



TRADING

Dynamic Trading With Predictable Returns and Transactions Costs

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Active investors and asset managers — such as hedge funds, mutual funds and proprietary traders — try to predict security returns and trade to profit from their predictions. However, such dynamic trading often entails significant turnover and transaction costs, so active investors must constantly weigh the expected benefit of trading against its costs and risks.

An investor often uses different return predictors (value and momentum predictors are two examples), and these have different prediction strengths and mean-reversion speeds — or, said differently, different “alphas” and “alpha decays.” The alpha decay is important because it determines how long the investor can enjoy high expected returns and, therefore, affects the trade-off between returns and transactions costs. For instance, while a momentum signal may predict a high return on IBM stock over the next month, a value signal might predict that Cisco will perform well over the next year.

This paper addresses how the optimal trading strategy depends on securities’ current expected returns, the evolution of expected returns in the future, their risks and correlations, and transaction costs. Our framework constitutes a powerful tool to optimally combine various return predictors taking into account their evolution over time, decay rate, and correlation, and trading off their benefits against risks and transaction costs. Such dynamic trade-offs are at the heart of the decisions of arbitrageurs that help to make markets efficient, as the efficient market hypothesis suggests they should be.

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