annualized basis, 6. Companies with 50% or more of the common shares owned by another corporation or 60% owned by insiders are removed, 7. Companies in bankruptcy or financial distress are eliminated, 8. Bid/Ask spreads calculated for 30 days must be 5% or less. The index was started on December 31, 1993, and a simulation for back history was used for returns back to January 1984.

#### **CRSP US Small Cap**

The CRSP US Small Cap Index includes U.S. companies that fall between the bottom 2%-15% of the investable market capitalization. There is no lower limit in market capitalization, other than what is specified by investability screens. The index includes securities traded on NYSE, NYSE Market, NASDAQ or ARCA. Ranking days, the days on which eligibility rules are applied and on which pro forma indexes are created, occur after the market close on the first Friday of March, June, September and December. Reconstitution occurs quarterly after the market close on the third Friday of March, June, September and December.

## Passive Small Cap Equity

### Overview

Fund	Portfolio Manager	Portfolio Manager Tenure	Index Technique	Targeted Tracking Error	Securities Lending	Mercer Preferred Index Fund Provider
BlackRock	Chris Bliss Alan Mason Greg Savage	2011 2014 2012	Optimization	0-10 bps	Yes	✓
Northern	Brent Reeder	2006	Replication/ Optimization <sup>1</sup>	N/A	No	✓
TIAA-CREF	Philip Campagna Lei Liao	2005 2014	Full Replication	0-10 bps	Yes	
Columbia	Christopher Lo Vadim Shteyn	2014 2011	Replication <sup>2</sup>	N/A	Yes <sup>3</sup>	
Principal	Thomas L. Kruchten	2011	Full Replication	30 bps	No	
Vanguard	Michael H. Buek	1991	Full Replication	N/A <sup>4</sup>	Yes	✓

<sup>1</sup> The fund's approach results in portfolios that are replicated where appropriate and optimized where sensible.

<sup>2</sup> The Fund attempts to achieve at least a 95% correlation between the performance of the Index and the Fund's investment results, before fees and expenses.

<sup>3</sup> Securities lending is allowed in the fund, but not currently employed.

<sup>4</sup> Vanguard does not set specific tracking error targets for funds. When invested in Vanguard index funds, shareholders should expect a return that closely approximates the funds' respective index return, less management fees and an allowance for transaction costs.

## Passive Small Cap Equity

Characteristics as of 9/30/2014

Fund	Strategy Assets (\$MM)	Strategy Inception	Mutual Fund Assets (\$MM)	Mutual Fund Inception	Ticker	Net Expense Ratio <sup>1</sup>	On Empower Platform	Revenue Sharing	Net Expense Ratio less Revenue
BlackRock	11,549	Apr-97	134	Apr-97	BDBKX	0.16%	Yes	0.00%	0.16%
Northern	14,236	Nov-87	907	Sep-99	NSIDX	0.15%	Yes	0.06%	0.09%
TIAA-CREF	1,532	Oct-02	1,532	Oct-02	TISBX	0.16%	Yes	0.00%	0.16%
Columbia	2,853	Jul-86	2,853	Jul-86	CXXRX	0.25%	Yes	0.10%	0.15%
Principal	3,948	Dec-00	1,010	Mar-01	PSSIX	0.26%	Yes	0.10%	0.16%
Vanguard	46,556	Oct-60	46,556	Oct-60	VSCPX	0.06%	Yes	0.00%	0.06%

<sup>1</sup> Some expense ratios may currently have an expense cap or fee waiver that can be changed by the manager at any time.

