

WHEN IS ENOUGH, ENOUGH?

Deciding how many managers to use has many variables and requires extensive analysis.



Northern Trust's multi-manager approach seeks to avoid over-diversification through extensive analysis and continuous monitoring of several factors, including correlations between managers, stock selection and tracking error.

Diversification is one of the defining characteristics of a multi-manager portfolio. A portfolio can be diversified in several ways, including by manager, investment style, sector, country and security. But when is a portfolio too diversified, particularly by manager? When is enough, enough?

Ultimately, the answer is, "It depends." With more than 30 years of experience in the manager of managers business, Northern Trust understands that the decision on how many managers to use in a multi-manager portfolio has many variables and is only determined after extensive analysis.

A FEW IMPORTANT THINGS TO CONSIDER

- **The number of managers may depend on the asset class.** A very narrow mandate will likely require fewer managers, as the range of value-added opportunities is smaller.
- **Client or fund objectives influence the number of managers.** Multi-manager funds or programs are custom-built according to the requirements of the program. Factors such as volatility tolerance, return objectives, investment horizon and comfort with out-of-benchmark exposure can all influence the number of managers in a fund.
- **The "right" number of managers can change.** Market conditions change and this can impact the number of managers or the combination of managers for a given portfolio. Also, the size of a given fund can impact the number of managers, as some practical considerations need to be taken into account.

NORTHERN TRUST'S APPROACH TO PORTFOLIO CONSTRUCTION

There are potential costs to over-diversification. A multi-manager program should not seek to replicate a benchmark nor to deliver index-like returns – that's the function of passive investing. A well-constructed multi-manager program should seek returns *in excess of* a benchmark *after fees*, within a risk-managed framework.

Evaluating Tracking Error

The balancing act is to manage risk while ensuring that the portfolio does not become a closet index. In most situations, Northern Trust tends to favor managers who have higher tracking error strategies. This is not an absolute and there can be instances in which we might include a lower-risk strategy. By blending potentially higher-excess-return but also higher-volatility strategies together, we strive to achieve an improved risk/return profile relative to any of the individual managers, while still seeking to deliver excess returns versus the benchmark.

Looking at tracking error is one conventional way to evaluate how active a portfolio is versus a stated benchmark. Tracking error is calculated as the standard deviation in the returns between the portfolio and the benchmark – in effect a relative standard deviation¹. In addition to looking at historical returns, we also use risk models to help predict the potential tracking error of a manager or a portfolio.

¹ **Standard Deviation** – A statistical measurement of dispersion about an average, which depicts how widely returns varied over a certain period of time.



Northern Multi-Manager Mid Cap Fund

As an example, this Fund currently has four managers, represented at varying allocations. Chart 1 shows the tracking error of each individual sub-adviser as well as the Fund relative to the core benchmark (Russell Midcap Index). The volatility around the core benchmark for any individual manager is high. However, by combining them appropriately, we seek to create a fund with a more palatable tracking error profile relative to the fund benchmark.

In this example, the Fund's tracking error (at 3.27%) is lower than that of each of the underlying managers. This is a function of combining specialists in a way that smoothes out the Fund's return stream relative to the core benchmark, reducing the volatility and generating a more favorable tracking error metric.

In pursuit of lower volatility and favorable returns over the long term, perhaps we give up some short-term performance. Single manager volatility, for instance, can be very high, and cycles can be long, as evidenced by Chart 2. This chart shows the excess return versus the Fund's core benchmark for this same group of sub-advisers since each manager's inception in the Fund.

