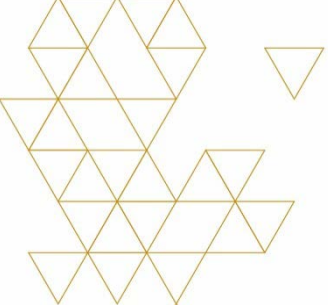


Touchstone Active Management Academy

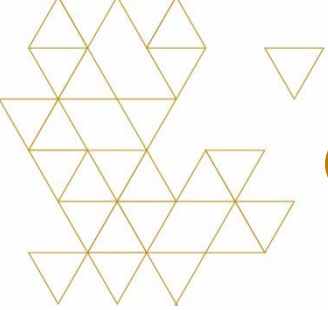
Tim Paulin
Touchstone Investments

University of Notre Dame
Mendoza College of Business
Stayer Center for Executive Education





Practical Application of Active Share & SCOPE



Objectives

- ▶ Relate Academic Research to Advisor Application
- ▶ Explore ActiveShare.Info as Resource
- ▶ Introduce Hands-on Workshop



From Academic...

- ▶ Professor Cremers' research evidences the importance and benefits of evaluating:
 - Active Share [How active is your fund manager? A new measure that predicts performance](#)
 - Skill
 - Conviction
 - Opportunity

} [Active Share and the Three Pillars of Active Management: Skill, Conviction and Opportunity](#)

 - Patience [Patient Capital Outperformance...](#)
 - Expenses [Do Mutual Fund Investors Get What They Pay For? The Legal Consequences of Closet Index Funds](#)
- ▶ If you forget those individual links: [ActiveShare.Info/About](#)

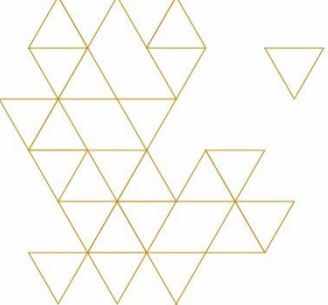


...to Application

- ▶ Influenced by Cremers' research, Touchstone developed a complementary framework
- ▶ This session will focus on everything BUT Skill



S	SKILL:	Ability to identify investment opportunities that enhance investor capital
C	CONVICTION:	Confidence to focus investments on best ideas and differentiate from the benchmark
O	OPPORTUNITY:	Flexibility to implement a highly differentiated strategy
P	PATIENCE:	Willingness and latitude to wait for investment conviction to pay off
E	EXPENSE:	Reasonable fees relative to active management exposure

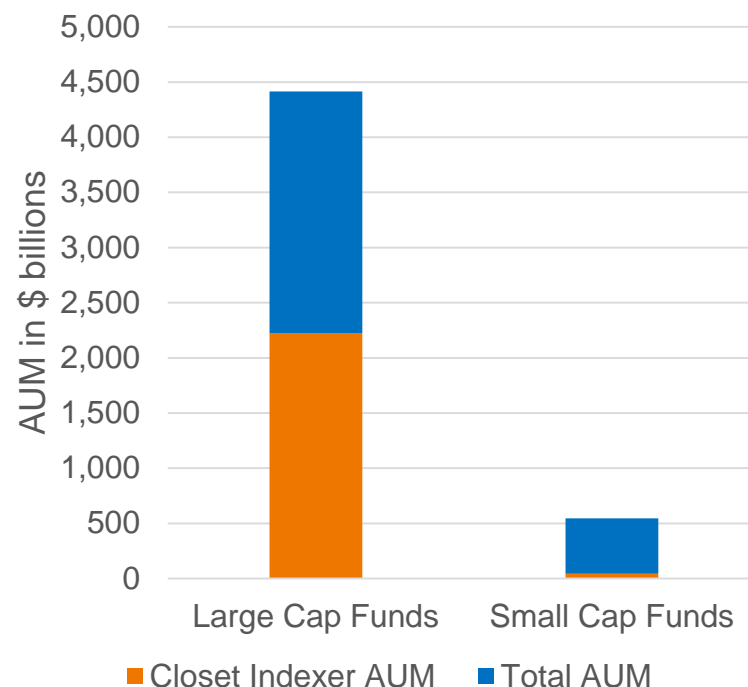


Importance of Evaluating SCOPE

Conviction: Closet Indexing

- ▶ Cremers' definition of Closet Indexing: under 60% Active Share
- ▶ Consideration: Are you getting what you're paying for?
- ▶ Relevant Consideration: Cause of Low Active Share?
 - Lack of Opportunity (is Active Share consistently low?)
 - Flexible Exposure (does Active Share vary with time and portfolio positioning?)

