

# MFDF 15c Benchmarks and Indexes Webinar

Fund Boards' Oversight of Investment Performance

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Jeff Tjornehoj,  
Senior Director, Fund Insights



**Broadridge**<sup>®</sup>



## Benchmark, Index, or Goal?

- Anything can be a benchmark: an index, a peer group median or average, a group ranking or a percentile
- Indexes are uninvestable portfolios of securities
- SEC Rule 33-6988 requires mutual funds to reference an “appropriate broad-based securities market index” for performance comparison
  - All performance must be 1, 5, 10 years in *marketing* materials and compared to an index
  - Performance for 15c, quarterly reviews, or other occasions can be for any period
- Performance incentive or “fulcrum” fees heighten index scrutiny
- Some strategies may be better explained as a goal, e.g. “absolute return”

### Other Considerations

- It’s very helpful to include r-squared (“R-sq”) when comparing index results
  - The farther from 1.00, the less relevant other statistics are
  - Can demonstrate whether the index is mis-specified

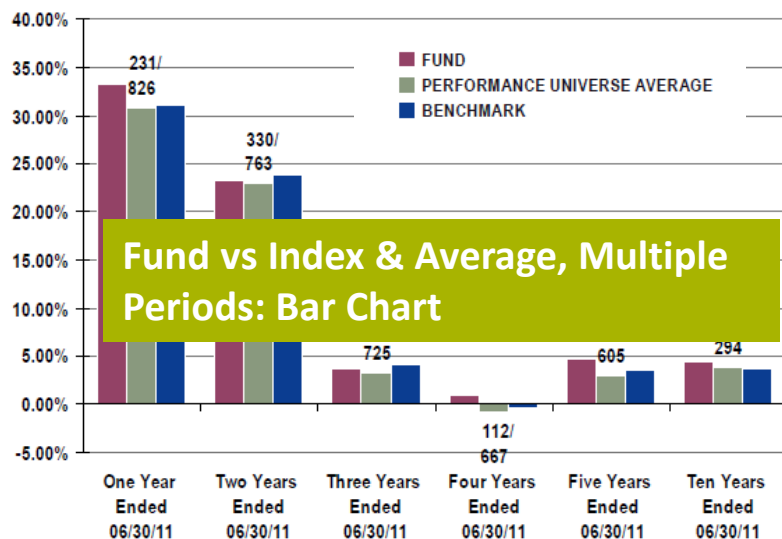
# Common Issues with Benchmarks

	Issue		Takeaway	
1	<b>Purpose</b>	Does the benchmark measure composition, performance, volatility, or something else?	→	Each aides a different measurement
2	<b>Survivorship bias</b>	Peer groups are subject to change, but index history is not	→	Trades stability for relevance
3	<b>Security mismatch</b>	Standard indexes are long-only, never have swaps or cash	→	Specialized or blended benchmarks
4	<b>Concentration</b>	Indexes often rules-based and limit concentration	→	Test of benchmark relevance
5	<b>Brand limits</b>	Licensing is expensive and no one tracks all possibilities	→	Custom benchmark

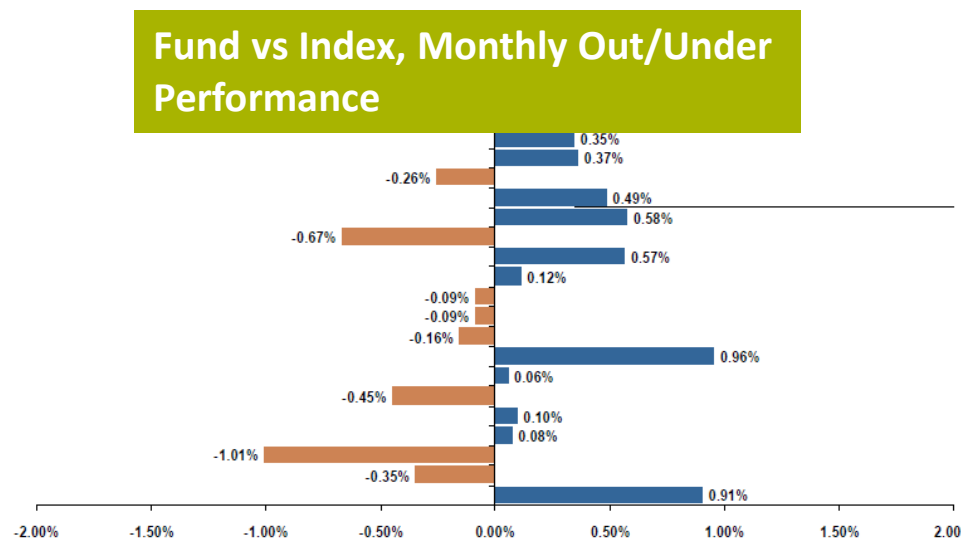
# Benchmarks and Indexes in 15c: Point-in-Time Examples

