Executive Summary

We propose a new factor-tilted risk-efficient portfolio that combines the minimum variance portfolio and factor strategy by a weighted-regularization model, with the weight determined by stocks' factor scores. The momentum-tilted min-variance portfolio has shown superior performance in three different markets and demonstrated high stability and time consistency, especially in the emerging market: it outperforms both minimum variance portfolio and classic factor strategy and creates a synergy effect between the two; In addition, applying mean prediction techniques when calculating the momentum scores, can further improve the outperformance of the momentum-tilted strategy.

We further extend the model with a multi-factor tilt: the momentum and value factors. The multi-factor model defeats the single-factor one and the minimum variance portfolio. The value factor strengthens the momentum factor's asset selection ability, and it works the best when the tilting intensity of the two factors is at comparable levels.