Closet Indexing in US Large and Small Cap Funds ¹



¹ Morningstar Direct Active Share data for funds in nine US Fund Morningstar Categories; Touchstone computation of assets invested in funds with Active Share < 60%



Conviction: Style Consistency

- ▶ Getting relevant exposure is critical to effective implementation of Financial Plans and Asset Allocation
- ▶ Challenges to relevant exposure:
 - Style Drift
 - Benchmark Mismatch / Asset Class Miscategorization
- ▶ Example: Well-known US Growth Fund
 - Prospectus Benchmark: Russell 2000 Growth - Active Share: 98%
 - Minimum Active Share Benchmark: Russell Mid Cap Growth - Active Share: 92%
 - % of Fund invested in:
 - Russell 2000 stocks: 12%
 - Russell Mid Cap stocks: 87%
 - Conclusion: Highly Active...but not relevant to Small Cap allocator



Opportunity: Strategy Liquidity and Capacity

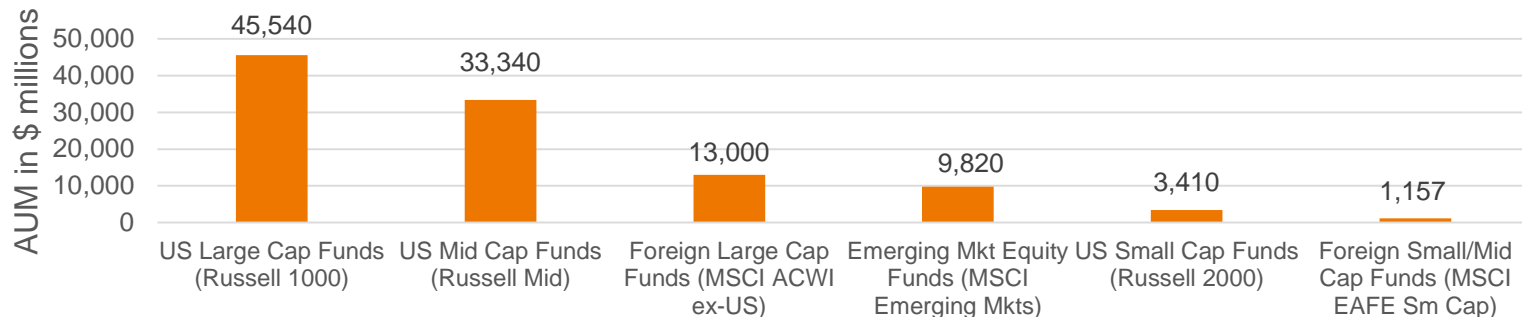
- ▶ Liquidity and Capacity impact Opportunity
- ▶ How much of opportunity set (e.g., US Small Stocks) are un-investable due to:
 - Insufficient trading volume
 - Too much AUM
- ▶ Potential Impacts:
 - Low Active Share due to concentration in most liquid stocks (typically largest companies)
 - High Active Share due to Style Drift, benchmark mismatch and unintended exposure
 - High number of holdings due to inability to hold larger positions

Evaluating Liquidity and Capacity

► Standard Institutional Capacity Analysis

- What proportion of a fund's portfolio can be entered or exited within 20 days while employing no more than 20% of Average Daily Trading Volume?
- For Active Managers, analysis assumes minimum 1% overweight relative to index weight

AUM Level at which 50% of stocks
in Benchmark are Not Liquidly Investable²



- 20 “Active” US Large Cap Funds each > \$46 billion AUM represent \$1.87 trillion AUM, in aggregate (nearly half the assets in US Large Cap Funds)

² Based on Touchstone proprietary analysis using Morningstar Direct data for holdings of ETF proxies for each index and average daily trading volume; Statistics as of year-end 2021