	One Year Ended 06/30/11	Two Years Ended 06/30/11	Three Years Ended 06/30/11	Four Years Ended 06/30/11	Five Years Ended 06/30/11	Ten Years Ended 06/30/11
<b>ABC Fund</b> ■	33.33%	23.22%	3.66%	0.99%	4.81%	4.48%
Rank	231/826	330/763	345/725	112/667	96/605	97/294
Lipper Mlt-Cap Core Index ◆	31.16%	23.81%	4.15%	-0.34%	3.56%	3.72%
High	51.24%	39.46%	17.01%	9.16%	10.09%	10.36%
Low	9.55%	6.55%	-9.64%	-8.94%	-5.19%	-3.00%
Median —	31.33%	22.75%	3.52%	-0.57%	3.07%	3.57%
Average	30.90%					3.79%
20th Percentile	34.57%					5.70%
40th Percentile	32.21%	23.42%	4.05%	-0.21%	3.45%	4.10%
60th Percentile	30.07%	21.94%	2.72%	-1.13%	2.61%	3.13%
80th Percentile	27.02%	20.08%	0.99%	-2.36%	1.51%	2.01%

Fund vs Index, Multiple Periods: Table

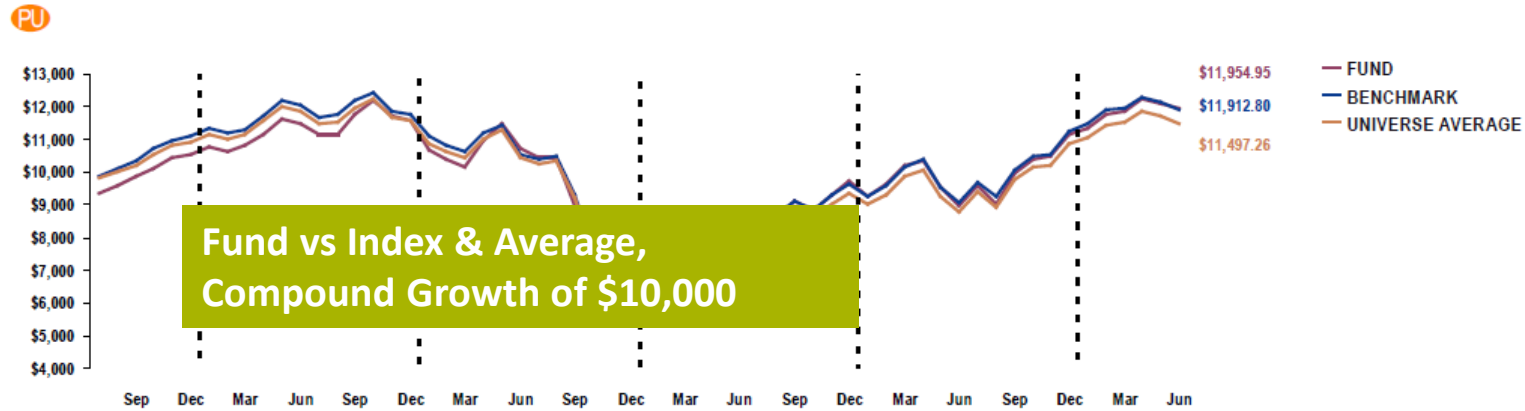


Fund vs Index & Average, Multiple Periods: Bar Chart

