

# Study on the Analytical Perspective on Accounting

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**Abstract:** *This paper offers a selective, analytical review of the financial accounting literature, with a primary focus on accounting valuation, including implied costs of equity capital, empirical accounting proxies, and frictions in accounting theory. This author believes that accounting research in these areas is frequently too complacent and lacks critical thinking. In the field of financial accounting, complacency distorts research innovation and hinders the long-term sustainability of accounting academia. The examples discussed in this paper include (but are not limited to) the issue of structural modelling and model falsifiability; determining whether a firm is overpriced or underpriced based on valuation models that do not account for such phenomena; arbitrarily "merging" two disparate models, one for valuation and one for the discount rate; failing to recognise the empirical limitations induced by risk-neutral valuation models in estimating costs of capital; and employing the same model for valuation and discount.*

**Keywords:** Financial accounting, accounting research, cost of capital.

## I. INTRODUCTION

This paper provides a selective, critical review of the financial accounting literature, with an emphasis on empirical archival research, but not exclusively. Given the broad scope of financial accounting research, it is necessary to be selective. Criticality is also required because, in my opinion, the field is overly complacent with respect to its scientific methodology, its numerous dubious proxy constructs, and the rather cavalier attitude that financial accounting empiricists (and sometimes even theorists) have toward financial accounting theory. In order to avoid being accused of excessive hubris, I will state up front that my own work is not immune to the criticisms raised in this paper.

The focus is on three research topics in financial accounting: accounting valuation, including implied costs of equity capital, empirical accounting proxies, and accounting theory frictions.

Given the firm's conservatism, a greater proportion of its known value is allocated to operating assets relative to operating earnings. The valuation issue is exacerbated by the undefined generic term "other value relevant information," as these variables will also have a portion of the firm's known value allocated to them. But, how are we to know, ex ante, which other variables are value-relevant, given that the model does not specify them, and what if the value-relevant variables vary across firms and industries?

Because Ohlsonian models assign the known value of the firm to accounting variables, one could argue that these models cannot provide any meaningful valuation insights. Although I disagree with this viewpoint, it correctly implies that Ohlsonian models cannot be used to determine which firms are overvalued or undervalued or to estimate intrinsic values based on accounting numbers that differ from market prices. <sup>6</sup> If the accounting numbers produce a value other than market value, it simply indicates that the firm's known value has not been "correctly" allocated to the accounting numbers. Numerous attempts to use Ohlsonian models to measure the firm's intrinsic value or, equivalently, its under- or overvaluation relative to its market value are conceptually flawed. The latter discussion glosses over the fact that the majority of Ohlsonian models assume risk neutrality. Given that the world is unquestionably not risk-neutral, it is difficult to interpret the empirical estimation of such models and their relative popularity. In a perceptive paper, Feltham and Ohlson (1999) extend the basic Residual Income Model (RIM) valuation model to incorporate risk so that the firm's value equals its book value, weighted abnormal earnings (as in risk-neutral models), and a sum of covariance risk-adjustment terms. Few empirical accounting articles have attempted to address the issue of risk within the context of model estimation. Nekrasov and Shroff (2009) are an exception; they estimate Feltham and Ohlson's (1999) extended RIM model. However, while they account for risk, they do not take into account the empirical reality that risk varies over time. Similar to Ohlson's (1995a,b) expansion of the standard RIM model, Lyle et al. (forthcoming) incorporate an extended system of dynamics, including risk dynamics, in the Feltham and Ohlson (1999) RIM model. In addition to



producing a closed-form linear solution amenable to empirical estimation, their dynamic risk structure and empirical results are consistent with the abundant empirical evidence in the accounting and finance literatures that costs of capital (expected returns) are time-varying.

## **II. ACCOUNTING EVALUATION AND COST OF CAPITAL**

Accounting cost of capital research has the potential to be significant from both a practical and a motivational standpoint. For instance, costs of capital can be used to value investments and serve as a benchmark for evaluating the performance of the CEO. A substantial amount of accounting disclosure policy research is motivated by the assumption that disclosure reduces firms' capital costs.

In accounting research, costs of capital are frequently implied; that is, they are typically computed as the internal rate of return relating current known price to estimated future cash flows, where cash flows are evaluated by a (typically Ohlsonian) model. The vast majority of empirical studies assume that the resulting internal rate of return number represents the cost of capital for the company. Nevertheless, if cash flows in the numerator are properly risk-adjusted, the implied cost of capital will be the risk-free rate. However, what is the purpose of such an endeavour? If the cash flows are not risk-adjusted, then the resulting estimate will only approximate the cost of capital under extremely restrictive assumptions, as Samuelson (1965) and Ohlson (1981) noted decades ago (1990).

