Linear Accounting Valuation When Abnormal Earnings Are AR(2)

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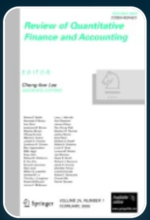

Review of Quantitative Finance and Accounting

Jeffrey L. Callen[1] & Mindy Morel[2]

Abstract

The Ohlson (1995) model assumes that abnormal earnings follow an AR(1) process primarily for reasons of mathematical tractability. However, the empirical literature on the Garman and Ohlson (1980) model finds that the data support an AR(2) lag structure for earnings, book values and dividends. Moreover, the AR(2) process encompasses a far richer variety of time series patterns than does the AR(1) process and includes the AR(1) process as a special case. This paper solves the Ohlson model directly for an AR(2) abnormal earnings dynamic. The model is estimated on a time series firm-level basis following the approach used by Myers (1999). It is found that, like the Ohlson AR(1) model, the Ohlson AR(2) model severely underestimates market prices even relative to book values. These results further bring into question the empirical validity of the Ohlson model.

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Author information

Authors and Affiliations

Rotman School of Management, University of Toronto, 105 St. George Street, Toronto, Ontario, M5S 3E6, Canada

Jeffrey L. Callen

School of Business Administration, The Hebrew University, Mount Scopus, Jerusalem, Israel, 91905

Mindy Morel

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