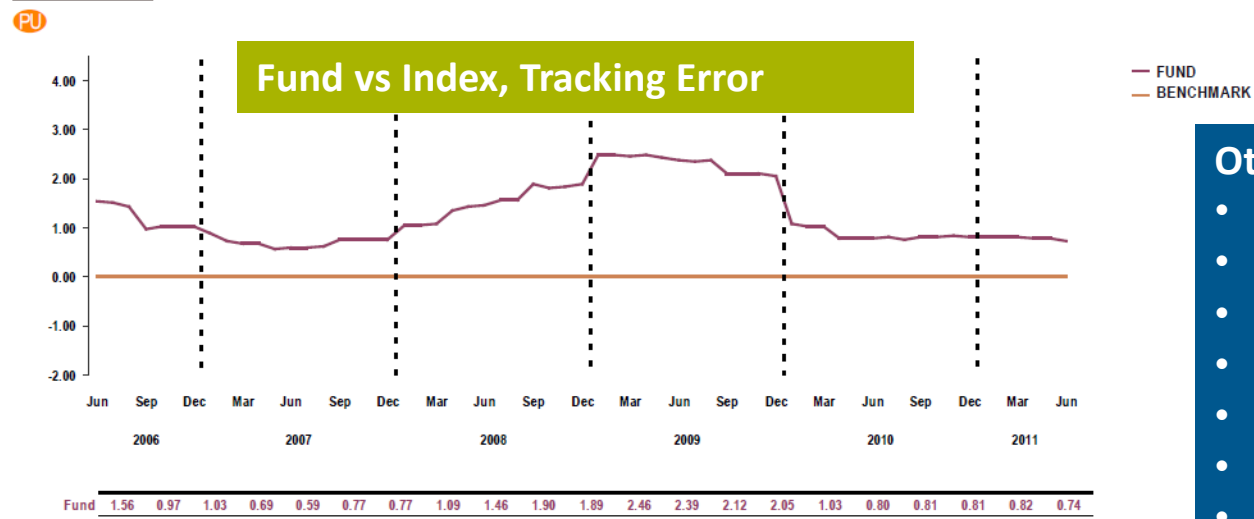


Fund vs Index, Monthly Out/Under Performance

# Benchmarks and Indexes in 15c: Rolling Period Examples

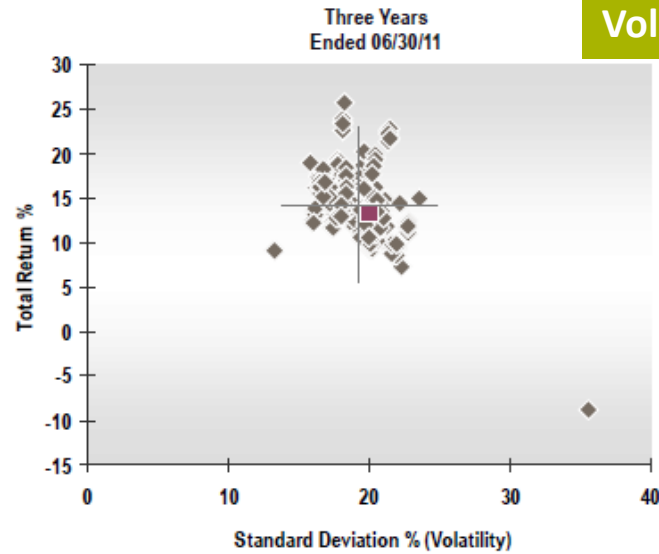


**FIGURE 1 TRACKING ERROR**



- Other Rolling Risk Measures:**
- Sharpe Ratio
  - Standard Deviation
  - Alpha
  - Beta
  - Information Ratio
  - Traynor
  - Tracking Difference

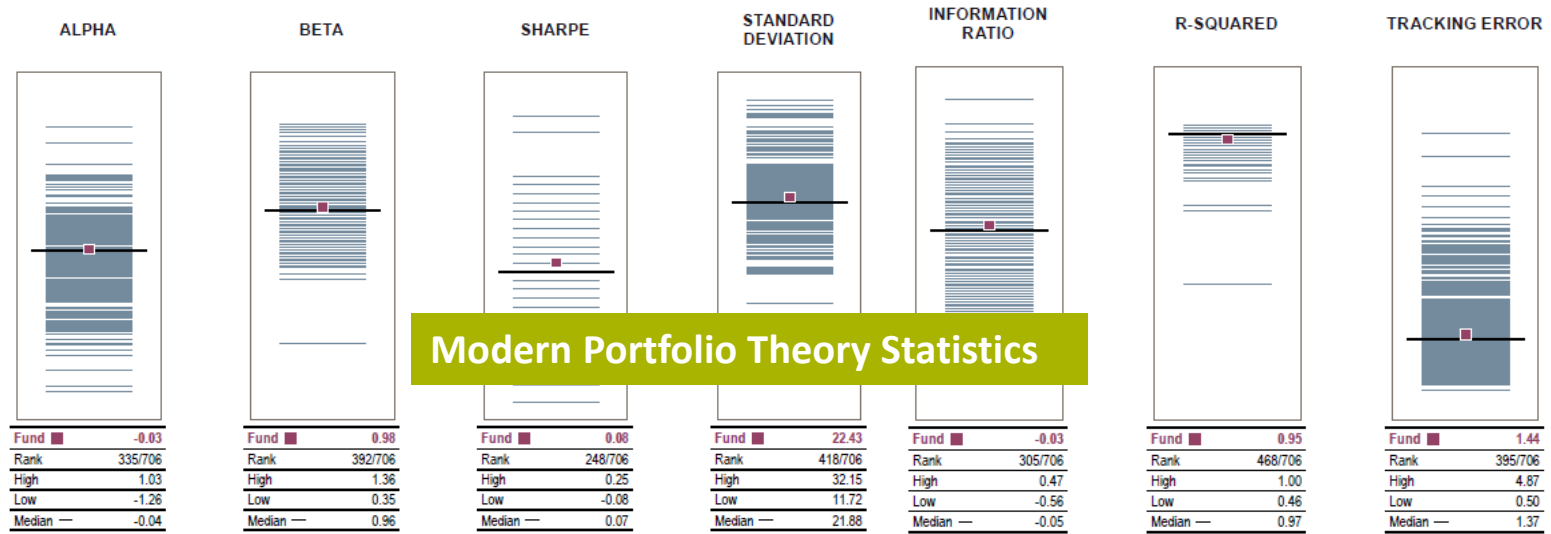
# Benchmarks and Indexes in 15c: "MPT" Examples



## Volatility vs Total Return

◆ EACH FUND OF THE PERFORMANCE UNIVERSE  
 + PERFORMANCE UNIVERSE AVERAGE  
 ■ FUND

MORE RETURN LESS VOLATILITY (NW QUADRANT)	MORE RETURN MORE VOLATILITY (NE QUADRANT)
LESS RETURN LESS VOLATILITY (SW QUADRANT)	LESS RETURN MORE VOLATILITY (SE QUADRANT)



## Modern Portfolio Theory Statistics