

# Performance Monitoring Report

Third Quarter

# 2018



Sample Client PMR

An Index Fund Advisors, Inc. Quarterly Fiduciary Report on the Performance of Peer Groups and Their Comprised Funds.

## Summary

#	Fund Name	Peer Group	Score	PCTL	Expense Ratio	PB Ratio	Turnover Ratio	Sharpe Ratio (3 yr)	Sharpe Ratio (5 yr)	Sharpe Ratio (10 yr)
1	DFA Emerging Markets (DFEMX)	US Fund Diversified Emerging Mkts	90.50	99.77 %	0.48%	1.67	4%	0.82	0.28	0.34
2	DFA Emerging Markets Small Cap (DEMSX)	US Fund Diversified Emerging Mkts	85.20	99.65 %	0.73%	1.30	11%	0.70	0.35	0.46
3	DFA Emerging Markets Value (DFEVX)	US Fund Diversified Emerging Mkts	84.60	99.42 %	0.57%	0.97	22.4%	0.89	0.26	0.32
4	DFA International Small Cap Value (DISVX)	US Fund Foreign Small/Mid Value	87.50	96.49 %	0.68%	0.91	21%	0.84	0.56	0.50
5	DFA International Small Company (DFISX)	US Fund Foreign Small/Mid Blend	88.70	98.02 %	0.53%	1.48	N/A	1.06	0.65	0.55
6	DFA International Value (DFIVX)	US Fund Foreign Large Value	84.90	99.14 %	0.43%	1.03	15%	0.82	0.34	0.32
7	DFA Tax-Managed International Value (DTMIX)	US Fund Foreign Large Value	84.90	99.14 %	0.53%	1.05	16%	0.81	0.32	0.31
8	DFA Tax-Managed US Eq (DTMEX)	US Fund Large Blend	88.20	99.02 %	0.22%	3.13	8%	1.66	1.3	0.82
9	DFA Tax-Managed US Marketwide Value (DTMMX)	US Fund Large Value	70.30	95.08 %	0.37%	1.91	5%	1.27	1.02	0.66
10	DFA Tax-Managed US Small Cap (DFTSX)	US Fund Small Blend	85.80	98.45 %	0.52%	2.11	11%	1.13	0.81	0.63
11	DFA Tax-Managed US Targeted Value (DTMVX)	US Fund Small Value	80.60	99.55 %	0.44%	1.55	14%	0.97	0.77	0.6
12	DFA U.S. Large Cap Value (DFLVX)	US Fund Large Value	72.00	96.57 %	0.27%	1.88	15%	1.3	1.03	0.66
13	DFA U.S. Micro Cap (DFSCX)	US Fund Small Blend	73.80	89.56 %	0.52%	1.99	15%	1.18	0.82	0.66
14	DFA U.S. Small Cap (DFSTX)	US Fund Small Blend	87.10	98.97 %	0.37%	2.09	14%	1.13	0.82	0.68
15	DFA U.S. Small Cap Value (DFSVX)	US Fund Small Value	75.50	97.29 %	0.52%	1.34	24%	0.93	0.65	0.57
16	DFA U.S. Targeted Value (DFFVX)	US Fund Small Value	78.30	98.42 %	0.37%	1.47	23%	0.97	0.71	0.58
17	Dimensional 2005 Target Dt Rtr Inc Instl (DRIMX)	US Fund Target-Date 2000-2010	67.50	76.44 %	0.19%	2.28	N/A	N/A	N/A	N/A
18	Dimensional 2010 Target Dt Rtr Inc Instl (DRIBX)	US Fund Target-Date 2000-2010	67.50	76.44 %	0.2%	2.28	N/A	N/A	N/A	N/A
19	Dimensional 2015 Target Dt Rtr Inc Instl (DRIQX)	US Fund Target-Date 2015	67.50	77.49 %	0.2%	2.28	N/A	N/A	N/A	N/A
20	Dimensional 2020 Target Dt Rtr Inc Instl (DRIRX)	US Fund Target-Date 2020	66.00	63.10 %	0.22%	2.28	N/A	N/A	N/A	N/A
21	Dimensional 2025 Target Dt Rtr Inc Instl (DRIUX)	US Fund Target-Date 2025	64.50	63.16 %	0.23%	2.28	N/A	N/A	N/A	N/A
22	Dimensional 2030 Target Dt Rtr Inc Instl (DRIWX)	US Fund Target-Date 2030	64.50	58.51 %	0.25%	2.28	N/A	N/A	N/A	N/A
23	Dimensional 2035 Target Dt Rtr Inc Instl (DRIGX)	US Fund Target-Date 2035	67.50	75.37 %	0.26%	2.28	N/A	N/A	N/A	N/A
24	Dimensional 2040 Target Dt Rtr Inc Instl (DRIHX)	US Fund Target-Date 2040	66.00	69.80 %	0.27%	2.28	N/A	N/A	N/A	N/A
25	Dimensional 2045 Target Dt Rtr Inc Instl (DRIIX)	US Fund Target-Date 2045	66.00	74.38 %	0.26%	2.28	N/A	N/A	N/A	N/A
26	Dimensional 2050 Target Dt Rtr Inc Instl (DRIJX)	US Fund Target-Date 2050	66.00	71.62 %	0.27%	2.28	N/A	N/A	N/A	N/A
27	Dimensional 2055 Target Dt Rtr Inc Instl (DRIKX)	US Fund Target-Date 2055	66.00	77.84 %	0.27%	2.28	N/A	N/A	N/A	N/A
28	Dimensional 2060 Target Dt Rtr Inc Instl (DRILX)	S&P 500 TR USD	67.50	85.76 %	0.27%	2.28	N/A	N/A	N/A	N/A
29	iShares Core MSCI Emerging Markets (IEMG)	US Fund Diversified Emerging Mkts	82.10	96.30 %	0.14%	1.58	4%	0.81	0.27	N/A
30	iShares MSCI EAFE Value ETF (EFV)	US Fund Foreign Large Value	51.70	58.33 %	0.39%	1.14	28%	0.62	0.25	0.30
31	Schwab International Small-Cap Eq ETF™ (SCHC)	US Fund Foreign Small/Mid Blend	62.60	80.00 %	0.12%	1.54	12%	0.91	0.50	N/A
32	Vanguard 500 ETF (VOO)	US Fund Large Blend	75.80	94.84 %	0.04%	3.32	3%	1.69	2	0.83

