"Accounting losses, investors' growth expectations and the association between stock returns and accounting earnings"

KTL Minna Martikaisen väitöskirja "Accounting losses, investors' growth expectations and the association between stock returns and accounting earnings" tarkastettiin 8.5.1998 Vaasan yliopistossa. Vastaväittäjänä oli professori Kenneth Högholm (Svenska handelshögskolan) ja kustoksena professori Timo Salmi.

It was thirty years ago when two brilliant young U.S. scholars Ray Ball and Philip Brown started a totally new area of accounting research, namely market-based accounting. This area of research uses stock market data to investigate various accounting phenomena, most notably the information content and usefulness of accounting earnings.

The importance of stock market data in accounting studies is nowadays commonly accepted by the international research community. It is widely recognized that the stock market offers accounting researchers a real-time laboratory to study many of the most essential questions of the modern accounting research. As a consequence, the success of this research area has been amazing. To illustrate, in The Journal of Accounting and Economics, the most cited accounting journal of the world, about 40 percent of studies published in this decade focus on this important area of research. The research has also been spread throughout the world. In Finland, The Helsinki School of Economics and Business Administration and The University of Vaasa have been the most recognized institutions in this area.

By no means, the research area is only of scientific interest. For firm managers, it is important to know what are the value-relevant factors of the firms. For investors, it is essential to try to identify which stocks may be over- and underpriced in the market. For accountants, it is important to know what kinds of accounting figures have relevance. Market-based accounting research provides useful information to all of these decision makers. The list of the potential users of the results of this line of research could be easily continued.

The exact purpose of the current thesis is to investigate how accounting losses affect investors' growth expectations for firms and consequently the observed association between stock returns and accounting earnings for different types of firms and over time. The theoretical background for the analysis relies on dividend based valuation and signaling theories.

Based on theoretical analysis, three main hypotheses are stated and empirically tested in the study. First, accounting losses are not assumed to be positively related to investors' growth expectations. The background for this hypothesis is the assumption that investors' cash flow expectations are related to persistent earnings, but not to earnings that are temporary by nature. Losses can be assumed to be more temporary than profits, because owners have the opportunity to sell their shares at the price of the market value of the net assets of the firm. If losses would reflect future cash flow expectations, then owners should, in principle, liquidate the firm if the firm reports a loss.

The second hypothesis of the thesis suggests that accounting losses are assumed to dampen the observed relationship between stock returns and accounting earnings especially for firms that have high growth opportunities and low financial leverage. The theoretical analysis of the thesis shows that the valuation impact of earnings is high for firms with high growth opportunities and low leverage. As a consequence, losses have an especially small impact on prices of these types of firms. This can be seen as a big dampening effect of losses on the observed earnings response coefficients (ERCs) that measure the relationship between stock returns and accounting earnings.

Moreover, as a third hypothesis, it is assumed that because the existence of accounting losses varies differently over time for different industries facing different business conditions, the observed earnings response coefficients are dampened for different industries in different time periods.

The empirical analysis of this study is based on a sample of New York Stock Exchange (NYSE) firms between 1975 and 1990. It appears that the relative frequency of losses in the sample of 9,316 firm-year observations is 7.7 percent, suggesting that losses are common among the NYSE firms during the sample period. The large amount of losses suggests that the impact of losses on the relationships between earnings-to-book equity and market-to-book equity ratios as well as on ERCs

is likely to significant if the assumption on the temporary nature of accounting losses holds true. It further appears that the amount of losses varies significantly across different types of firms and industries.

The evidence on the relationship between the market-to-book and earnings-to-book ratios suggests that the two ratios are not significantly positively related if accounting earnings are negative. For positive earnings, however, the positive relationship exists for the largest and least levered firms. These findings support the hypothesis that investors regard accounting losses as temporary, not reflecting future cash flow expectations. Profits are considered more persistent, especially for the largest and least levered firms. Moreover, it appears that the impact of accounting losses on the relationship between earnings-to-book and market-to-book ratios varies across firms. This may be because earnings persistence varies between firms, earnings of the largest and least levered firms being persistent.

The empirical results further suggest that accounting losses affect the estimated ERCs differently across firms that have different levels of growth opportunity and financial leverage. The impact is highest in the subgroup including high growth opportunity firms and in the subgroup of the firms with low financial leverage. In the subgroup including high financial leverage or low growth opportunity firms the exclusion of losses has hardly any impact on ERCs. Moreover, the results indicate that the different impact of losses on ERCs in different growth opportunity and financial leverage subgroups are at least to some extent incrementally important, and are not sensitive with respect to firm size. In addition, the results indicate that the impact of growth opportunities and financial leverage on ERCs is clearly observable, especially when losses and profits are analyzed separately.

This thesis also finds that the relative frequency of losses varies significantly over time among industries. While Carla Hayn in her seminal study in Journal of Accounting and Economics in 1995 reports that in general losses have increased through time, the results of this study indicate that this is not the case for all industries, apparently because of their different business cycles. Moreover, certain industries report losses considerably more often than others. The results further suggest that estimated ERCs are considerably higher in those years when losses are infrequent. Although loss patterns vary considerably between certain industries, the results indicate that there also exists considerable contemporaneous covariances between certain industries that should be taken into account when estimating ERCs using time series regressions. The recognition of this type of covariance improves the efficiency of the ERC estimates. In this study this is done by applying the seemingly unrelated regression technique.

Earlier studies focusing on the time-series estimates of ERCs typically use ordinary least squares separately for each model's regression estimates, these studies neglect the existence of contemporaneous covariances between models. By taking into account these contemporaneous covariances, more accurate estimates can be attained when more information is incorporated into the system investigated. The empirical evidence of this study suggests that the observed time-series ERCs for individual industries are considerably strengthened by recognizing the contemporaneous covariances between industry-specific models. This is especially the case with respect to the accuracy of the ERC estimates.

In general, the empirical results of this thesis strongly support the research hypotheses stated in the beginning of the study. This is obviously because investors consider losses as temporary. Since the loss patterns vary considerably among industries and different types of firms, it should be noted that the temporary components of their earnings may vary. Therefore, comparisons based on earnings data should take into account this observation. To illustrate, assume that a decision maker is interested in how growth opportunities affect ERCs in a given industry. If losses and profits are pooled in the analysis, the observed results are likely to be downwards biased because of the temporary nature of losses.

The results are also potentially interesting to firm managers. This thesis suggests that losses do not significantly affect stock prices if the market thinks that they are temporary. Therefore, it is important for managers to inform the market if this is the case. An interesting study in this context is provided by Kasznik and Lev, who report that firms facing large earnings disappointments are more likely to provide discretionary disclosures than firms that are facing large positive earnings surprises. Further evidence on these issues would obviously be of great interest.

Finally, the results of this study are also of interest to people interested in the quality of earnings. Evidence on ERCs is potentially of great interest when assessing the effect of a change in accounting rules, for instance, on earnings quality. This study provides further evidence which hopefully helps us to better understand what an ERC is and what are the fundamental factors behind this. Again, further evidence on these issues is needed, however. Potentially interesting aspects are, for instance, the magnitude of ERCs around changes in accounting and tax regulations and in different markets.