## Passive Small Cap Equity

### Portfolio Statistics as of 9/30/2014

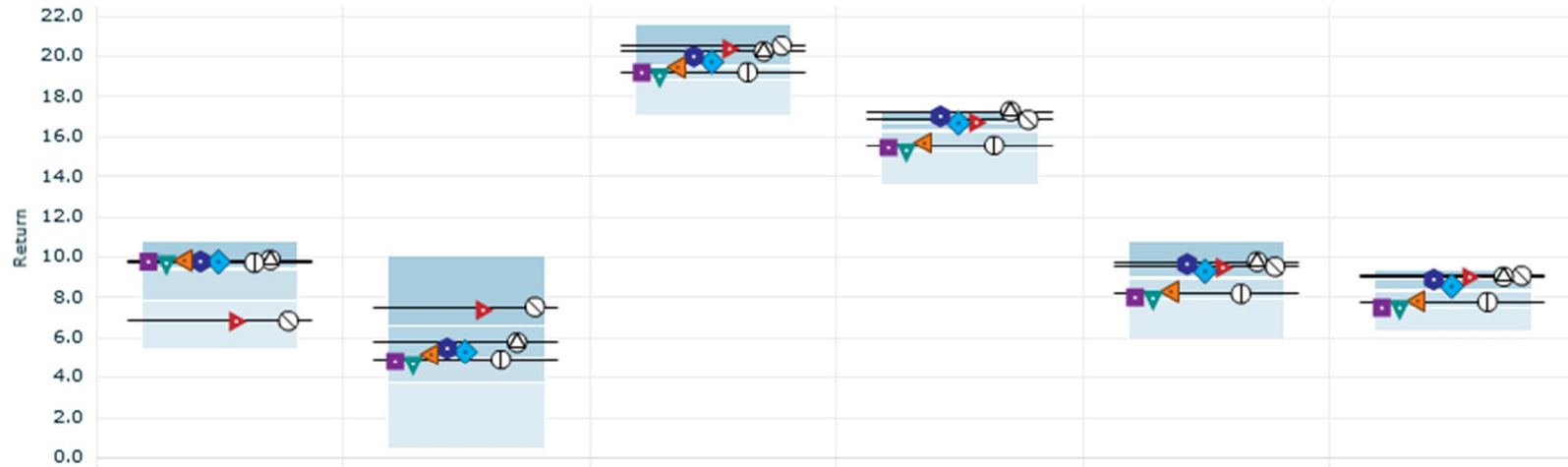
Fund	Number of Holdings	P/E	P/B	Weighted Average Market Cap (\$MM)	% Off Benchmark Exposure	% Cash
BlackRock	1,998	19.0x	1.8x	1,700	3%	3%
Northern	1,993	19.0x	2.1x	1,731	2%	2%
TIAA-CREF	2,003	20.7x	2.1x	1,700	1%	1%
<b><i>Russell 2000</i></b>	<b><i>1,951</i></b>	<b><i>20.7x</i></b>	<b><i>2.1x</i></b>	<b><i>1,710</i></b>	<b><i>N/A</i></b>	<b><i>N/A</i></b>
Columbia	601	20.1x	2.0x	1,595	2%	2%
Principal	600	20.8x	2.0x	1,389	0%	0%
<b><i>S&amp;P Small Cap 600</i></b>	<b><i>600</i></b>	<b><i>20.1x</i></b>	<b><i>2.0x</i></b>	<b><i>1,595</i></b>	<b><i>N/A</i></b>	<b><i>N/A</i></b>
Vanguard	1,484	27.2x	2.3x	3,250	0%	0%
<b><i>CRSP US Small Cap</i></b>	<b><i>1,463</i></b>	<b><i>27.2x</i></b>	<b><i>2.3x</i></b>	<b><i>3,260</i></b>	<b><i>N/A</i></b>	<b><i>N/A</i></b>



## Passive Small Cap Equity

Return in \$US (after fees) over 3 mths, 1 yr, 3 yrs, 5 yrs, 7 yrs, 10 yrs ending December-14

Comparison with the Mutual Fund US Equity Small Cap Index universe (Percentile Ranking)



