

Replication Section

Introduction

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The Fama-MacBeth [1] cross-sectional regression technique is a mainstay of empirical finance. Yet researchers and practitioners are forced to reinvent the wheel when implementing this method because the original data and code are not available. Some might think, “Fama and MacBeth’s description of what they did is clear enough and it’s easy to program this method.” Yet, anyone who possesses even a modicum of programming experience knows that writing the code is only the first step in creating a functioning program. The next step is checking the code, and it would be much easier to check the code if a benchmark were available. Indeed, persons who argue that “the instructions are clear enough” either do not value their own time (why else wouldn’t they want an easy way to check their code?) or, worse, do not check their own code.

In this issue, Bailer and Martin attempt to replicate the Fama-MacBeth results. Naturally, they fail. They ascribe the failure to the fact that the CRSP data that Fama-MacBeth employed have been subjected to revision through the intervening years. However, one can’t help wondering whether the description *was* sufficiently clear. Did Fama and MacBeth describe *every* detail of their program? Did they make *no* programming errors? What software package did they use? Was the software accurate? We will never know.

From the perspective of finance professionals who use the Fama-MacBeth method, it is at least reassuring that Bailer and Martin’s results are somewhat close to those of Fama and MacBeth. Suppose they had not been close: we would not know whether the source of the discrepancies was the data, the programming, the software, or some combination thereof. In some sense, then, the replication attempt by Bailer and Martin, while not completely successful, is nonetheless reassuring. Their extension should be of great interest to finance professionals. The Fama-MacBeth method relies on Ordinary Least Squares, which is known to be sensitive to outliers. Bailer and Martin employ robust methods, and obtain markedly different estimates of the slope parameter, β .

Reference

- [1] E. Fama and J.D. MacBeth, Risk, Return and Equilibrium: Empirical Tests, *Journal of Political Economy* **81**(3) (1973), 607–636.