

Dynamic Portfolio Choice with Intertemporal Hedging and Transaction Costs

Xiaofei Shi

University of Toronto

When returns are partially predictable and trading is costly, utility maximizing investors track a target portfolio at a constant trading speed. The target portfolio is optimal for a frictionless market, where asset returns are scaled back to account for trading costs and volatilities are adjusted to proxy the “execution risk” of holding assets that are costly to trade and exposed to volatile states. The trading speed solves an optimal execution problem, which describes how the legacy portfolio inherited from the past is traded towards the target portfolio in an optimal manner. Unlike for period-by-period mean-variance preferences as in Garleanu and Pedersen (2013), the target portfolio hedges changes in investment opportunities, and both it and the trading speed are linked and depend on execution risk.

In Special Session 61 on Recent Advances in Mathematical Finance and Related Fields at the Mathematical Congress of the Americas 2025.