Opportunity: “Best Ideas” Dilution

- ▶ Best Ideas Dilution occurs if managers are forced to own more securities due to lack of liquidity or capacity (or a self-imposed lack of conviction)
- ▶ Academic Research suggests fund manager best ideas outperform the market and focused managers outperform more broadly diversified counterparts³
- ▶ Effective Diversification research suggests 30 or fewer stocks are sufficient to eliminate systematic risk
- ▶ “Cost” of Best Ideas Approach: Higher Tracking Error vs. Index Returns
 - Differentiable Return Pattern, but...
 - More significant periods of underperformance (and outperformance) to explain
- ▶ Reasonable Question: Why am I paying for your 100th, 200th or 500th best idea?
 - Well-known Large Growth Fund: 216 of 387 stocks in fund have 0.10% weight or lower; Just 12 stocks in fund have greater than 1% weight

³ [Best Ideas; Fund Managers Who Take Big Bets](#)



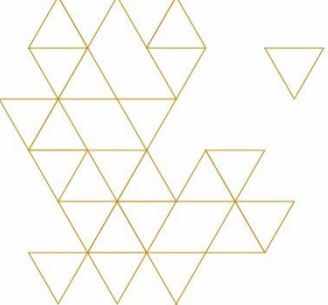
Patience: Virtuous and Lucrative

- ▶ Rare quality among market participants (JPM stats re. market volume)
 - Discretionary Fundamental Traders ~10% of equity trading volume (JPM's Kolanovic 2017)
- ▶ Rare form of conviction for active managers
 - Low Active Share Passive also tends to be Patient
 - Increasing AUM to Passive has increased Patience among funds in aggregate
- ▶ Digging below the surface:
 - Cremers' Holdings Duration
 - Position Turnover vs. Trading Turnover
- ▶ Practical Considerations:
 - Given number of holdings and position turnover, how many new ideas must each investment team member come up with each year?
 - Are team size, experience and credentials adequate to generate that many new ideas applying the fund's process?



Expenses: Getting What You Pay For vs. Minimizing Cost

- ▶ Expense Ratios are naturally higher for Active Management – it's more costly to deliver than indexing
- ▶ Sole Focus on Expense Ratio ignores:
 - Active Fund performance is presented net of fees (already taking expenses into account)
 - Cremers research showing lack of correlation between performance and cost for high Active Share funds
- ▶ Active Fee concept:
 - How much am I paying for non-benchmark exposure (i.e., active management)?
 - What is the excess return the active portion of the portfolio must produce for the fund to outperform? (i.e., the hurdle rate?)



Where to Evaluate SCOPE



SCOPE Resources

- ▶ Industry Applications
 - Morningstar
 - Lipper
- ▶ Fund Company Content
 - Public Websites
 - Advisor-use materials
- ▶ [ActiveShare.Info](#)
 - Professor Cremers website
 - Supported with financial, development and quality control resources from Touchstone

Scoping via Morningstar



Source: Morningstar Direct – examples provided are for illustrative purposes only. The data shown is not intended to be for point-in-time.



Challenges with Morningstar Data

▶ Lack of context

- Active Share – right benchmark?
- Active Share vs. Portfolio Exposure (Active and Relevant)?
- # of Holdings vs. Popular Peers?
- % in Top 10 vs. Index Fund?
- AUM impact on Opportunity Set (Too big to be active)?
- Transaction turnover vs. Position turnover?
- Expense Ratio vs. Active Fee?

▶ Recency Bias

- Skill statistics – 3, 5, 10 through most recent month or quarter
- Turnover stat – most recent fiscal year only

