Journal of Accounting and Economics 50 (2010) 410–454

Contents lists available at ScienceDirect

Journal of Accounting and Economics

journal homepage: www.elsevier.com/locate/jae

Accounting anomalies and fundamental analysis: A review of recent research advances ☆

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ARTICLE INFO

Available online 15 October 2010

JEL classification:
G12
G14
M41

Keywords:
Accruals
Anomalies
Forecasting
Fundamental analysis
Market efficiency
Risk

ABSTRACT

We survey recent research in accounting anomalies and fundamental analysis. We use forecasting of future earnings and returns as our organizing framework and suggest a roadmap for research aiming to document the forecasting benefits of accounting information. We combine this with opinions from the academic and practitioner communities to critically evaluate key clusters of papers about accounting anomalies and fundamental analysis disseminated over the last decade. Finally, we provide a new analysis on how an ex ante and ex post treatment of risk and transaction costs affects the accrual and PEAD anomalies, and offer suggestions for future research.

1. Introduction

In this paper, we review the literature on accounting anomalies and fundamental analysis. Given the existence of numerous excellent literature reviews of closely related topics, we have constructed our review to complement them. We focus on research studies that have publication or distribution dates after the year 2000, examine accounting-related anomalies and fundamental analysis geared toward forecasting future earnings and security returns, and examine empirical research methods.

An underlying theme of our survey is that the information contained in general purpose financial statements can help investors make better portfolio allocation decisions. To this end, an investor can use information in these statements to forecast earnings for the reporting entity, estimate the risk of these earnings, and ultimately make an assessment of the intrinsic value of the firm that can be compared to observed market prices. We use this forecasting activity as our primary

☆ We are indebted to the *CFA Institute* for their generous support in constructing and administering a questionnaire and survey of their membership. We would also like to thank Brad Betts, John Core (Editor), Jon Lewellen (discussant), SP Kothari, Stephen Lok, Stephen Penman, Kari Sigurdsson, Richard Sloan, Mark Soliman and seminar participants at the 2009 JAE conference, London Business School, the 2008 JP Morgan Equity Quant Conference, and the 2010 Sanford C. Bernstein conference on Controversies in Quantitative Finance.
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0165-4101/$ - see front matter
doi:10.1016/j.jacceco.2010.09.008

organizing principle for research on accounting anomalies and fundamental analysis.[1] While we recognize the co-existence of other accounting properties and objectives, we view forecasting as a powerful organizing concept for reviewing the recent literature.

The first part of our review tabulates the most highly cited research studies on accounting anomalies and fundamental analysis published or distributed after the year 2000. We then categorize these highly cited studies by identifying their common and overlapping citations to earlier papers in the literature. The second part of our survey presents results from a questionnaire of investment professionals and accounting academics about their opinions on accounting anomalies and fundamental analysis and how academic research has informed investment practice and to highlight some differences between that and the research conducted by investment professionals. The third part of our survey lays out a desired framework for research seeking to document the forecasting benefits of accounting information, which we then use to critically evaluate the relevant research disseminated over the last decade. In the fourth part, we present some empirical analysis on how an ex ante and ex post treatment of risk and transaction costs affects the well known accrual and PEAD anomalies. In the final part of our review, we offer suggestions for future research.

Our survey focuses on empirical research covering accounting anomalies and fundamental analysis. However, empirical research is (or should be) informed by theory, because the interpretation of empirical analysis is impossible without theoretical guidance. While we do not review in detail papers already covered in prior surveys or those papers covered in concurrent *Journal of Accounting and Economics* survey papers (see, e.g., Beyer et al., this issue; Dechow et al., this issue), we do attempt to recognize linkages between them.

Our survey, in some respects, reiterates a central theme from Kothari (2001). Specifically, academic research that seeks to explore relations between accounting attributes and future firm performance, particularly stock returns, should strive to keep market efficiency as a maintained null hypothesis. The mere finding of an association between an accounting attribute and future stock returns is not prima facie evidence of market inefficiency. As with the research reviewed in Kothari, we continue to find that researchers may be too quick to deviate from the maintained assumption of market efficiency. Furthermore, the documented deviations from market efficiency are many and varied, with little attempt to provide a framework linking them together so as to provide a compelling alternative hypothesis. We are believers in the potential for market inefficiencies; however we think that the hurdle for documenting these inefficiencies is non-trivial.

Our survey also contains a citation analysis of recently published and working papers on accounting anomalies and fundamental analysis. This citation analysis lets the "academic research market speak" on which research papers on accounting anomalies and fundamental analysis have attracted the attention of other researchers and have had a meaningful impact on the subsequent literature. While many of the most highly cited papers are from finance journals, there are some very influential papers from accounting journals that are broadly cited in both types of journals (see, e.g., Xie, 2001; Richardson et al., 2005).

We conduct a citation analysis on papers disseminated in the last decade and find four main clusters of overlapping citations common among these papers. We apply the following labels to the four clusters of research papers: *Fundamental Analysis*, *Accruals Anomaly* (including related investment anomalies), *Underreaction to Accounting Information* [including post-earnings announcement drift (hereafter PEAD) and other forms of momentum], and *Pricing Multiples and Value Anomaly*.

The *Fundamental Analysis* cluster cites a number of prior foundational papers including Abarbanell and Bushee (1997, 1998) and Feltham and Ohlson (1995). The citation foundation of the *Accruals Anomaly* cluster is from Sloan (1996). The *Underreaction to Accounting Information* cluster most often cites Bernard and Thomas (1989, 1990), Foster et al. (1984), and Jegadeesh and Titman (1993) as foundational papers. The *Pricing Multiples and Value Anomalies* cluster is bound together by references to the foundational papers of Basu (1977), Reinganum (1981), Ball (1992), and Fama and French (1993, 1995).

We categorize, evaluate, and discuss some of the main research advances after the year 2000 in each of the four research clusters. In addition, we identify what we believe to be essential components of "good" archival empirical research within the accounting anomalies and fundamental analysis umbrella. Those components are: (1) credible alternative hypotheses (relative to market efficiency) with sound theoretical foundations; (2) robust (in and out of sample) predictive power; (3) a sound treatment of risk; (4) a sound treatment of transaction costs (for research looking at future stock returns); (5) attempting to document additivity to pre-existing accounting attributes; and (6) incorporating non-price based tests to help strengthen inferences about risk versus mispricing. We then use these key ingredients to provide a structure for our survey.

The questionnaire we distributed to investment professionals and to accounting academics indicate some interesting similarities and differences of opinion regarding the current state of research on accounting anomalies and fundamental analysis and where that literature should proceed. While our findings suggest that many of the conventions and techniques used in academic research differ from those in the investment community, both the practitioners and academics who completed our questionnaire placed high importance for future academic research on theoretically motivated empirical tests of investor behavior; empirical tests of asset pricing, risk, and factor models; empirical research on forecasting firm and industry fundamentals; and the empirical discovery and investigation of new "anomalies" or signals.

[1] We keep the discussion of accounting anomalies and fundamental analysis distinct from each other as this is how the literature has evolved. But we note that fundamental analysis could be characterized as subsuming the accounting anomaly literature (i.e., both have the primary goal of forecasting earnings and returns).