



## Investment Theory - Small Cap Value Fund Evaluation

Ian Arzt (iga246), Aritra Chowdhury (ac79277), Harsh Mehta (hdm564)

### Main Steps

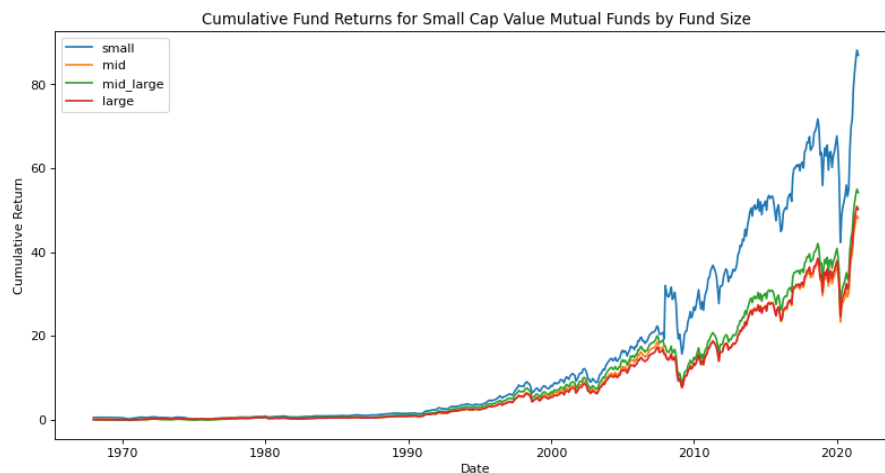
- Acquire the fund returns and summaries from WRDS and preprocess data
- Group Small, Mid, Mid-Large, and Large Funds, by Monthly Total Net Assets (MTNA)
- Plot value of the fund over time and returns for each of the Fund sizes

### Assumptions

- Fund Size is calculated just by the monthly total net asset value.
- Fund Performance is measured by the equally-weighted mean monthly return of grouped funds, as referenced in this document.<sup>1</sup>
- Quantiles for grouping fund size are based on an equal percentile distribution of the asset value.
- Transaction costs and rear-end load fees are taken into consideration by the use of MTNA.

### Results

Our team was able to reinforce results previously discovered in the industry that Fund Size and Fund Performance have an inverse relationship in Small-Cap Value Mutual Funds. Small sized funds, over 50 years, perform the best by a significant margin (cumulative return of ~8500%), followed by Mid-Large, Mid, and Large sized funds (cumulative return of ~5000%) which are very similar to each other. Small funds outperform large funds by earning extra return premia from their holdings, characterized by lower market cap, greater book-to-market, and higher price momentum, on average. These premia are more than enough to offset the greater percentage transaction costs that smaller funds incur. Larger funds earn lower average returns by holding stocks of greater market capitalization, lower book-to-market. Presumably, the transaction costs incurred by larger funds if they were to emphasize in their portfolios the types of stocks held by their smaller counterparts would subsume their higher average returns.



<sup>1</sup> Chordia, T. (2014, June). *How Does Size Affect Mutual Fund Performance? Evidence from Mutual Fund Trades*. CKGSB. Retrieved October 16, 2021, from <https://www.ckgsb.edu.cn/uploads/201409/paper%20of%20Prof.%20Tarun%20Chordia.pdf>.