Fund Company Resources: Touchstone Examples

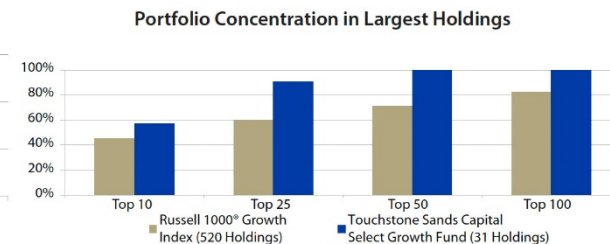
Group/Fund	# of Holdings ^		Active Share %
	Portfolio	Benchmark	
U.S. Equity Funds — Large Cap			
Touchstone Anti-Benchmark® US Core Equity Fund	88	1,020	91
Touchstone Value Fund	49	859	89
Touchstone Sands Capital Select Growth Fund	31	520	87
Touchstone Large Cap Fund	29	1,020	80
Touchstone Focused Fund	48	3,011	71
Touchstone Dividend Equity Fund	78	859	69
Touchstone Large Cap Focused Fund	47	503	65
Touchstone Large Company Growth Fund	29	520	64
Touchstone Growth Opportunities Fund	45	1,656	60
U.S. Equity Funds — Mid Cap			
Touchstone Mid Cap Fund	34	828	95
Touchstone Mid Cap Value Fund	71	706	90
Touchstone Mid Cap Growth Fund	54	409	84
U.S. Equity Funds — Small Cap			
Touchstone Small Cap Fund	35	1,991	97
Touchstone Small Company Fund	72	1,991	95
Touchstone Small Cap Value Fund	90	1,404	94



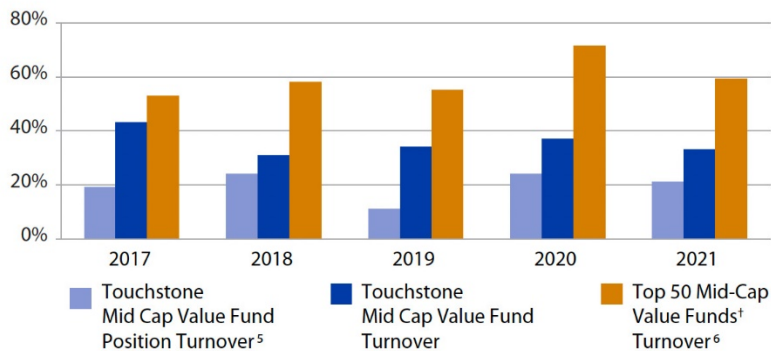
Holding Style*

	Value	Blend	Growth
Large	—	7	61
Mid	—	—	31
Small	—	—	2

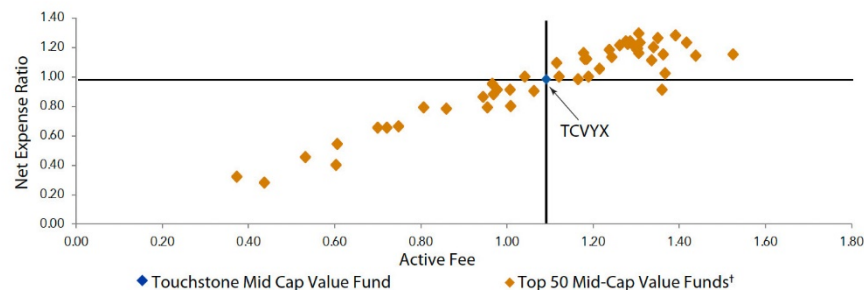
Value Blend Growth



Portfolio Turnover Rate⁴



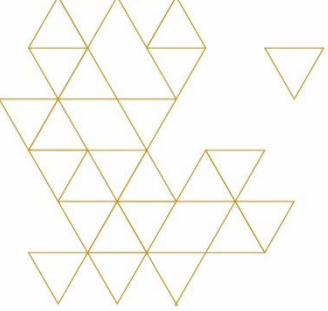
Fund Net Expense and Active Fee⁷: Top 50 Mid-Cap Value Funds†





