Forthcoming, The Journal of Finance

Survival

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First Draft: September, 1993
March 5, 1995

Abstract

Empirical analysis of rates of return in Finance implicitly condition on the security surviving into the sample. We investigate the implications of such conditioning on the time series of rates of return. In general this conditioning induces a spurious relationship between observed return and total risk for those securities that survive to be included in the sample. This result has immediate implications for the equity premium puzzle. We show how these results apply to other outstanding problems of empirical Finance. Long term autocorrelation studies focus on the statistical relation between successive holding period returns, where the holding period is of possibly extensive duration. If the equity market survives, then we find that average return in the beginning is higher than average return near the end of the time period. For this reason, statistical measures of long-term dependence are typically biased towards the rejection of a random walk. The result also has implications for event studies. There is a strong association between the magnitude of an earnings announcement and the post-announcement performance of the equity. This might be explained in part as an artefact of the stock price performance of firms in financial distress that survive an earnings announcement. The final example considers stock split studies. In this analysis we implicitly exclude securities whose price on announcement is less than the prior average stock price. We apply our results to this case, and find that the condition that the security forms part of our positive stock split sample suffices to explain the upward trend in event-related cumulated excess return in the pre-announcement period.

The authors wish to thank Jacob Boudoukh, Larry Gloston, Craig MacKinlay, Philippe Jorion and workshop participants at NYU Stern School of Business, University of Strathclyde and Yale School of Management for helpful comments and suggestions.