

# Returns to scale in passive management:

## Evidence from ETFs

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### Abstract

Leveraging recursive demeaning, we find that ETF's benchmark-adjusted return increases with lagged fund size. One standard deviation increase in fund size is associated with an increase in monthly performance by 4.5-9.6 basis points. Economies of scale are more pronounced in funds with high tracking errors. In contrast, the scale effect is weakened for higher Morningstar rating funds. Liquidity and turnover that affect scale economies in active funds are unlikely to play a role in passive funds. Returns to scale are present over time without systematic differences between normal and illiquid periods. Our results highlight the importance of size in ETFs.

**Keywords:** Returns to scale, ETF, Index fund, Passive management

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