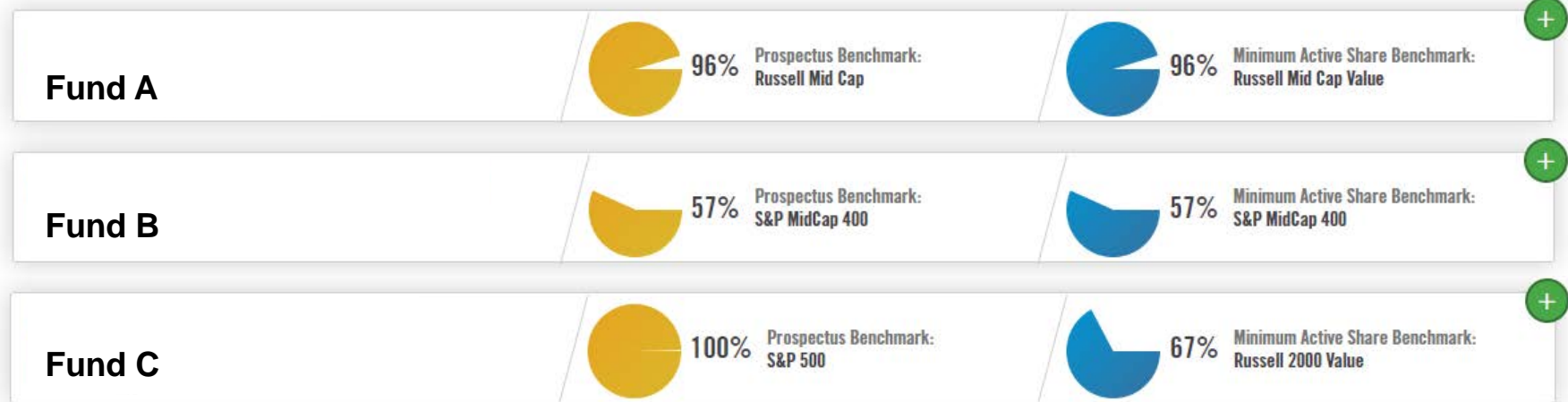
ActiveShare.Info

- ▶ Available to Public
- ▶ Designed to help evaluate 1400+ U.S. equity funds
- ▶ Informed by Professor Cremers' academic research
- ▶ Reflects elements of Active Share + SCOPE (ex-Skill)
- ▶ Resources:
 - In-app "About," "Definitions" and "Help"
 - Touchstone ActiveShare.Info Guide
- ▶ Remainder of Session focused on ActiveShare.Info:
 - Explore content and its interpretation
 - Review functionality
 - Introduce Hands-On Workshop



ActiveShare.Info: Examining & Interpreting Content

Active Share



- ▶ Vs. Prospectus Benchmark and “Minimum Active Share” Benchmark
 - Calculate Active Share vs. 44 U.S. equity indexes – one with lowest value
 - 14 Russell, 18 S&P, 4 Dow Jones, 4 FTSE, 3 MSCI, 1 NASDAQ
- ▶ Why two Active Shares presented?
 - Little-to-No discrepancy: Prospectus benchmark likely a relevant comparison
 - Wide discrepancy: there may be a better benchmark for the strategy than Prospectus Benchmark

