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Differences in the valuation of earnings and book value: Regulation effects or industry effects?

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Abstract

This paper uses a valuation framework on a sample of firms from four European countries (France, Germany, Netherlands, and United Kingdom) to examine how income, accruals, and book value of equity are perceived by the respective capital markets. Our model includes adjustments for industry effects and taking into account the linear information dynamics of the accounting variables posited in the Ohlson model. Consistent with previous researchers, we find that both earnings and book value of equity have valuation implications and that there is significant dispersion in the country-specific and industry-specific valuation multiples. However, when using accounting variables to forecast market values we find that industry-specific valuation multiples reduce forecasting error more than country-specific ones.

Keywords: Valuation; Country effects; Industry effects; Out-of-sample prediction

1. Introduction

In 1980, F. Black issued a provocative statement: accounting policies must be chosen so that earnings are useful in the valuation of a firm and, more specifically, that the earnings–price multiple should be constant across firms. It is well known however, that there is substantial variation in the average earnings–price multiple across countries although Land and Lang (2002) found that earnings multiples across countries became more similar over the years. In the present study, we investigate whether the systematic differences in the

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value relevance of the book value of equity and earnings found among European countries and reported in King and Langli (1998) and Arce and Mora (2002) may also be explained by economic factors such as industry effects. We go even further and ask whether one should regulate accounting at the national level (or, even the supra-national one, e.g., I.F.R.S.) or at the industry level by adopting industry-specific standards as the FASB or even European country regulators have done on a number of occasions in the past. We focus on four European Union (EU) countries. The EU offers an interesting context for such studies because a series of Directives were enacted in the 1980s to ensure that member states would harmonize their accounting policies. Still, generally accepted accounting principles vary substantially across countries. Consequently, a number of recent publications (inter alia, Arce & Mora, 2002; King & Langli, 1998) have examined the valuation implications of these differences.

The modeling approach used in this paper is based on Ohlson (1995) and Feltham and Ohlson (1995, 1996). This class of models "can best be understood as an attempt to restate economic theories of income measurement in the light of advances in the economics of asset pricing under uncertainty" (Walker, 1997, p. 341). The fundamental characteristics of Ohlson type models are characterized by the clean surplus assumption and linear information dynamics (Walker, 1997). Indeed, estimating variants of the Ohlson model imposes three types of constraints on the estimated equation:

> "The first constraint is that all components of earnings have the same earnings forecasting coefficient and valuation multiple. The second constraint adds the additional restriction that earnings valuation multiples are identical across industries. The third constraint is that the theoretical structural relation underlying the valuation model is appropriate." (Barth, Beaver, Hand, & Lansdman, 2002, p. 1).

The purpose of this study is to provide evidence on the influence of these constraints in a cross-national context.

Several studies provide evidence that the first constraint is binding with regard to the cash flow and accrual components of income (e.g., Barth, Beaver, Hand, & Landsman, 1999; Dechow, 1994; Sloan, 1996). In particular, with relevance to the current study, Barth et al. (1999, 2002) show that total accruals and cash flow earnings components have different implications for forecasting abnormal earnings and for estimating equity market value in the context of Ohlson (1999). That is, disaggregating earnings into its accrual and cash flow components aids in forecasting abnormal earnings and explaining equity market value. We argue that different institutional environments for accounting regulation are likely to influence the accruals component only. Therefore, any systematic differences in accounting policies will be reflected in the valuation of accruals and not cash flows because cash flows should be valued at approximately the same rate based on economic conditions.

Barth et al. (1999, 2002) also provide evidence that the valuation of the accrual and cash flow components of earnings vary across industries. In the case where the researcher aims to identify differences in the valuation of earnings and book value across countries, constraining the valuation coefficients of earnings components (and book value) to be the same is even more important because economic conditions facing European countries are more likely to be reflected at the industry level rather than the macro level.