

## Who gets more, Passive or Active – Let's follow the Money!

We used Morningstar® as our source for data and PlanTools to perform analysis of the total assets for the Top 20 Open End peer groups that we see available within a 401(k) plan. The data is as of November 30, 2022, and asset allocation funds were excluded from this analysis. In addition, we removed all the duplicates associated with multiple share classes of the same investment strategy and then divided the funds between active and passive ("index") offerings.

Peer Group	Total Peer Group Assets	# of Fund Options	Active Peer Group Assets	Active \$ as a % of Total \$	# Active Funds	Active Funds as a % of all Funds	Passive Peer Group Assets	Passive \$ as a of Total	# Index Funds	Passive Funds as a % of all Funds
Diversified Emerging Mkts	\$461,895,267,909	237	\$340,639,698,791	73.75%	225	94.94%	\$121,255,569,118	26.25%	12	5.06%
Foreign Large Blend	\$1,104,149,029,069	215	\$376,760,678,102	34.12%	178	82.79%	\$727,388,350,967	65.88%	37	17.21%
Foreign Large Growth	\$240,113,763,987	116	\$234,790,838,698	97.78%	113	97.41%	\$5,322,925,289	2.22%	3	2.59%
Foreign Large Value	\$228,577,445,272	93	\$216,767,490,366	94.83%	90	96.77%	\$11,809,954,906	5.17%	3	3.23%
Foreign Small/Mid Blend	\$36,078,577,783	29	\$25,815,097,776	71.55%	27	93.10%	\$10,263,480,007	28.45%	2	6.90%
Foreign Small/Mid Growth	\$44,303,166,229	47	\$44,303,166,229	100.00%	47	100.00%	\$0.00	0.00%	0	0.00%
Foreign Small/Mid Value	\$24,439,898,586	20	\$23,846,599,240	97.57%	19	95.00%	\$593,299,346	2.43%	1	5.00%
Large Blend	\$4,936,509,731,089	409	\$1,649,904,749,996	33.42%	324	79.22%	\$3,286,604,981,093	66.58%	85	20.78%
Large Growth	\$1,954,061,023,045	350	\$1,718,966,074,769	87.97%	322	92.00%	\$235,094,948,276	12.03%	28	8.00%
Large Value	\$1,486,287,376,155	325	\$1,214,244,764,346	81.70%	303	93.23%	\$272,042,611,809	18.30%	22	6.77%
Mid-Cap Blend	\$279,213,684,414	123	\$77,799,547,962	27.86%	99	80.49%	\$201,414,136,452	72.14%	24	19.51%
Mid-Cap Growth	\$456,837,987,904	154	\$315,204,469,838	69.00%	141	91.56%	\$141,633,518,066	31.00%	13	8.44%
Mid-Cap Value	\$262,582,477,018	106	\$231,612,101,359	88.21%	102	96.23%	\$30,970,375,659	11.79%	4	3.77%
Small Blend	\$342,398,172,746	190	\$160,010,909,833	46.73%	161	84.74%	\$182,387,262,913	53.27%	29	15.26%
Small Growth	\$216,889,787,540	74	\$187,396,200,228	86.40%	69	93.24%	\$29,493,587,312	13.60%	5	6.76%
Small Value	\$175,600,806,772	139	\$126,503,887,449	72.04%	131	94.24%	\$49,096,919,323	27.96%	8	5.76%
High Yield Bond	\$245,926,171,497	175	\$245,912,774,337	99.99%	174	99.43%	\$13,397,160	0.01%	1	0.57%
Inflation-Protected Bond	\$196,329,341,267	50	\$112,795,181,961	57.45%	43	86.00%	\$83,534,159,306	42.55%	7	14.00%
Intermediate Core Bond	\$1,005,925,362,511	133	\$348,626,479,431	34.66%	113	84.96%	\$657,298,883,080	65.34%	20	15.04%
Intermediate Core-Plus Bond	\$841,896,706,621	172	\$840,034,948,500	99.78%	171	99.42%	\$1,861,758,121	0.22%	1	0.58%
TOTALS	\$14,540,015,777,414	3157	\$8,491,935,659,211	58.40%	2852	90.34%	\$6,048,080,118,203	41.60%	305	9.66%



The rows highlighted in green indicate the peer groups with 50% or more of the peer group assets held in passive options. All this information is based on the available Open End investment strategies. The chart above excludes CITs, ETFs, and Private Funds.