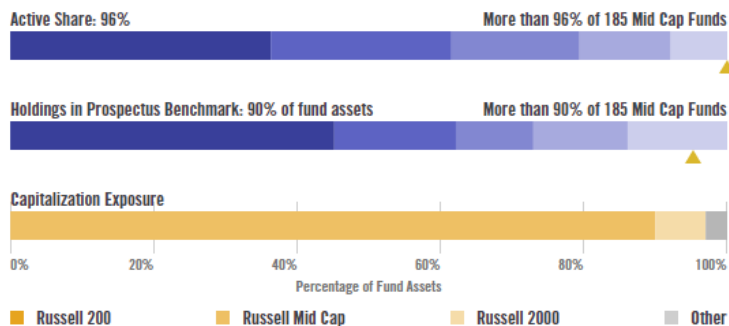
Source: ActiveShare.Info

Expand to Fund Details

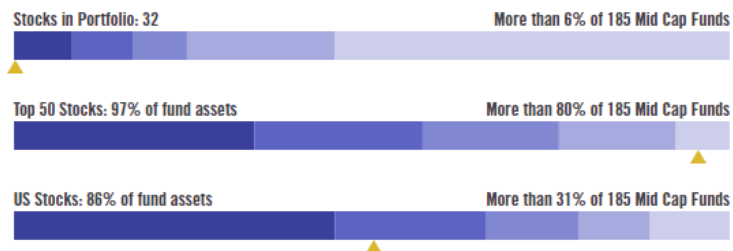
Fund A



Active Share & Benchmark Exposure



Conviction & Opportunity



Patience

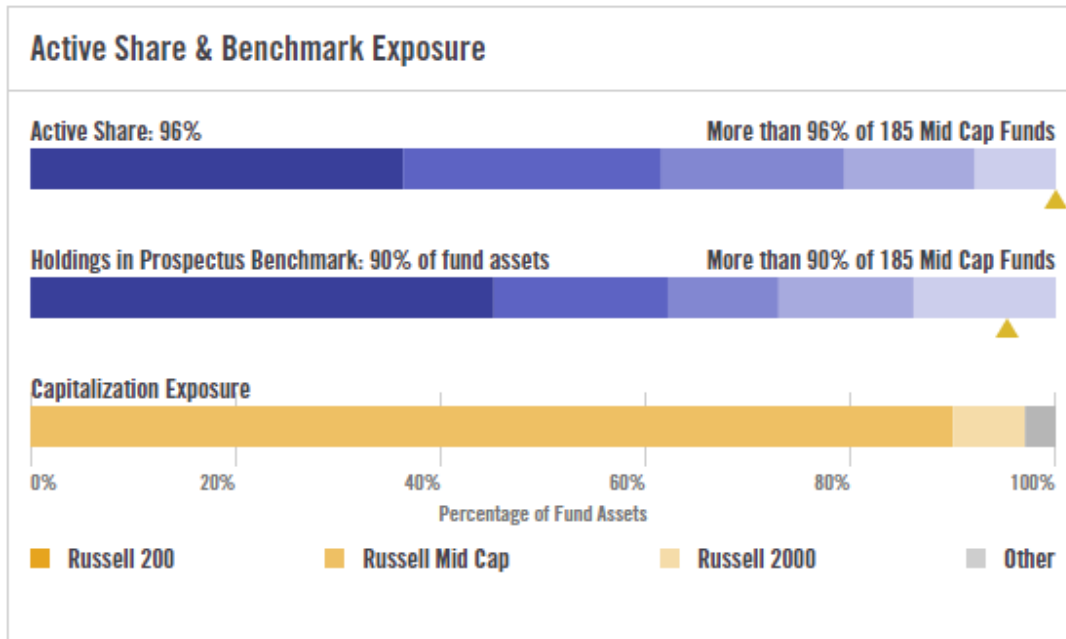


Fees & Expenses

Share Class	Ticker	Expense Ratio	Active Fee
Class A Shares		1.22%	1.27%
Class C Shares		1.97%	2.06%
Class R6 Shares		0.80%	0.84%
Class Y Shares		0.97%	1.01%
Class Z Shares		1.22%	1.27%
Institutional Class Shares		0.90%	0.94%