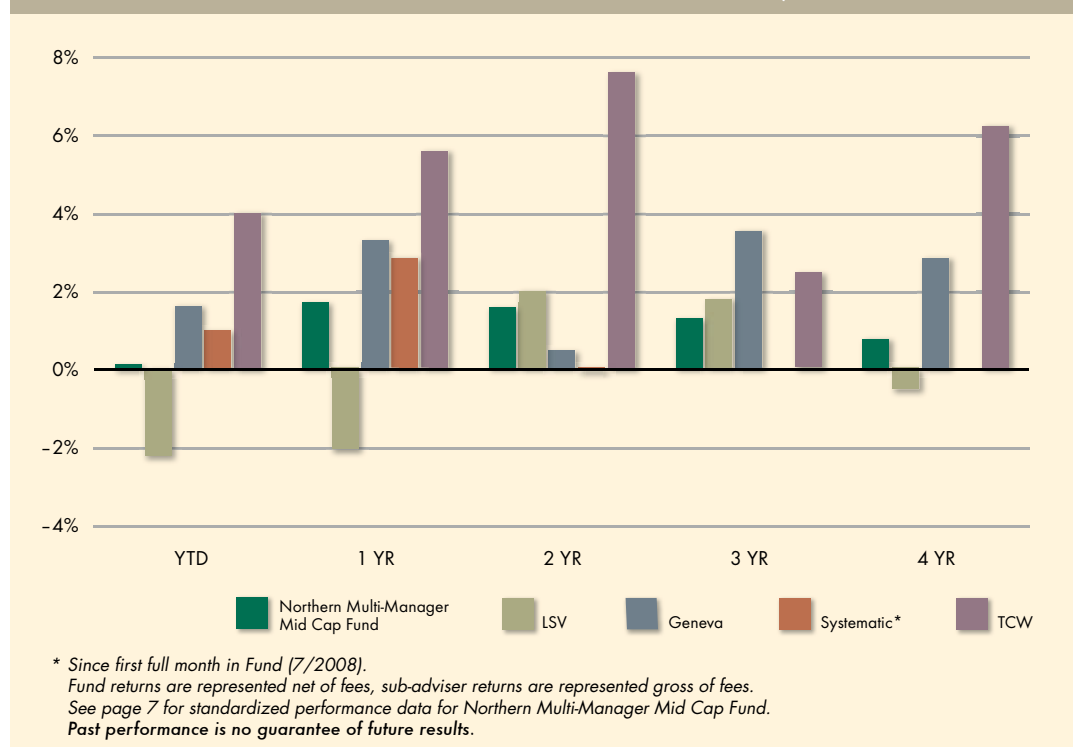
We will give up short-term performance in pursuit of less volatility and favorable returns over the long term.

CHART 1. TRACKING ERROR COMPARISON: NORTHERN MULTI-MANAGER MID CAP FUND VS. RUSSELL MIDCAP INDEX

% of Fund	FUND/Sub-Adviser	Tracking Error 7/2008 - 9/2010
100%	MID CAP FUND	3.27
20%	Geneva (Conservative Growth)	6.95
20%	TCW (Aggressive Growth)	6.35
30%	LSV (Deep Value)	6.44
30%	Systematic (Relative Value)	7.12

Source: Northern Trust returns, using Zephyr StyleADVISOR. Fund returns are represented net of fees, sub-adviser returns are represented gross of fees. Past performance is no guarantee of future results.

CHART 2. EXCESS RETURN COMPARISON: NORTHERN MULTI-MANAGER MID CAP FUND VS. RUSSELL MIDCAP INDEX JUNE 2006 THROUGH SEPTEMBER 30, 2010



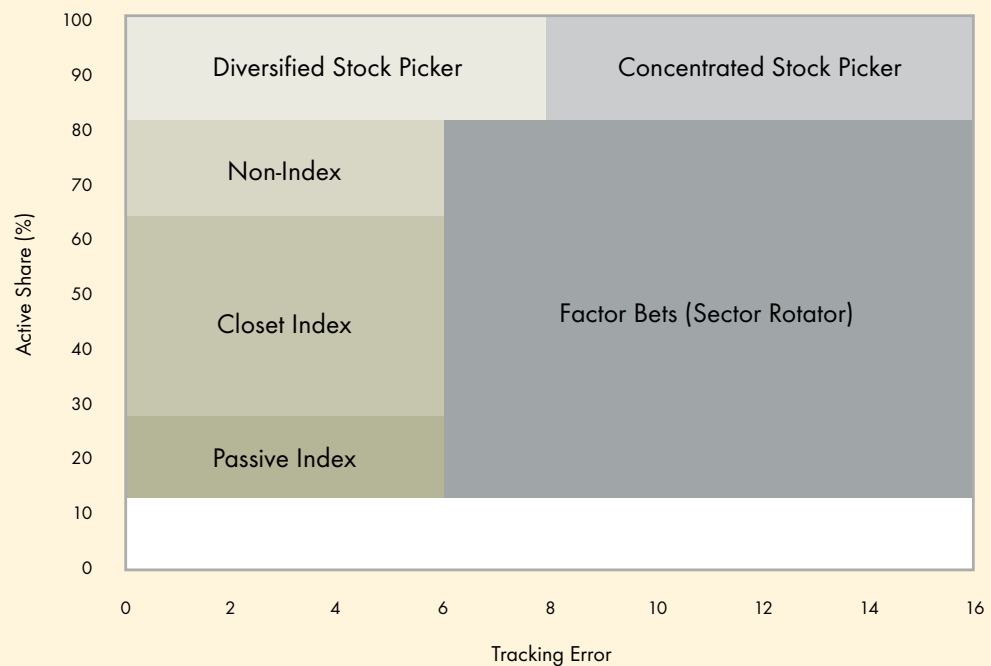
LSV had positive excess returns on a two-year basis. However, if an investor had assets concentrated with LSV over the entire four-year period, the investment would actually have underperformed the benchmark. At the same time, Geneva, which delivered very strong four-year excess return numbers, underperformed more recently. Northern Multi-Manager Mid Cap Fund, however, combines these different strategies, and delivered more consistent returns over all time periods, and with less volatility than any individual manager.

