

*Spanning tests are used to assess the behavior of G7 and Asian country small cap indexes as separate asset classes of efficient portfolios for U.S. investors in multiple benchmark scenarios.*

*Empirical results show that a small cap asset as a separate asset depends on the choice of benchmark portfolio and some small cap indexes in developed countries could be a separate asset class. This fact implies that asset allocation should consider the interaction among all assets in a portfolio to avoid over-diversification and should be a dynamic process. Step-down spanning is better than correlation to identify potential assets to diversification and constraints do not necessarily reduce the diversification benefits of a new asset.*