	3 mths (%)	1 yr (%)	3 yrs (%pa)	5 yrs (%pa)	7 yrs (%pa)	10 yrs (%pa)
BlackRock	9.8 (37)	4.8 (60)	19.2 (63)	15.4 (73)	8.0 (68)	7.5 (77)
Northern	9.7 (44)	4.7 (61)	19.0 (70)	15.3 (75)	8.0 (74)	7.5 (74)
TIAA-CREF	9.8 (20)	5.2 (47)	19.4 (51)	15.7 (62)	8.3 (60)	7.8 (58)
Columbia	9.8 (31)	5.5 (39)	20.0 (35)	17.0 (12)	9.6 (28)	8.9 (26)
Principal	9.8 (34)	5.3 (41)	19.7 (43)	16.7 (27)	9.3 (42)	8.6 (35)
Vanguard	6.8 (83)	7.4 (17)	20.4 (22)	16.7 (25)	9.5 (36)	9.0 (13)
RU2000	9.7 (42)	4.9 (56)	19.2 (59)	15.5 (66)	8.2 (65)	7.8 (62)
SP600SC	9.8 (18)	5.8 (27)	20.2 (26)	17.3 (6)	9.8 (23)	9.0 (11)
Spliced SC	6.8 (83)	7.5 (16)	20.5 (21)	16.8 (18)	9.5 (34)	9.1 (10)
5th Percentile	10.8	10.1	21.6	17.4	10.8	9.4
Upper Quartile	9.8	6.6	20.3	16.7	9.7	8.9
Median	9.4	5.0	19.5	16.3	9.0	8.3
Lower Quartile	7.9	3.7	18.8	15.3	7.9	7.5
95th Percentile	5.4	0.5	17.1	13.6	5.9	6.3
Number	72	71	64	53	51	32

The information contained within the exhibit was derived by Mercer using content supplied by Lipper, a Thomson Reuters Company.



## Passive Small Cap Equity

Performance as of 12/31/2014

Fund	One Quarter	One Year	Three Years	Five Years	Seven Years	Ten Years
BlackRock Small Cap Index Fund Class K <sup>1</sup>	9.8	4.8	19.2	15.4	8.0	7.5
Northern Small Cap Index Fund	9.7	4.7	19.0	15.3	8.0	7.5
TIAA-CREF Small-Cap Blend Index Fund Institutional	9.8	5.2	19.4	15.7	8.3	7.8
<b>Russell 2000</b>	<b>9.7</b>	<b>4.9</b>	<b>19.2</b>	<b>15.5</b>	<b>8.2</b>	<b>7.8</b>
Columbia Small Cap Index Fund R5 <sup>2</sup>	9.8	5.5	20.0	17.0	9.6	8.9
Principal SmallCap S&P 600 Index Fund Inst <sup>3</sup>	9.8	5.3	19.7	16.7	9.3	8.6
<b>S&amp;P Small Cap 600</b>	<b>9.8</b>	<b>5.8</b>	<b>20.2</b>	<b>17.3</b>	<b>9.8</b>	<b>9.0</b>
Vanguard Small-Cap Index Fund Inst Plus <sup>4</sup>	6.8	7.4	20.4	16.7	9.5	9.0
<b>Vanguard Spliced Small Cap Index<sup>5</sup></b>	<b>6.8</b>	<b>7.5</b>	<b>20.5</b>	<b>16.8</b>	<b>9.5</b>	<b>9.1</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.21%).

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Z share class (expense ratio: 0.25%).

<sup>3</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the R-5 share class (expense ratio: 0.47%).

<sup>4</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Investor share class (expense ratio: 0.24%).

<sup>5</sup> Russell 2000 Index through May 16, 2003; MSCI US Small Cap 1750 Index through January 30, 2013; CRSP US Small Cap Index thereafter.