For example, of the 237 open-end Diversified Emerging Market investment strategies, the market offers 225 active and 12 passive options. The overwhelming number of options (94.94%) and the vast major of assets (73.75%) favor the active management of the emerging market peer group as of November 30, 2022. Notice this is not the case in every peer group; however, of the 20 peer groups considered in this study, 14 peer groups have over 50% of their total assets allocated to active strategies.

## **Selecting & Monitoring Passive Funds**

According to the statutory substantive and procedural prudence obligations, a prudent fiduciary will establish a process for selecting and monitoring both active and passive investments. A decision to ignore the obligation to evaluate passive funds is typically due to:

- 1. Technology limitations associated with the monitoring tools used, or
- 2. Limited passive offerings.

Modern Portfolio Theory provides an accepted process for selecting and monitoring investments. The three key MPT metrics are Alpha, Beta, and R-Squared. The following table provides a general comparative outline of these three metrics and other metrics that can be used to evaluate both active and passive funds.

MPT Stat	Active	Passive				
Alpha	Greater than Zero	Zero or Negative = to the expense ratio				
Beta	Collared >.80<1.20	1				
R-Squared	80 or Higher	100				
Tracking Error	Subjective based on peer group	0				
Total Return	Greater than the Index	Equal to Less than Index by the Exp Ratio				
Excess Return	Positive	Negative = to Exp Ratio				
Expense Ratio	Low	Low				
Capture Ratio (Up/Down)	Greater than 1	1				
Down Capture	Less than Index	100 = Index				
Up Capture	Greater than Index	100 = Index				
Manager Tenure	Important	Not Important				



Avg Mkt Cap	Style Specific	= Index
# of Holdings	Subjective	= Index

Based on an evaluation of users within PlanTools, Tracking Error, R-Squared, and Expense ratio are the primary metrics most heavily weighted when assessing passive funds. Several of the other metrics are secondary when used to validate the three primary metrics.

## **Ranking Challenges**

The following table is focused on the index leaders in each of the five peer groups highlighted above in green (Foreign Large Blend, Large Blend, Mid-Cap Blend, Small Blend, and Intermediate Core Bond). Again, we eliminated multiple share classes to determine the actual number of index strategies offered by each investment manager. The "percentage of index versus total Open End assets" represents the percentage of total Open End assets that Vanguard has in their 3 index funds. The column of CIT, ETF and Private Funds represents additional assets not counted in Open End totals. Notice that Blackrock has zero Open End index assets for Foreign Large Blend, but they are the second largest provider of Foreign Large Blend assets in passive strategies when you consider the CITs, ETFs, and Private Assets.

Another point worth considering in the table below and above is that the Large Blend peer group has the largest number of funds with 115 index options available. Of course, not all Large Blend indexes are the S&P 500. Some are Russell 1000, Russell 3000, CRSP, and other indexes. The problem with so few options is the limitations on ranking. Take for example Tracking Error ("TE"). In a perfect world, if you had 100 investments using the S&P 500 index to calculate the TE value, you would have 1 fund per rank percentile. However, if you only have 10 samples with different unique values, the second-best S&P alternative could have a ranking in the 20<sup>th</sup> percentile even though the difference in the tracking error could be no more than a 1000<sup>th</sup> of a point.

In addition, to complicate or possibly confuse the analysis even further, most ranking calculations include active funds and other indices that are of not of interest to the investor. Clearly, if an investor desires to include the S&P 500 in their 401(k) there is no reason to compare that fund to active funds or other passive funds with a different mandate. What the investor wants is the best S&P 500 among all S&P 500 options. While there may be an S&P 500 fund the plan does not qualify to use, the objective is to select the best S&P 500 the plan qualifies to hold and most importantly that is available on the platform or from the vendor/custodian/recordkeeper the plan has hired.

Bottom line, there are not many choices, so the metrics used to evaluate and monitor index funds must be designed to assist the advisor with identifying the index with the tightest fit to the uninvestable index it is mirroring.



Not only are there few index options, but there are also few investment managers that offer an index option. Consider the S&P 500, the most popular passive option, only has 45 investment options using the S&P 500 as the primary prospectus benchmark out of 86 passive large blend option after removing multiple share classes from the 201 passive Large Blend offerings as of November 30, 2022.