Looking at Active Share

Active share is another metric used to evaluate how similar or different a manager is versus a benchmark. Active share is a position-based statistic that looks at how different the positions in a portfolio are from the index, both in terms of what **is** in the portfolio (as well as allocation sizes) and what **is not** in the portfolio. What a manager does not own is just as important as what is owned, when thinking about returns relative to a benchmark. For instance, a portfolio with zero overlap to the benchmark has 100% active share, while portfolios with an active share greater than 60% are generally considered truly active (see Chart 3).

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CHART 3. CATEGORIZING PORTFOLIOS BY ACTIVE SHARE PERCENTAGE/TRACKING ERROR



Source: Based on the Yale School of Management study, "How Active Is Your Fund Manager? A New Measure That Predicts Performance" (Martijn Cremers and Antti Petajisto, August 2006).

Northern Multi-Manager Small Cap Fund

This Fund, for example, currently has five sub-advisers covering the U.S. small cap equity space. Given that the small cap universe is very broad, it is not surprising that a small cap portfolio would use several managers. Chart 4 illustrates that it is possible to have five managers and still have a high active share percentage.

Given the Fund's active share of just below 85% (meaning 85% of the Fund is different than the index in terms of names as well as position sizes), the Fund clearly shows an active profile as a diversified stock picker. The Fund varies significantly from the benchmark and is far from a closet index fund.

Striving to Add Value through Stock Selection

We analyze various iterations of manager combinations to maximize the percentage of risk coming from stock selection and minimize the amount of risk coming from fundamental

factors such as style and capitalization. We also consider the size of allocation to any individual manager as well as every manager's contribution to the stock selection risk. We do not want the fund's performance to be overly dependent on a single sub-adviser's success or failure.

Like many investment decisions, the manager allocation decision is about trade-offs. In this case, we analyze the trade-off between maximizing risk from stock selection and concentrating risk with a single sub-adviser. The same analysis can be done using varying numbers of managers.

Chart 5 above, and the charts that follow, are based on a mix of five managers with varying allocations, and graphically represent some of the trade-offs we consider.

CHART 4. ACTIVE SHARE COMPARISON:
NORTHERN MULTI-MANAGER SMALL
CAP FUND

FUND/Sub-Adviser	Active Share as of 9/30/10
SMALL CAP FUND	83.0%
<i>Copper Rock</i>	93.5%
<i>Riverbridge</i>	97.1%
<i>Denver Investment Advisors</i>	94.9%
<i>MetWest</i>	97.6%
<i>Hotchkis & Wiley</i>	98.2%

Source: Northern Trust returns using Wilshire Analytics. Fund returns are represented net of fees, sub-adviser returns are represented gross of fees. Past performance is no guarantee of future results.