33	Vanguard FTSE All-World ex-US Sm-Cp ETF (VSS)	US Fund Foreign Small/Mid Blend	68.20	90.00 %	0.13%	1.58	14%	0.94	10	N/A
34	Vanguard FTSE Developed Markets ETF (VEA)	US Fund Foreign Large Blend	81.50	98.65 %	0.07%	1.58	3%	0.89	4	0.37
35	Vanguard FTSE Emerging Markets ETF (VWO)	US Fund Diversified Emerging Mkts	82.60	97.53 %	0.14%	1.77	6%	0.69	5	0.31
36	Vanguard Global ex-US Real Estate ETF (VNQI)	US Fund Global Real Estate	68.50	91.67 %	0.14%	1.02	6%	0.63	8	N/A
37	Vanguard REIT ETF (VNQ)	US Fund Real Estate	78.00	93.10 %	0.12%	2.49	6%	0.53	7	0.41
38	Vanguard Small Cap Index Inv (VSCIX)	US Fund Small Blend	76.80	92.27 %	0.17%	2.48	15%	1.31	0.93	0.69
39	Vanguard Small-Cap Value ETF (VBR)	US Fund Small Value	70.90	79.17 %	0.07%	1.93	19%	1.17	1	0.65
40	Vanguard Value Index Inv (VIVAX)	US Fund Large Value	76.30	98.06 %	0.17%	2.38	9%	1.54	1.22	0.73
41	Schwab® S&P 500 Index (SWPPX)	US Fund Large Blend	78.50	93.91 %	0.03%	3.32	2%	1.69	1.36	0.83

