

I. Introduction

Investors often use financial ratios such as P/B ratio and P/E ratio to track the variations in stock prices. Lee, Myers, and Swaminathan (1999) showed that a P/V ratio could be better than P/B, P/E, and P/D ratios in tracking stock prices and predicting the returns. The denominator of P/V is calculated using the intrinsic value model developed by Ohlson (1995). Ohlson establishes the residual income valuation method using the clean surplus concept that specifying the relations among book values, future earnings, and dividends. His method allows one to estimate a firm's intrinsic value using contemporaneous accounting and information variables. Specifically, a firm's value can be expressed as its book value plus a linear function of current abnormal earnings and the scalar variable representing other information. Since this method incorporates information dynamics, it might be an improvement over the present value of expected dividends (PVED) model as argued in Penman and Sougiannis (1996), Frankel and Lee (1998), and Dechow, Hutton, and Solan (1999).¹ Furthermore, information dynamics also provide the concrete formulation of future cash flows than traditional discount cash flows model as discussed in Feltham and Ohlson (1995).

¹ The PVED model uses the present value of expected future dividends to common shareholders based on currently available information as the proxy of a firm's intrinsic value.

Past insurance literature did not offer a concrete method to evaluate an insurance company and few researches paid attention to insurance companies' value as to discuss their stock prices as well. However, the general supports from the literature for Ohlson's method stimulates us to examine the applicability of Ohlson's residual income valuation method to insurance companies. We use time-series models to forecast abnormal earnings and capture the information dynamics. The resulted value as a proxy to the insurer's intrinsic value is then used to form P/V ratios which in turn are used to form a regression model to explain the variations in the insurance companies' stock prices. The regression model also includes the conventional P/B and P/E ratios. The sampled insurers are publicly traded multi-line companies collected from the 2002 Center of Research in Securities Prices (CRSP) monthly tapes and COMPUSTAT. Our results will show the applicability of Ohlson's model and Lee, Myers, and Swaminathan's findings in the insurance industry. This study will also be one of the few studies in examining the intrinsic value of an insurance company and the variations in insurance firms' stock prices.

We find the intrinsic value estimated by residual income model with six months abnormal earnings' forecasts is a little higher than the book value but a lot lower than the stock price. Ohlson's method hence does not produce a good proxy for the stock price or the intrinsic value of an insurance company. Such results hold

under various measures for the discount rate. Although our regression model seems to have high explanatory power for the variations in the stock price, the improvement from substituting the P/B ratio for the P/V ratio is immaterial. Therefore, the good results found in Lee, Myers, and Swaminathan (1999) do not appear in the insurance industry.

The remainder of the paper is organized as follows. Section II discusses the meaning of financial ratio and Section III introduces the residual income valuation model. Section IV describes the data and constructs the portfolio for the industry index. The regression modeling and results are in Section V. Section VI contains conclusions and discussions for future research.