CHART 5. HYPOTHETICAL ALLOCATIONS WITH
FIVE MANAGERS

	Mix 1	Mix 2	Mix 3	Mix 4
Manager A	24.0%	30.0%	25.0%	20.0%
Manager B	36.0%	30.0%	25.0%	20.0%
Manager C	10.0%	13.3%	15.0%	20.0%
Manager D	10.0%	13.3%	15.0%	20.0%
Manager E	20.0%	13.3%	20.0%	20.0%

Like many investment decisions, the manager allocation decision is about trade-offs.

In Chart 6, we compare the percentage of tracking error that comes from stock selection for the overall hypothetical mix (y axis), which we seek to maximize, relative to the contribution to that stock selection risk from a single manager (x axis). While we seek to maximize the amount of tracking error that comes from stock selection (Mix 1), this mix also shows that one single manager is contributing more than 40% of that stock selection risk. This means that in the event this manager is wrong, the impact to the overall fund will be high. So how much are we willing to bet that this manager will be right? Should we slightly reduce the total percentage of risk from stock selection, but have it more evenly balanced among the managers (Mix 2)? This same analysis is considered by adding and subtracting managers.

CHART 6. STOCK SELECTION TRADEOFFS: TRACKING ERROR FROM STOCK SELECTION VS. STOCK SELECTION RISK TO ONE MANAGER

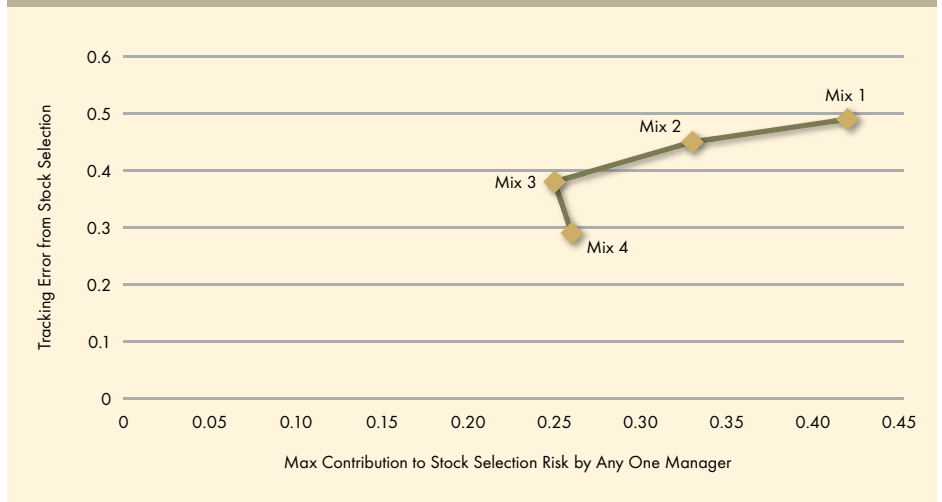
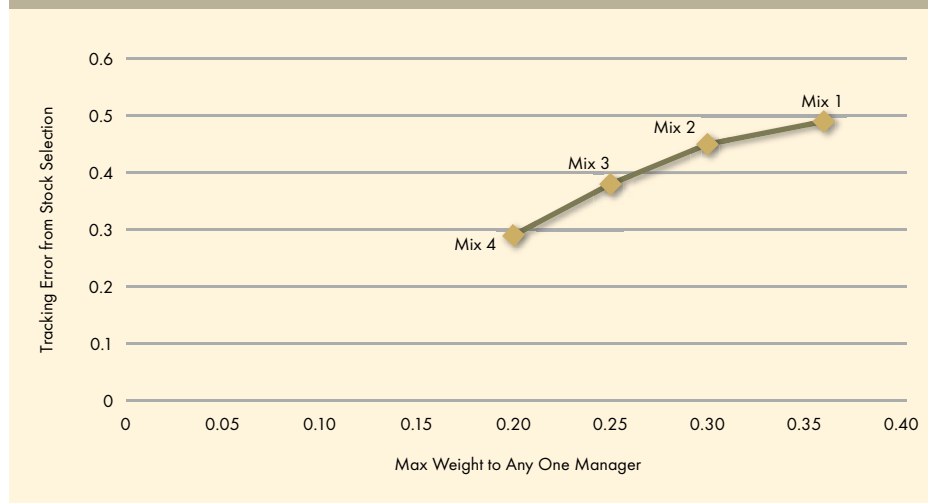


Chart 7 shows another type of trade-off that we consider, comparing the percentage of tracking error that comes from stock selection for the overall mix (y axis) relative to the highest allocation to a single manager for the mix (x axis). The trade-off is between percent of stock selection risk and concentration risk with a single manager. While we seek to maximize risk from stock selection, we are cognizant of manager-specific risk, both at the organizational and portfolio level, and want to be mindful of these trade-offs.