\*Note: N/A values indicate insufficient data

## Summary

#	Fund Name	Peer Group	Score	Percentile	Expense Ratio	Credit Rating	Avg. Credit Duration	Standard Deviation (3 yr)	Standard Deviation (5 yr)	Standard Deviation (10 yr)
1	DFA Five Year Global Fixed Income (DFGBX)	US Fund World Bond	72.00	96.78 %	0.27%	AA	3.79 yrs.	1.76%	1.92%	2.28%
2	DFA One Yr Fixed Income (DFIHX)	US Fund Ultrashort Bond	83.00	97.88 %	0.17%	AA	0.90 yrs.	0.38%	0.35%	0.58%
3	DFA Short-Term Government (DFFGX)	US Fund Short Government	62.00	90.14 %	0.19%	AAA	2.77 yrs.	1.39%	1.31%	1.94%
4	DFA Two Year Global Fixed Income (DFGFX)	US Fund World Bond	64.00	89.60 %	0.17%	AA	1.53 yrs.	0.49%	0.44%	0.60%
5	iShares 1-3 Year Treasury Bond ETF (SHY)	US Fund Short Government	57.00	81.82 %	0.15%	AAA	1.90 yrs.	0.76%	0.71%	0.92%
6	Schwab Short-Term US Treasury ETF™ (SCHO)	US Fund Short Government	68.00	90.91 %	0.06%	AAA	1.94 yrs.	0.77%	0.70%	N/A
7	Vanguard Short-Term Bond Index Inv (VBISX)	US Fund Short-Term Bond	79.50	99.53 %	0.15%	AA	2.7 yrs.	1.29%	1.26%	1.62%

# Performance Monitoring System

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## Introduction

The investment advisor has implemented a set of monitoring guidelines to ensure that all funds meet IFA's standard of a sound investment. The guidelines include a fiduciary monitoring scoring system to analyze every fund. There are nine equity scoring categories and five fixed income scoring categories as shown in Table 1.

## Monitoring vs Selection

IFA monitors the ongoing prudence of the funds in its portfolios. IFA uses framework of Modern Portfolio Theory rather than the monitoring guidelines to select the Funds. Almost all live mutual fund returns data are insufficient to provide meaningful information about expectations of the future investment performance. Nevertheless, all selections at the time of inclusion are prudent according to the monitoring guidelines and are monitored on an ongoing basis to ensure they remain prudent.

## Scoring System

Using the factors listed in Table 1, each fund is assigned an aggregate score between 0 (Worst) to 100 (Best) by summing individual scores for the fourteen factors mentioned above. If the fund scores greater than 33.33 it is considered satisfactory. If a fund falls below 33.33 it will be placed under review and may be removed.

Note on money market Funds: Morningstar does not widely provide information on the total number of holdings, the average credit rating, turnover, and average effective duration for money market funds. In order to put Money Market funds on the same 0 to 100 scale, IFA increased the other factors' weights proportionally.

Note on funds of funds: A common example is a target date retirement fund. For a fund of funds, IFA analyzes each of the underlying fund components separately as if it was an individual fund. Each underlying fund must score above 33.33 or the fund of funds itself will be placed under review.

Below is the scoring system for each of the fourteen factors. Funds are scored based on how they perform relative to their peers.

IFA assigns points for each factor according to which decile the fund falls relative to its peers. Every factor is scored one of these three ways: Lowest to highest, highest to lowest, and middle out. For Example: Prospectus Net Expense ratio is ranked from lowest to highest because to us, a cheaper fund is preferable. Scores are shown in Table 1.

In this system, factors that can be directly controlled such as net expense ratio, turnover, and total number of holdings are given more weight compared to factors that are less directly controlled such as Sharpe ratios. This strategy is consistent with developing a prudent process for portfolio management.

## Table 1: Prudent Monitoring Factors and Their Weights

### Equity Scoring Table

Factor	Weight	Deciles									
		1	2	3	4	5	6	7	8	9	10
<i>Prospectus Net Expense Ratio</i>	15.00%	10	20	30	40	50	60	70	80	90	100
<i>P/B Ratio</i>	15.00%	100	90	80	70	60	50	40	30	20	10
<i>Turnover Ratio</i>	15.00%	10	20	30	40	50	60	70	80	90	100
<i>Average Market Cap</i>	15.00%	20	40	60	80	100	80	60	40	20	10
<i># of Holdings</i>	15.00%	10	20	30	40	50	60	70	80	90	100
<i>% of Assets in Top 10 Holdings</i>	15.00%	10	20	30	40	50	60	70	80	90	100
<i>Sharpe Ratio 10 Years</i>	5.00%	10	20	30	40	50	60	70	80	90	100
<i>Sharpe Ratio 5 Years</i>	3.00%	10	20	30	40	50	60	70	80	90	100
<i>Sharpe Ratio 3 Years</i>	2.00%	10	20	30	40	50	60	70	80	90	100