It is common for empirical accounting valuation studies to use Ohlsonian type models to value the firm's cash flows and a CAPM type model to empirically determine the relevant cost of capital, regardless of how well the valuation model accounts for risk. This apparent contradiction appears to be caused by the paradox that if an Ohlsonian model is used to value the firm's cash flows, one cannot then reverse engineer an estimate of the firm's cost of capital from the same model. Alternately, if one reverse-engineers a model to estimate the implied cost of capital, one cannot then use the same model to value the company. To properly use Ohlsonian models for valuation purposes, however, a cost of capital estimate is required, for instance to calculate abnormal earnings. The common practise of "merging" two models so that one model is used for valuation and the other for estimating capital costs is problematic for two reasons. First, according to the implied cost of capital literature, a company's value and cost of capital are jointly determined. In any case, this literature assumes that the price reflects both future cash flows (earnings) and the discount rate. When estimating firm value with one model and cost of capital with another, this simultaneity is cavalierly disregarded. Estimating price from an Ohlsonian-type model and the cost of capital from a CAPM-type model assumes that the two models are essentially equivalent, which is not the case. Each model does not necessarily imply the other.

## **III. THE THEORY OF FINANCIAL ACCOUNTING AND FRICTIONS**

Financial accounting theory is expected to generate testable hypotheses and guide empirical research in the field. Nonetheless, there is a regrettable tendency for theory to disregard the frictions that give it meaning. True, frictions are often difficult to model, but sometimes they are the central issue. This issue has been brought up by theorists in the past—see, for example, Hemmer's (2008) discussion of unmodeled frictions in the paper by Plantin et al. (2008)—but I believe it is significant and worthy of emphasis. Two instances should suffice.

Gigler et al. (2009) model the effect of accounting conservatism on debt covenants in a sophisticated manner. In the context of their model, they assume that the firm's debt level is both positive and exogenous. In other words, the leverage decision is not modelled in Gigler et al. (2009). This is neither unusual nor necessarily problematic in and of itself. One cannot endogenize everything in a model, and even significant decisions cannot always be included, particularly when the model is otherwise complex. But, here's the catch: In their model, debt is assumed to have no positive value. Indeed, debt is expensive when there are no offsets. Consequently, the firm in this model should consist entirely of equity, but one cannot analyse debt covenants for an all-equity firm. In short, it is illogical to assume an exogenous level of debt when the model itself determines an equity-only optimal capital structure. How can debt covenants be rationally explained in a model where only irrational firms issue debt?

One possible response to such a criticism would be to extend the model by including, for example, tax deductibility of interest, which would create an optimal level of debt in the model. However, given the complexity of the existing model, including taxes would likely render it intractable, and it would not alter the qualitative model results. This response, in my opinion, is inadequate. There is no assurance that the authors' findings regarding the effect of

conservatism on debt covenants would still hold if tax frictions were incorporated into their model. For instance, it is possible that the assumed exogeneity of debt, in which no firm would hold debt optimally to begin with, is what drives the conclusion of the paper that accounting conservatism is essentially negative. A proof with taxes (or other frictions) is required, in my opinion, if we are to believe the model's results.

There are instances in which some frictions are modelled while others are not, and it is the frictions that are not modelled that are of particular importance. Beyer and Guttman (2012) examine an intriguing model of voluntary endogenous disclosure prior to the firm issuing new shares to finance new investment opportunities. The problem is that new shareholders appropriate a portion of the benefits from existing assets. This provides management with an incentive to overstate the value of current assets so that new investors are willing to pay a higher price for each new share, thereby reducing share dilution. The model is quite sophisticated, and its implications for voluntary disclosure are novel. Nonetheless, the model's essential implicit assumption is that new shareholders share the benefits of existing assets with existing shareholders. To the extent that existing assets distort managerial incentives, however, firms will frequently use project financing rather than raising straight equity, which separates the returns from the new investment from the returns from existing assets. In other words, project financing eliminates their issue. Beyer and Guttman do not consider this alternative or the frictions that could make the project financing approach prohibitively expensive.

#### IV. CONCLUSION

This paper provides a selective critical review of the financial accounting literature, with a primary focus on three research topics: accounting valuation, including implied costs of capital, empirical accounting proxies, and unmodeled frictions in accounting theory. This author believes that accounting research in these areas is frequently overly complacent, particularly in its lack of critical reasoning. Frequently, empiricists fail to recognise the limitations of the available models and end up misusing them. Examples discussed in this paper include structural modelling and model falsifiability; determining whether a firm is overpriced or underpriced based on valuation models that do not account for such phenomena; arbitrarily "merging" two disparate models—valuation and discount rate—and failing to recognise the empirical limitations induced by risk neutral valuation models in estimating costs of capital. Other examples of a lack of critical reasoning include repeatedly using proxies that ostensibly have no underlying theoretical basis, estimating regressions that inevitably yield biased coefficients when the econometrics literature provides solutions, and generating complex models without the frictions that are essential to the issue being researched.

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