## Passive Small Cap Equity

### Calendar Year Performance

Fund	2007	2008	2009	2010	2011	2012	2013	2014
BlackRock Small Cap Index Fund Class K <sup>1</sup>	-1.9	-34.0	26.7	26.8	-4.5	16.1	39.1	4.8
Northern Small Cap Index Fund	-1.9	-34.0	27.2	26.4	-4.5	16.2	38.6	4.7
TIAA-CREF Small-Cap Blend Index Fund Inst	-1.5	-33.5	26.8	26.8	-4.1	16.6	39.0	5.2
<b><i>Russell 2000</i></b>	<b>-1.6</b>	<b>-33.8</b>	<b>27.2</b>	<b>26.9</b>	<b>-4.2</b>	<b>16.3</b>	<b>38.8</b>	<b>4.9</b>
Columbia Small Cap Index Fund R5 <sup>2</sup>	-0.4	-30.8	25.5	26.1	0.8	16.2	41.0	5.5
Principal SmallCap S&P 600 Index Fund Inst <sup>3</sup>	-0.6	-31.3	25.2	25.5	0.5	15.9	40.6	5.3
<b><i>S&amp;P Small Cap 600</i></b>	<b>-0.3</b>	<b>-31.1</b>	<b>25.6</b>	<b>26.3</b>	<b>1.0</b>	<b>16.3</b>	<b>41.3</b>	<b>5.8</b>
Vanguard Small-Cap Index Fund Inst Plus <sup>4</sup>	1.2	-36.1	36.1	27.7	-2.8	18.0	37.6	7.4
<b><i>Vanguard Spliced Small Cap Index</i></b> <sup>5</sup>	<b>1.2</b>	<b>-36.2</b>	<b>36.1</b>	<b>27.8</b>	<b>-2.8</b>	<b>18.2</b>	<b>37.8</b>	<b>7.5</b>

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.21%).

<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Z share class (expense ratio: 0.25%).

<sup>3</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the R-5 share class (expense ratio: 0.47%).

<sup>4</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Investor share class (expense ratio: 0.24%).

<sup>5</sup> Russell 2000 Index through May 16, 2003; MSCI US Small Cap 1750 Index through January 30, 2013; CRSP US Small Cap Index thereafter.

## Passive Small Cap Equity

### Tracking Error vs. Respective Benchmark as of 12/31/2014

Fund	One Year	Three Years	Five Years	Seven Years	Ten Years
BlackRock Small Cap Index Fund Class K <sup>1</sup>	0.1	0.2	0.2	0.2	0.2
Northern Small Cap Index Fund	0.1	0.1	0.1	0.1	0.1
TIAA-CREF Small-Cap Blend Index Fund Institutional	0.0	0.1	0.1	0.2	0.1
Columbia Small Cap Index Fund R5 <sup>2</sup>	0.0	0.1	0.1	0.1	0.1
Principal SmallCap S&P 600 Index Fund Inst <sup>3</sup>	0.1	0.1	0.2	0.2	0.1
Vanguard Small-Cap Index Fund Inst Plus <sup>4</sup>	0.0	0.0	0.0	0.1	0.1

This table presents the tracking ability of the manager versus their respective index covering the time periods indicated above. Tracking error is the annualized standard deviation of quarterly excess returns.

<sup>1</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Institutional share class (expense ratio: 0.21%).

