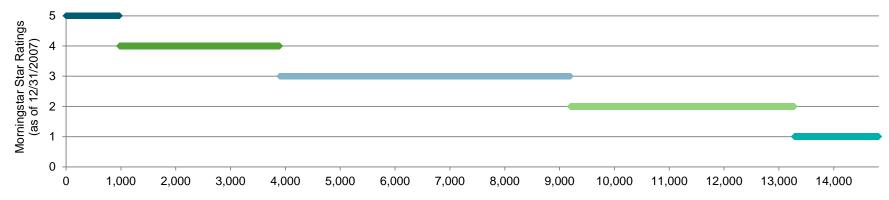
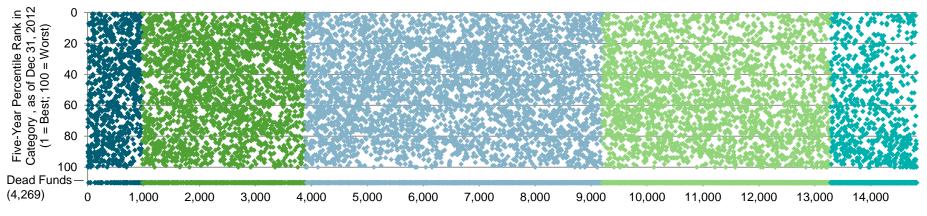
## Is There Predictive Power in Morningstar Ratings?

## **MORNINGSTAR STAR RATINGS, AS OF DECEMBER 31, 2007**



Fund Rank: Sorted by Dec 2007 Overall Star Rating, then Three-Year Total Return Percentile Rank in Category

## **SUBSEQUENT PERFORMANCE, 2008–2012**



Fund Rank: Sorted by Dec 2007 Overall Star Rating, then Three-Year Total Return Percentile Rank in Category

For illustrative purposes only. Mutual fund universe and non-Dimensional money managers' fund data provided by Morningstar, Inc. Sample size (14,822) taken from entire US mutual fund universe with a Morningstar Star Rating as of December 31, 2007, including funds which have since ceased operations. Past performance is no guarantee of future results. There is always the risk that an investor may lose money.

Morningstar is a US-based research firm that publishes stock and mutual fund data. The firm is widely known for its mutual fund "star" rating system. The system rates mutual funds according to a five-star system, with five stars indicating superior performance for the time period.

Although Morningstar warns against choosing funds solely on its star rating, many investors do just that in their quest for higher returns. But they should not expect their narrowly focused approach to produce reliable results over time.

This slide documents the challenge of picking a future winner based on its Morningstar rating. The top chart displays all US-based mutual funds (14,822 funds) sorted by their Morningstar rating at the end of 2007. The bottom chart plots performance of these funds over the subsequent five-year period based on each fund's percentile return rank in its respective peer category. A low percentile indicates high relative performance.

If funds with high star ratings could repeat their top relative performance in the future, the data in the bottom chart would demonstrate this, with high-star-rated funds delivering high relative returns, and lower-star-rated funds showing lower relative performance. The chart would display fund performance in stair-step fashion, with a large concentration of five-star funds in the higher percentile range (e.g., top 20%) and most lower-rated funds concentrated in the bottom percentiles.

The actual data tell a different story. In the bottom chart, each star rating displays broadly dispersed relative five-year performance, confirming that a fund's past rating does not indicate future returns. Note also that nearly one third of funds across all star ratings failed to survive the subsequent five-year period, as indicated by the Dead Funds sort (4,269 funds). These results are consistent with fund performance research, which finds little evidence of persistent outperformance based on star ratings.

1 Christopher R. Blake and Matthew R. Morey, "Morningstar Ratings and Mutual Fund Performance," Working Paper, March 15, 1999.