

How to validate a return predictor

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This short essay summarizes research on return predictors using the manager sentiments developed by [Jiang, Lee, Martin, and Zhou \(2019\)](#) as an example. The manager sentiment index is [here](#). I build my code on the author’s [code](#) from another paper on return predictability.

[Rapach, Ringgenberg, and Zhou \(2016\)](#) follow the following steps to evaluate a new predictor of stock return. The first step is to execute in-sample tests, examining whether the coefficient is significant. The next step is to check the magnitude of the out-of-sample R square. The encompassing test will compare this predictor with existing predictors, showing whether this predictor has significant information superiority.

The interpretation has two dimensions. We want to know how much utility this predictability can bring to the investors. So [Rapach et al. \(2016\)](#) measures the utility for a mean-variance investor by calculating the CES. The natural question about the source of return predictability. VAR decomposition can show whether the predictability is from cash flow or discount rate.

A. In-Sample Regression

In-sample return predictability regression suffers from the following econometric issues.

1. One-side test: based on Inoue and Kilian (2004), a one-side alternative hypothesis is more powerful.
2. Persistent Predictor: based on Ferson et al. (2003), predictors’ persistence leads to spurious results.
3. Stambaugh small-sample bias
4. Using overlapping observations leads to biased t-statistics and standard error

[Jiang et al. \(2019\)](#) uses the heteroskedasticity- and autocorrelation-robust Newey-West t-statistics and wild- bootstrapped empirical p-value can account for the persistence in predictors, correlations between excess market return and predictor innovations, and general forms of the return distribution.

REFERENCES

Jiang, F., J. Lee, X. Martin, and G. Zhou (2019). Manager sentiment and stock returns. *Journal of Financial Economics* 132(1), 126–149.

Rapach, D. E., M. C. Ringgenberg, and G. Zhou (2016). Short interest and aggregate stock returns.
Journal of Financial Economics 121(1), 46–65.