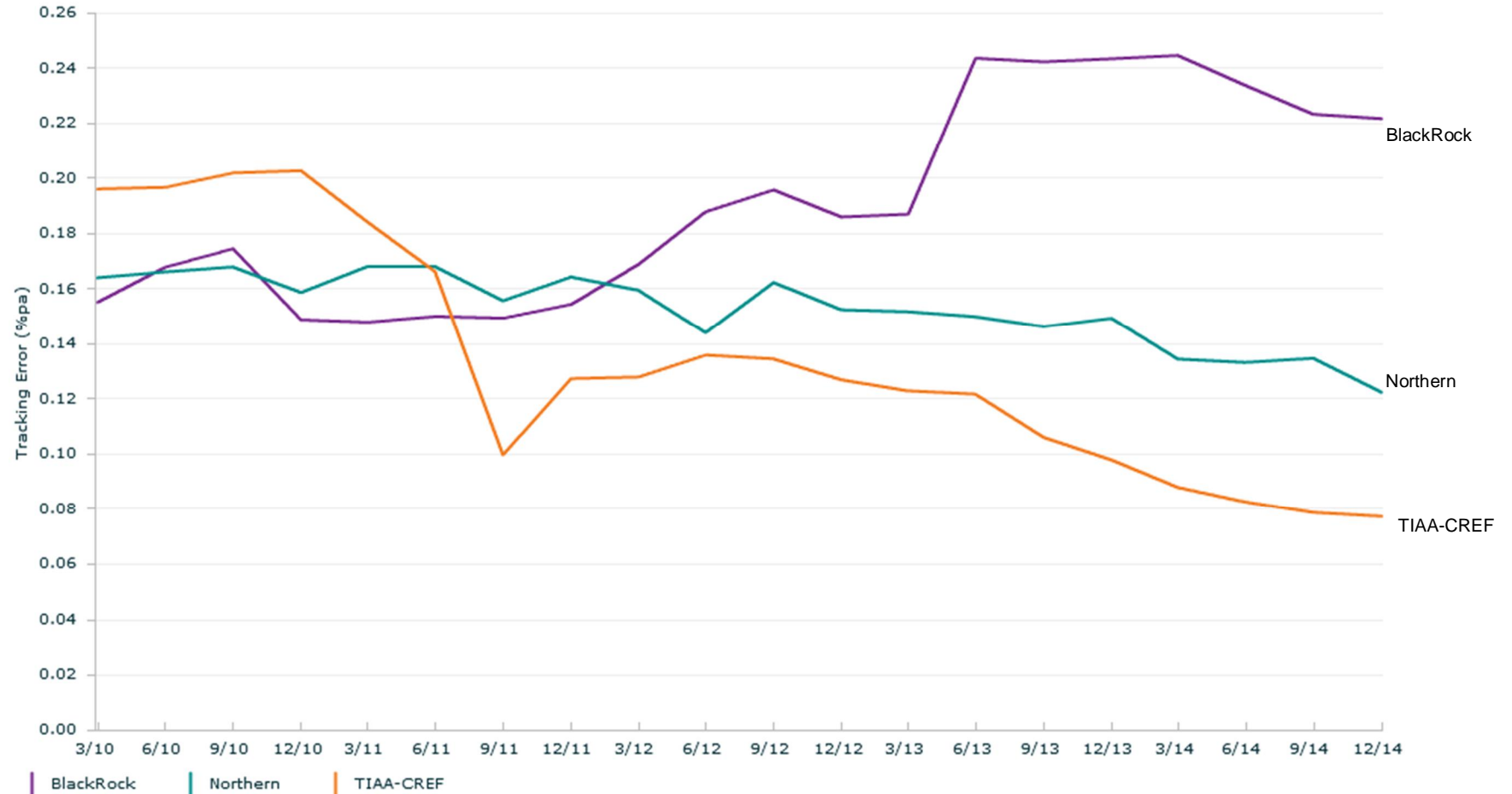
<sup>2</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Z share class (expense ratio: 0.25%).

<sup>3</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the R-5 share class (expense ratio: 0.47%).

<sup>4</sup> Due to the shorter track record of the proposed share class, the performance data for this fund reflects that of the Investor share class (expense ratio: 0.24%).

## Passive Small Cap Equity

Rolling 3 yr Tracking Error vs. Russell 2000 in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)