CHART 7. STOCK SELECTION TRADEOFFS: TRACKING ERROR FROM STOCK SELECTION VS. MANAGER CONCENTRATION



In this example, we can maximize our risk from stock selection using Mix 1, however that places 36% of assets with a single manager. Depending on the strategy and the firm, this may or may not be acceptable from a risk perspective. We may be willing to reduce the amount of risk from stock selection – but better diversify the manager concentration risk – by moving from Mix 1 to either Mix 2, 3 or 4. This same analysis is considered by adding and subtracting managers.

The number of managers can depend on how correlated different types of strategies are and whether different types of strategies exist.

Seeking Managers Who Behave Differently

In the portfolio construction process, we use managers who we anticipate will perform differently during different types of markets. In this way, we are not only reducing individual manager risk, but are also potentially gaining risk/return diversification benefits. As a result, the number of managers can depend on how correlated different types of strategies are and whether different types of strategies exist.

One way we perform this analysis is by looking at correlation of excess returns versus the benchmark. We expect managers with similar styles to have higher correlation of excess returns than managers with different styles.

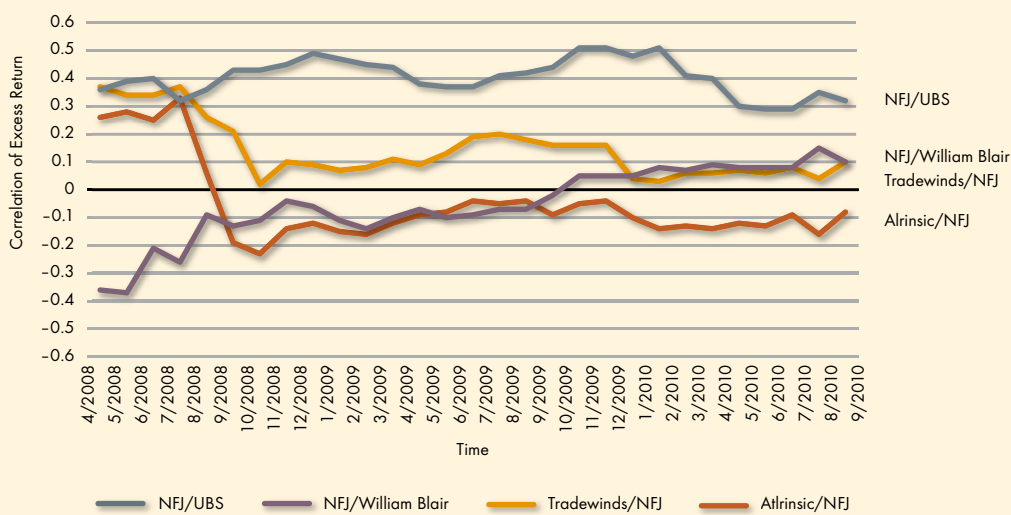
Chart 8 displays the correlation of excess returns for the sub-advisers in the Northern Multi-Manager International Equity Fund, highlighting the affect of adding the newest sub-adviser, NFJ, to the Fund. It is important to note, however, that the portfolio construction process overall analyzes all sub-adviser combinations.

In this scenario, the correlations are reasonably low, suggesting that the sub-advisers are outperforming or underperforming at different times. The highest correlation results are between NFJ and UBS. While these managers have very different investment strategies, they both tend to

have significant exposure to emerging markets, which has resulted in heightened correlation levels. We look at this same analysis over multiple periods and consider the market environment in order to use it effectively.

In addition to performance correlation, we look at correlation of factor exposures. Are the managers taking highly correlated bets? This analysis is done with portfolio risk models that decompose portfolios into factor exposures (i.e., size, growth, value, momentum, etc.) and provides correlation analysis on those exposures.