Source: ActiveShare.Info

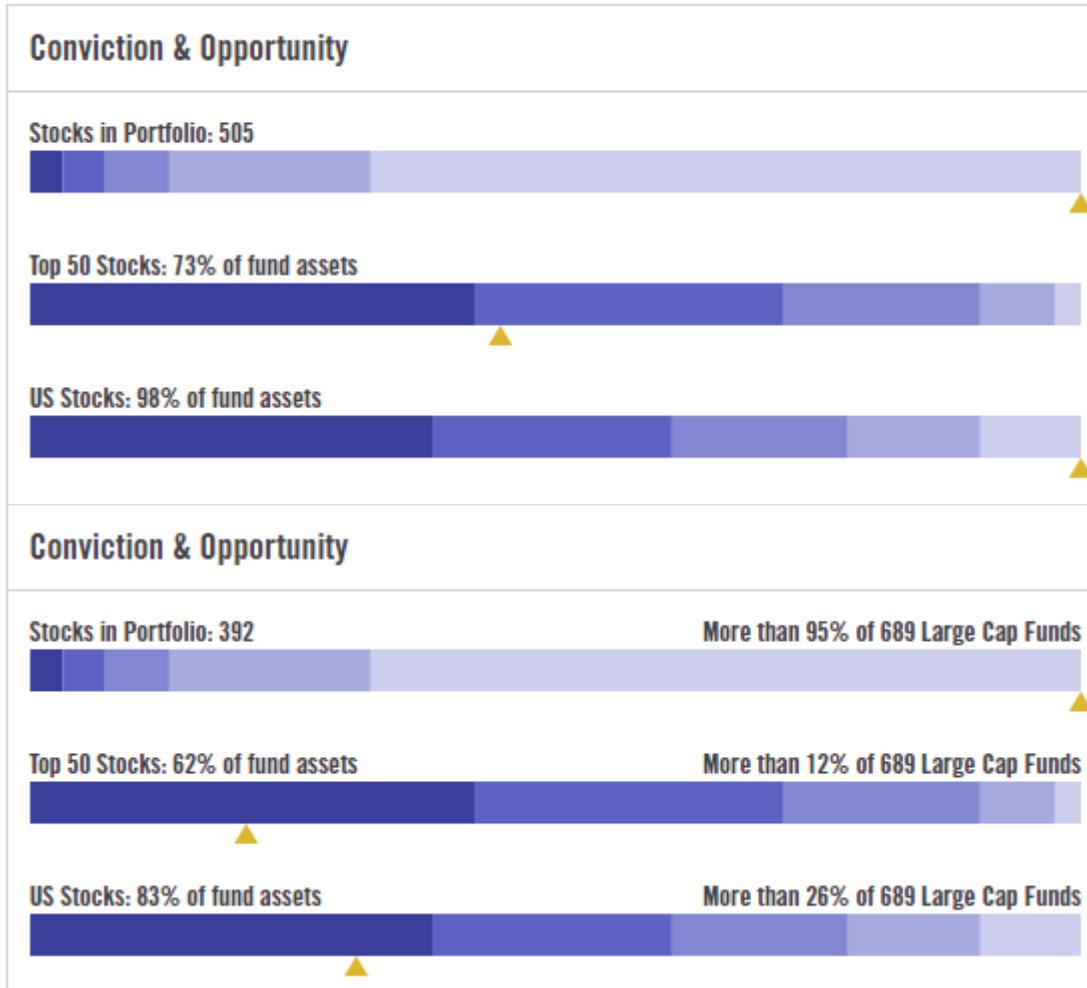
Active Share & Benchmark Relevance



- ▶ Active Share vs. Large, Mid or Small peers
 - Primary: Is it active?
 - Secondary: How active vs. peers?
- ▶ Holdings in Benchmark
 - Is manager “cheating”?
 - Getting desired exposure?
- ▶ Capitalization Exposure
 - Large = 200 + Mid
 - Getting desired exposure?
- ▶ Numerical data
 - Hover over bars

Source: ActiveShare.Info

Conviction & Opportunity



Source: ActiveShare.Info

- ▶ Top Fund: Index Fund
 - Very Diversified: 505 stocks
 - 27% outside top 50 names
 - 2% outside U.S.
- ▶ Bottom Fund: “Active” Fund
 - Very Diversified: 392 stocks
 - 38% outside top 50 names
 - 17% outside U.S.

Is this the conviction
you’re seeking?

Is something constraining
opportunity? (e.g., AUM)

Patience

Patience

Holdings Duration: 0.44 Years More than 7% of 168 Mid Cap Funds



Holdings Duration: 1.02 Years More than 38% of 168 Mid Cap Funds



Holdings Duration: 1.65 Years More than 86% of 168 Mid Cap Funds



Holdings Duration: 2.03 Years More than 97% of 168 Mid Cap Funds



Quintile Breakpoints

First Quintile	Second Quintile	Third Quintile	Fourth Quintile	Fifth Quintile
Min: 0.59 years	Min: 0.85 years	Min: 1.09 years	Min: 1.34 years	Min: 1.64 years
Max: 0.85 years	Max: 1.09 years	Max: 1.34 years	Max: 1.64 years	Max: 1.99 years

Reminders:

- Holdings Duration = Wtd Avg Number of Years Current Portfolio has been held
- Alternate concept to Turnover

4 Mid Cap Funds:

- Range of 0.4 – 2.0 years
- Translates to turnover-equivalent range of 50% to 250%

Quintile ranges define patience of peer group

Source: ActiveShare.Info

Fees & Expenses

Fees & Expenses

Share Class	Ticker	Expense Ratio	Active Fee
Class K Shares		0.57%	1.53%
Class R Shares		1.12%	3.01%
Institutional Shares		0.62%	1.66%
Investor A Shares		0.87%	2.33%
Investor C Shares		1.62%	4.35%
Service Shares		0.87%	2.33%

Fees & Expenses

Share Class	Ticker	Expense Ratio	Active Fee
Class A Shares		1.19%	1.45%
Class C Shares		1.93%	2.35%
Class I Shares		0.94%	1.14%