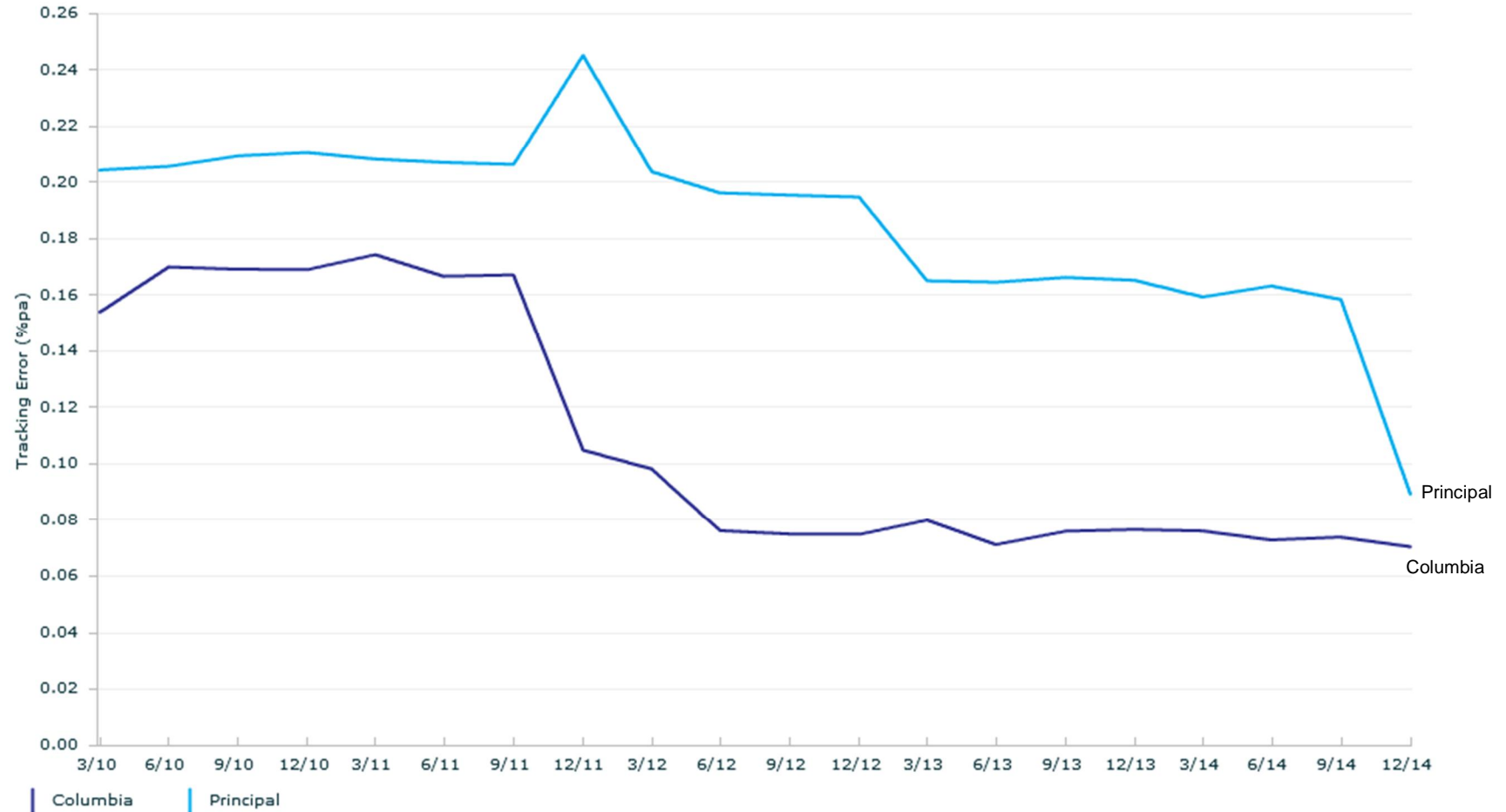
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## Passive Small Cap Equity

Rolling 3 yr Tracking Error vs. S&P 600 Small Cap in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)



