Summary of *Unobserved Performance of Hedge Funds*

VIKAS AGARWAL, STEFAN RUENZI, and FLORIAN WEIGERT (JF, 2024)

Summarized by Li Ziming

1. **What are the research questions?**
   - Can unobserved performance predict future hedge fund performance?
   - What drives UP and differentiates high-performing hedge funds?
   - How does investor behavior affect the predictability of UP?
2. **Why are the research questions interesting?**
   - Identification of skilled managers and the sources of their skill remains elusive, due to lax regulation, opaque structure, and limited disclosure.
   - The new skill measure UP provides insights into the nature of hedge funds' trading strategies that contribute to returns.
3. **What is the paper's contribution?**
   - Contribute to literature on relation between hedge funds' reported returns to risk factors.
     - Prior literature: nonlinear risk (Fung and Hsieh, 2004); correlation risk (Buraschi et al., 2014).
     - Extend: construct skill measure for hedge funds out-performing other risk factors.
   - Contribute literature that studies the skill in hedge funds using holdings-based method.
     - Prior literature: hedge funds not more skilled than mutual funds in security selection (Griffin and Xu, 2009); hedging motives rather than information (Chen et al., 2019).
     - Extend: unobserved actions of hedge funds cause the different alpha between returns-based and holdings-based approach.
   - Contribute literature that researches how investor flows affect the fund performance.
     - Prior literature: managers' ability to generate abnormal performance hampered by investor inflows (Berk and Green, 2004).
     - Extend: investors direct to high reported gross performance, but not to high UP.
4. **What hypotheses are tested in the paper?**
   - H1: Hedge funds with higher UP achieve better future performance.
   - H2: UP driven by intra-quarter trades, derivatives use, short selling, and delayed disclosure.
   - H3: Investors' limited attention and ability to parse managerial skill leads to delayed response and long-lived predictability.

   a) Do these hypotheses follow from and answer the research questions?
   - Yes.

   b) Do these hypotheses follow from theory? Explain logic of the hypotheses.
   - Builds on the Berk and Green (2004) framework, suggesting that superior skill results in better performance, but investor flows and scale effects should erode performance predictability.
5. **Sample: comment on the appropriateness of the sample selection procedures.**
   - Focusing on equity-oriented hedge funds to ensure comparability and consistent interpretation of UP may cause sample selection problem.

6. **Comment on the appropriateness of variable definition and measurement.**
   - UP is defined as the risk-adjusted difference between gross fund returns and returns inferred from disclosed long-equity positions.
7. **Comment on the appropriateness of the regress/predict model specification.**
   - Employ Fama-MacBeth regressions with seven-factor model, augmented by book-to-market and momentum factors, ensuring robust risk adjustments.
8. **What difficulties arise in drawing inferences from the empirical work?**
   - The analysis is conducted at the firm level due to lack of data on individual hedge funds, potentially limiting applicability.
9. **Describe at least one publishable and feasible extension of this research.**
   - Use machine learning to identify patterns in UP that are not captured by traditional factor models.