### Fixed Income Scoring Table

Factor	Weight	Deciles									
		1	2	3	4	5	6	7	8	9	10
<i>Avg. Effective Duration</i>	40.00%	10	20	30	40	50	60	70	80	90	100
<i>Prospectus Net Expense Ratio</i>	20.00%	10	20	30	40	50	60	70	80	90	100
<i>3 Year Annualized St. Dev.</i>	5.00%	10	20	30	40	50	60	70	80	90	100
<i>5 Year Annualized St. Dev.</i>	10.00%	10	20	30	40	50	60	70	80	90	100
<i>10 Year Annualized St. Dev.</i>	25.00%	10	20	30	40	50	60	70	80	90	100

### Summary

This monitoring evaluation will be conducted on a quarterly basis to ensure the funds in your plan conform to IFA's fiduciary standards according to this scoring system. Those funds that achieve a satisfactory score are considered viable and will be kept.

## Glossary of Terms

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**Sharpe Ratio:** A risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the fund's historical risk-adjusted performance. The Sharpe ratio is calculated for the past 36-month period by dividing a fund's annualized excess returns by the standard deviation of a fund's annualized excess return

**Prospectus Net Expense Ratio:** The percentage of fund assets, net of reimbursements, used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

**P/B Ratio:** The weighted average of the price/book ratios of all the stocks in a portfolio. The P/B ratio of a company is calculated by dividing the market price of its stock by the company's per-share book value. Stocks with negative book values are excluded from this calculation. In theory, a high P/B ratio indicates that the price of the stock exceeds the actual worth of the company's assets, while a low P/B ratio indicates that the stock is a bargain. All P/B ratios greater than 75 are capped at 75 for the calculation.

**Turnover Ratio:** measures the portfolio manager's trading activity by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. A turnover ratio of 100% or more does not necessarily suggest that all securities in the portfolio have been traded. In practical terms, the resulting percentage loosely represents the percentage of the portfolio's holdings that have changed over the past year.

**Average Market Cap:** Morningstar defines the overall "size" of a stock fund's portfolio as the geometric mean of the market capitalization for all of the stocks it owns. It's calculated by multiplying the stock's portfolio weight by the natural log of the market cap. The results for each stock are summed and divided by sum of the portfolio weights, and then the exponential of the resulting number is taken.

**# of Holdings:** The net number of holdings in the portfolio.

**% Asset in Top 10 Holdings:** The aggregate assets, expressed as a percentage, of the fund's top 10 portfolio holdings. This figure is meant to be a measure of portfolio risk. Specifically, the higher the percentage, the more concentrated the fund is in a few companies or issues, and the more the fund is susceptible to the market fluctuations in these few holdings. Cash and cash equivalents are generally not included in this calculation. (An exception is made for money market portfolios.)

**Average Effective Duration:** A measure of a fund's interest-rate sensitivity--the longer a fund's duration, the more sensitive the fund is to shifts in interest rates. Duration is determined by a formula that includes coupon rates and bond maturities. Small coupons tend to increase duration, while shorter maturities and higher coupons shorten duration. The relationship between funds with different durations is straightforward: A fund with a duration of 10 years is twice as volatile as a fund with a five-year duration.

**Standard Deviation:** A statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility. Standard deviation is most appropriate for measuring risk if it is for a fund that is an investor's only holding. The figure cannot be combined for more than one fund because the standard deviation for a portfolio of multiple funds is a function of not only the individual standard deviations, but also of the degree of correlation among the funds' returns. If a fund's returns follow a normal distribution, then approximately 68 percent of the time they will fall within one standard deviation of the mean return for the fund, and 95 percent of the time within two standard deviations. Morningstar computes standard deviation using the trailing monthly total returns for the appropriate time period. All of the monthly standard deviations are then annualized.