Source: ActiveShare.Info

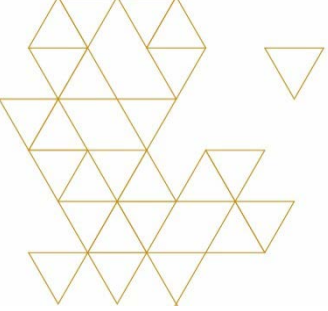
▶ Reminders:

- Expense Ratio doesn't consider what we're paying for
- Active Fee
 - Cost of Active portion of portfolio
 - Hurdle Rate to outperform

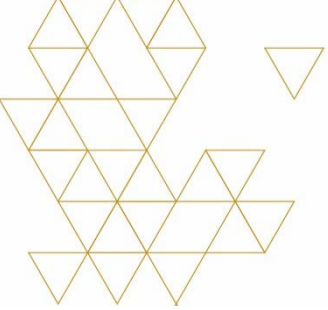
▶ 2 Large Growth Funds, highlighting Institutional Shares

- Top Fund: 37% Active Share
- Bottom Fund: 82% Active Share

If index fund exposure is at or near zero cost, which fund is a better bargain?

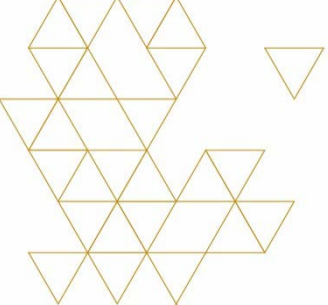


ActiveShare.Info: Navigating Functionality

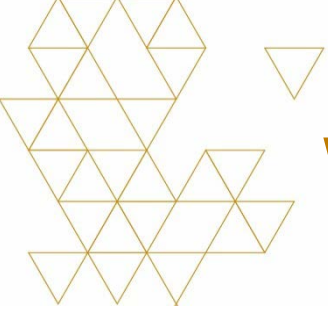


Important Functionality

- ▶ About, Definitions, Help
- ▶ Filtering
 - By Name or Ticker
 - By Characteristics
- ▶ Expanding/Contracting Fund Content
- ▶ Sort By
- ▶ Compare
- ▶ Export
- ▶ Print

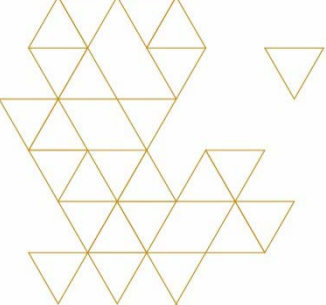


ActiveShare.Info: Hands-On Workshop



Workshop Logistics

- ▶ Teams
- ▶ Locations
- ▶ Instructions



Touchstone Securities, Inc., has partnered with Professor Martijn Cremers to provide consulting services. Touchstone and Professor Martijn Cremers are independent of each other.

Active Share measures the percentage of the Fund's holdings that differ from those of the benchmark. It is calculated by taking the sum of the absolute difference between all of the holdings and weights in the portfolio and those of the benchmark holdings and weights and dividing the result by two. Index performance is not indicative of fund performance. Investing in an index is not possible. Active Share is not a performance measurement. There are no assurances that any strategy or investment approach will meet its objectives. This information should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. Past performance is not indicative of future results.

*Performance data quoted represents past performance, which is no guarantee of future results. The investment return and principal value of an investment in the Fund will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be higher or lower than performance data given. **For performance information current to the most recent month-end, visit [TouchstoneInvestments.com/mutual-funds](https://www.touchstoneinvestments.com/mutual-funds).** From time to time, the investment advisor may waive some fees and/or reimburse expenses, which if not waived or reimbursed, will lower performance. Performance by share class will differ due to differences in sales charges and class expenses. Calendar year returns of the Fund and the Benchmark do not include the effects of the applicable sales charge which would lower returns. Returns assume reinvestment of all distributions.*

Please consider the investment objectives, risks, charges and expenses of the Fund carefully before investing. The prospectus and the summary prospectus contain this and other information about the Fund. To obtain a prospectus or a summary prospectus, contact your financial advisor or download and/or request one at [TouchstoneInvestments.com/resources](https://www.TouchstoneInvestments.com/resources) or call Touchstone at 866.610.6673. Please read the prospectus and/or summary prospectus carefully before investing.

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Not FDIC Insured | No Bank Guarantee | May Lose Value