Foreign Large Blend	# of OE Options	Total OE Assets	% of Index vs Total OE Assets	Total CIT-ETF- Private Assets	# Funds	Total Passive Exposure
Vanguard	3	\$562,504,558,564	50.94%	\$163,354,005,016	2	\$725,858,563,580
Blackrock	0	\$0	0.00%	\$150,095,004,377	19	\$150,095,004,377
Fidelity	10	\$102,264,803,561	9.26%	\$1,484,039,581	2	\$103,748,843,142
State Street	3	\$6,487,582,942	0.59%	\$95,156,447,401	10	\$101,644,030,343
Schwab	1	\$8,091,392,893	0.73%	\$28,722,569,569	1	\$36,813,962,462
TIAA	1	\$19,113,043,356	1.73%	\$0	0	\$19,113,043,356
TOTALS	18	\$698,461,381,316	63.26%	\$438,812,065,944	34	\$1,137,273,447,260
Large Blend						
Vanguard	10	\$2,421,942,322,471	49.06%	\$8,505,747,661	2	\$2,430,448,070,132
Fidelity	9	\$530,662,020,632	10.75%	\$1,015,475,186	4	\$531,677,495,818
State Street	3	\$6,933,050,882	0.14%	\$339,482,448,576	6	\$346,415,499,458
Blackrock	0	\$0	0.00%	\$343,514,196,266.00	15	\$343,514,196,266
Schwab	3	\$94,026,061,930	1.90%	\$54,603,054,013	3	\$148,629,115,943
TOTALS	25	\$3,053,563,455,915	61.86%	\$747,120,921,702	30	\$3,800,684,377,617
Mid-Cap Blend						
Vanguard	2	\$147,874,438,976	52.96%	\$0	0	\$147,874,438,976
State Street	3	\$386,419,232	0.14%	\$56,024,865,626	2	\$56,411,284,858
Fidelity	3	\$27,142,215,015	9.72%	\$0	0	\$27,142,215,015
Schwab	1	\$965,446,407	0.35%	\$9,745,102,177	1	\$10,710,548,584
Blackrock	0	\$0.00	0.00%	\$6,912,939,948	6	\$6,912,939,948
JNL	2	\$6,564,917,247	2.35%	\$0	0	\$6,564,917,247
TOTALS	11	\$182,933,436,877	65.52%	\$72,682,907,751	9	\$255,616,344,628
Small Blend						



Vanguard	3	\$130,501,507,202	38.11%	\$0	0	\$130,501,507,202
Blackrock		\$0	0.00%	\$32,887,839,762	13	\$32,887,839,762
State Street	0	\$0	0.00%	\$28,315,843,616	1	\$28,315,843,616
Schwab	2	\$7,233,863,683	2.11%	\$20,198,798,758	2	\$27,432,662,441
Fidelity	3	\$21,280,450,418	6.22%	\$671,215,815	2	\$21,951,666,233
TOTALS	8	\$159,015,821,303	46.44%	\$82,073,697,951	18	\$241,089,519,254
Intermediate Core Bond						
Vanguard	3	\$542,789,032,505	53.96%	\$0	0	\$542,789,032,505
State Street	2	\$1,145,356,305	0.11%	\$119,615,109,132	2	\$120,760,465,437
Blackrock	0	\$0	0.00%	\$101,624,880,461.00	14	\$101,624,880,461
Fidelity	4	\$74,770,404,306	7.43%	\$0	0	\$74,770,404,306
TIAA	1	\$19,465,494,692	1.94%	\$0	0	\$19,465,494,692
TOTALS	10	\$638,170,287,808	63.44%	\$221,239,989,593	16	\$859,410,277,401

Those 45 S&P 500 passive options hold \$2,345,838,359,310 in assets of which Vanguard alone holds 75% of those assets with Fidelity holding 15% of Open-End S&P 500 assets. So, while you have 45 options, if Fidelity and Vanguard are available options to the plan, they are hard to ignore in favor of another investment manager with much less assets. It is not that assets alone are the primary indicator but their dominance in the market should give them the advantage in managing their S&P 500 index fund to the uninvestable index better than the competition. Of course, the Open-End universe does not represent the entire market and that is what the above chart also demonstrates. Yet, Fidelity and Vanguard remain the top two investment managers with the largest block of S&P 500 assets.

In conclusion, this analysis demonstrates that index funds should be evaluated and monitored using a narrowed list of metrics to identify those that do the best job managing the index fund to the uninvestable index benchmark they intend to mirror. While it might appear that there are many passive investment options, once you eliminate the duplicate share classes the number of dominate index providers is reduced to a half dozen or so candidates. The key criteria for selecting an index fund is low cost and the tightest fit to the benchmark. Of course, securities lending does play a role when evaluating index funds and should you elect to use an index fund with securities lending it is highly advised that you secure an annual due diligence report addressing their securities lending procedures. Fortunately, Catapult, the industry leading RFP/RFI solution offers templates for securities lending that permit a plan sponsor or an advisor to properly document their process to evaluate the procedures adopted by the investment manager to execute securities lending in a prudent manner.