

Small Cap Value Fund Performance with Size

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Problem Statement:

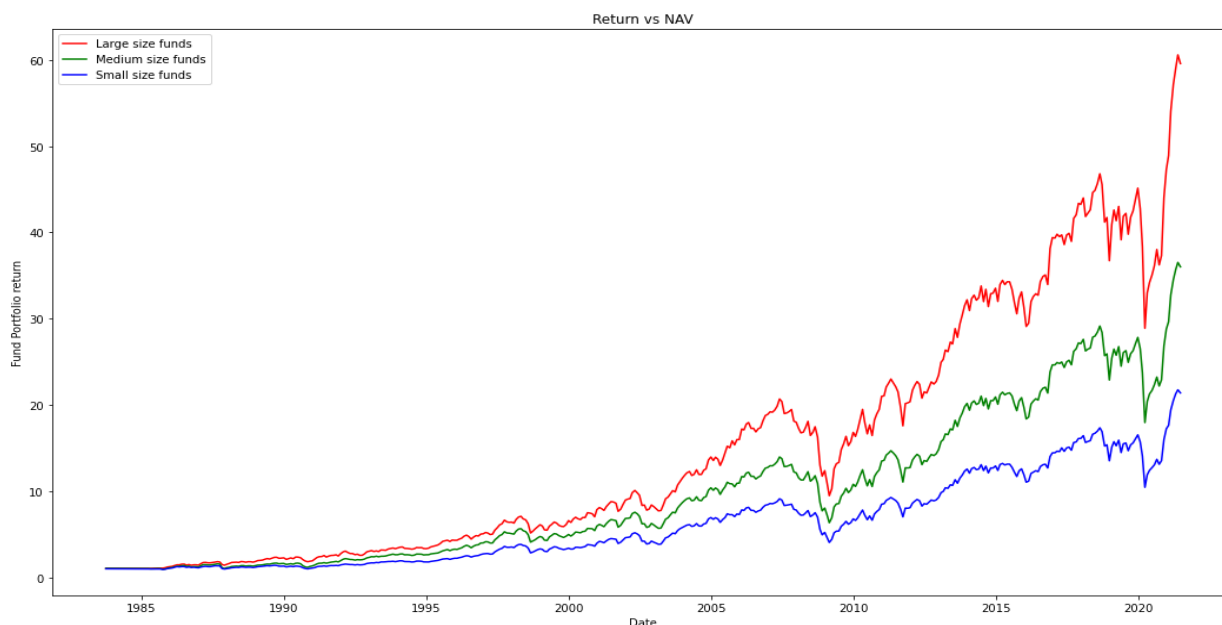
In this project, we want to study if there is a relationship between fund's performance and fund's size for small-cap value mutual funds.

Our Approach:

We joined the fund summary, monthly return and monthly net asset value tables from CRSP - Mutual Funds database. We then filtered in the small-cap value funds based on the Lipper class. The total number of unique small-cap value funds included in our study is 1180, with 188106 observations ranging from March 1969 to June 2021. We then cut our observations into three equal-number groups based on the ascending order of their net asset value. The groups (in millions) are (0.63, 13.419], (13.419, 20.06], (20.06, 385.17] at the beginning of the time period i.e., March 1969, which correspond to "small", "medium", and "large" size funds. Last, we calculated the average monthly return for each group, and graphed the compounding returns over time for three different fund sizes.

Our Findings:

Fund Size	Large	Medium	Small
Average Monthly Return	0.010801	0.009663	0.008352



Potential Reasoning Behind Our Findings:

fund_size	exp_ratio
large	0.0129
medium	0.0140
small	0.0146

As a fund grows, it experiences economies of scale and the effective per unit liabilities (expense ratio) come down, thus increasing the overall returns net of fees. However, beyond a point, the fund can become unwieldy because of limited investment opportunities among other things. But because Value stocks are less liquid for people trying to sell, these funds do not face the challenges of asset allocation in common with larger funds. They do not drift far away from their investment style as size increases.

Hence, larger small cap value stock funds are leverage managing cost savings to effectively give better returns to investors.