CHART 8. CORRELATION OF EXCESS RETURNS: NFJ AND THE SUB-ADVISERS IN NORTHERN MULTI-MANAGER INTERNATIONAL EQUITY FUND VS. THE MSCI ACWI EX U.S. INDEX



Source: Northern Trust using Wilshire Analytics.
See page 7 for standardized performance data for Northern Multi-Manager International Equity Fund.
Past performance does not guarantee future results.

FIGURING OUT “ENOUGH”

We perform many types of analyses and look at the diversification question from many perspectives to make the best possible judgment. Through rigorous research, analysis and monitoring, we seek to create portfolios that maximize returns while minimizing risk over the long term.

So when is enough manager diversification enough? While there is no magic number, the goal is to avoid over-diversification through extensive analysis and continuous monitoring of correlations between managers, stock selection, tracking error and active share. The process, which is iterative and active, has been honed through many years of experience in the multi-manager business.

FOR MORE INFORMATION

To learn more about Northern Trust’s multi-manager approach and how our multi-manager funds or programs may help you pursue your investment goals, please contact your relationship manager.

CHART 9. SELECT NORTHERN MULTI-MANAGER FUNDS AVERAGE ANNUAL TOTAL RETURNS

Fund	Average Annual Total Returns as of 9/30/10					Total Annual Operating Expense Ratios	
	1-Year	5-Year	10-Year	Since Inception	Inception Date	Gross	Net
Multi-Manager International Equity Fund	6.49%	—	—	0.54%	6/22/2006	1.45%	1.44%
Multi-Manager Mid Cap Fund	19.22%	—	—	2.26%	6/22/2006	1.20%	1.20%
Multi-Manager Small Cap Fund	10.28%	—	—	-1.20%	6/22/2006	1.41%	1.40%

Performance quoted represents past performance and does not guarantee future results. Investment return and principal value will fluctuate so that shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than that shown here. Performance data current to the most recent month end is available by calling 800-595-9111.

The Advisor has agreed to reimburse certain expenses of the Fund. The contractual reimbursement arrangement is expected to continue until at least July 31, 2011. After this date, the contractual arrangements may be terminated if it is determined to be in the best interest of the Fund and its shareholders. In the absence of fee waivers, yield, total return, growth since inception and dividends would have been reduced. Total return is based on net change in NAV assuming reinvestment of distributions.

INDEX DEFINITIONS:

Russell Midcap® Index is an unmanaged index measuring the performance of the 800 smallest companies in the Russell 1000® Index.

MSCI ACWI® Ex-U.S. Index is a free-float adjusted market capitalization index that is designed to measure the equity performance in the global developed and emerging markets, excluding the U.S.

IMPORTANT RISK INFORMATION:

There are risks involved in investing including possible loss of principal. There is no guarantee that the investment objectives of any fund or strategy will be met. Risk controls and models do not promise any level of performance or guarantee against loss of principal.

Equity Risk: Equity securities (stocks) are more volatile and carry more risk than other forms of investments, including investments in high-grade fixed income securities. The net asset value per share of this Fund will fluctuate as the value of the securities in the portfolio changes.

Diversification: Diversification does not guarantee a profit nor protect against a loss.

NORTHERN MULTI-MANAGER SMALL CAP FUND RISK

Small Cap Risk: Small capitalization funds typically carry additional risks since smaller companies generally have a higher risk of failure. Their stocks are subject to a greater degree of volatility, trade in lower volume and may be less liquid.

NORTHERN MULTI-MANAGER MID CAP FUND RISKS

Mid Cap Risk: Mid capitalization stocks typically carry additional risk, since smaller companies generally have higher risk of failure and, historically, their stocks have experienced a greater degree of volatility.

NORTHERN MULTI-MANAGER INTERNATIONAL EQUITY FUND RISKS

International Risk: International investing involves increased risk and volatility.

Emerging Markets Risk: Emerging market investing is subject to additional economic, political, liquidity and currency risks not associated with more developed countries.

Please carefully read the prospectus and summary prospectus and consider the investment objectives, risks, charges and expenses of Northern Funds before investing. Call 800-595-9111 to obtain a prospectus and summary prospectus, which contains this and other information about the Funds.

Northern Funds are distributed by Northern Funds Distributors, LLC, not affiliated with Northern Trust.

NOT FDIC INSURED	May lose value	No bank guarantee
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