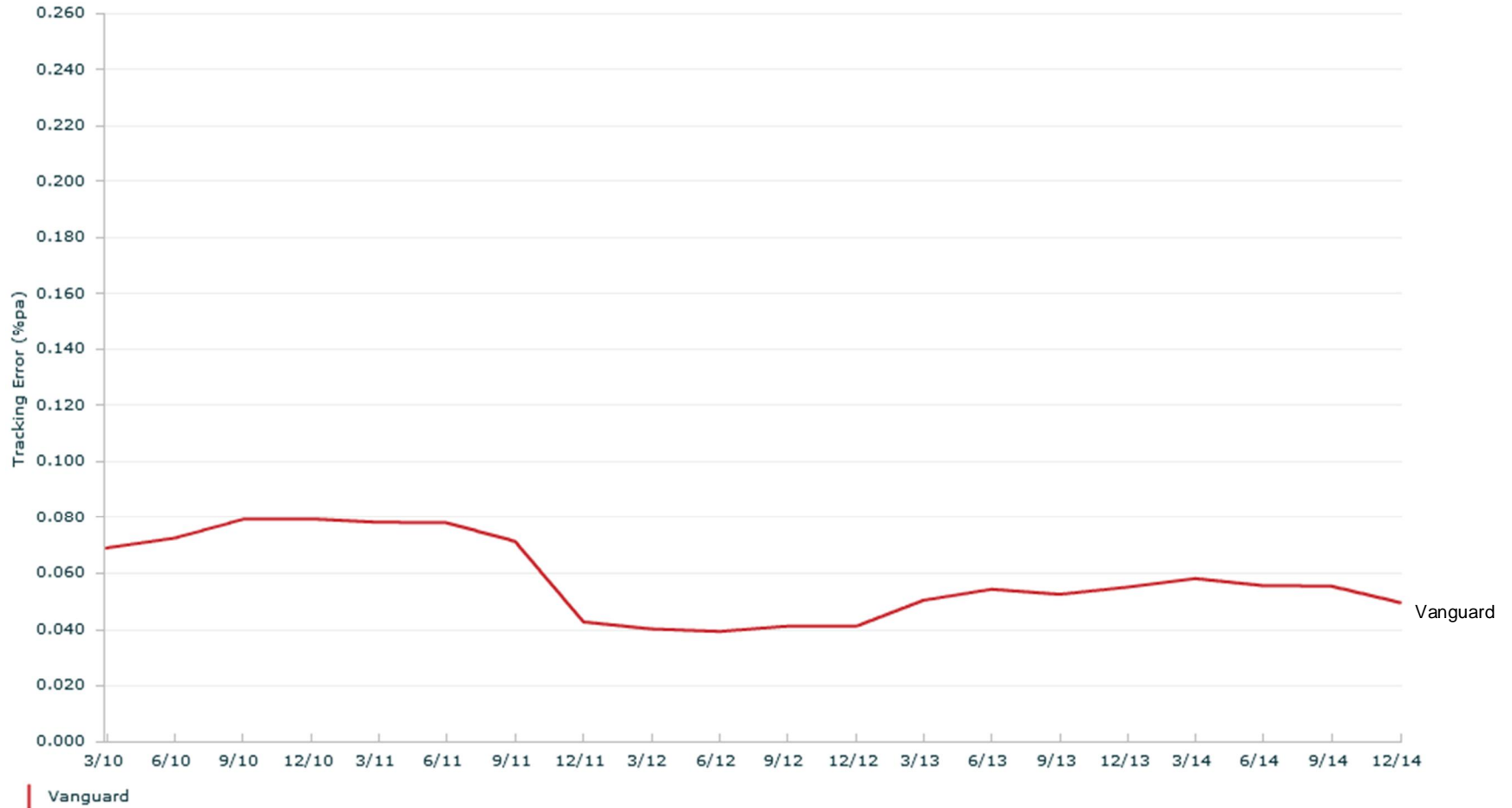
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## Passive Small Cap Equity

Rolling 3 yr Tracking Error vs. Vanguard Spliced Small Cap Index in \$US (after fees) over 5 yrs ending December-14 (quarterly calculations)



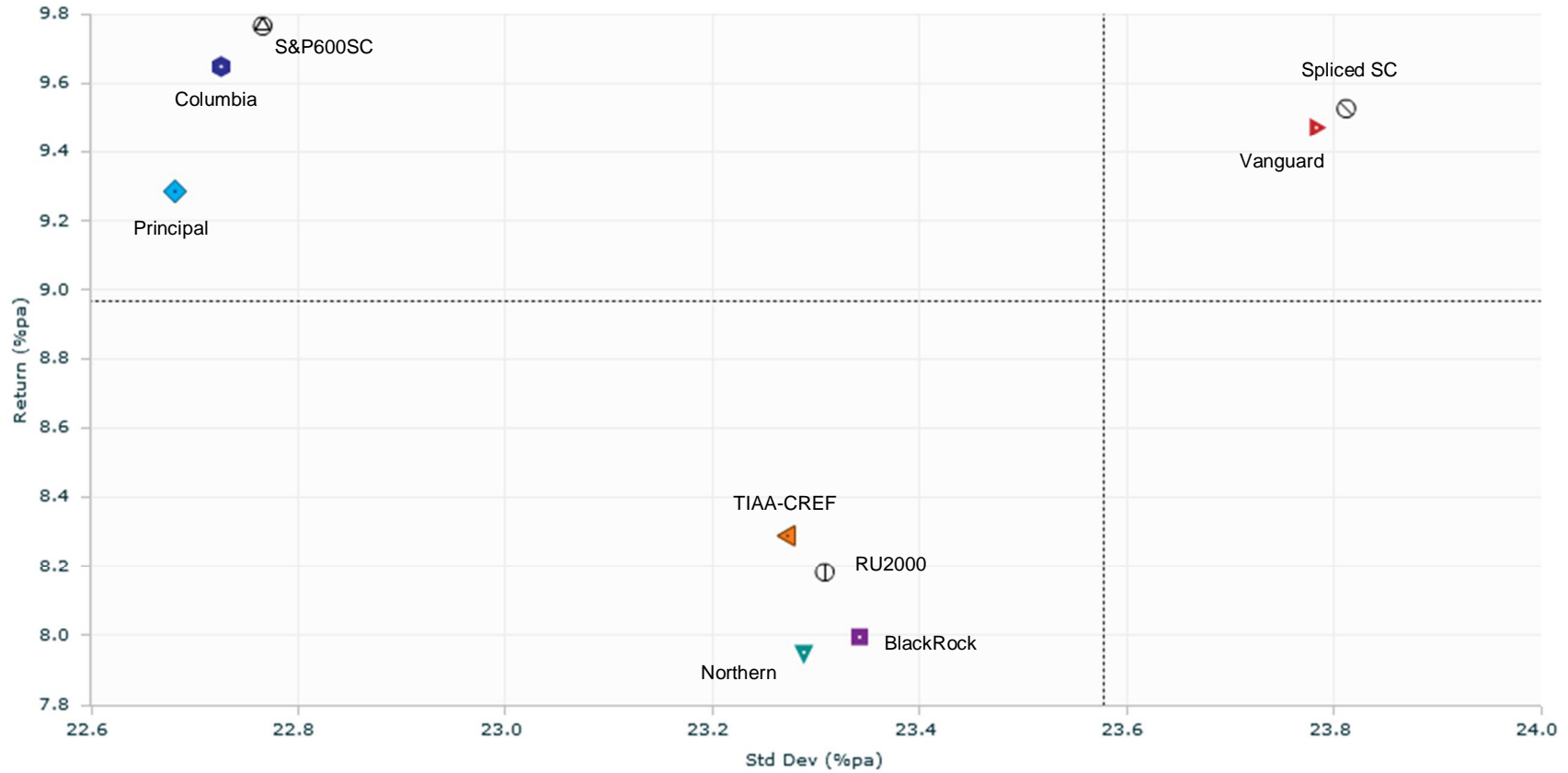
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## Passive Small Cap Equity

Return and Std Deviation in \$US (after fees) over 7 yrs ending December-14 (quarterly calculations)  
Comparison with the Mutual Fund US Equity Small Cap Index universe







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