EARNINGS MANAGEMENT AND ACCOUNTING STANDARDS IN EUROPE

Wolfgang Aussenegg[1], Vienna University of Technology
Petra Inwinkl[2], Vienna University of Technology
Georg Schneider[3], University of Paderborn

We examine the earnings management level for a set of European public traded firms that switch their financial statements from local GAAP to IAS/IFRS. The Data sample comprises 17 European countries with more than 18,000 firm-year observations. Overall we are using 15 different proxies to measure earnings management. Our results exhibit that German legal origin and some French legal origin countries experience a significant decline in earnings management compared to their local GAAP counterparts, whereas this is not the case for English legal origin countries (like UK and Ireland) and Northern European countries (Scandinavian legal origin). The latter two regions have already lower earnings management levels prior to IAS/IFRS adoption compared to the rest of Europe. Therefore, for these countries the transition from local GAAP to IAS/IFRS does not change their earnings management behavior. In addition, we show that firm size and time have no significant effect on the earnings management level. On the other hand, growth firms and firms with a higher financial leverage exhibit higher levels of earnings management, whereas firms with more operating cash flow reveal less earnings management. In comparing the results for all 15 earnings management measures it seems that different measures tend to capture different dimensions of earnings management.

Keywords: Earnings Management, Local Accounting Standards, IAS/IFRS, Europe
JEL classification: G14, G15, G38, M41

1. Introduction

In our study we test 4 hypotheses. First, firms that adopt IAS/IFRS do not engage in significantly less or more earnings management compared to firms reporting under local GAAP (Hypothesis 1). Second, we assume that growth firms tend to engage more in earnings management (Hypothesis 2). Third, we hypothesize that firms with more cash flows from operations tend to engage less in earnings management (Hy-

---

[1] Corresponding author: Department of Finance and Corporate Control, Vienna University of Technology; Address: Favoritenstrasse 9-11, A-1040 Vienna, Austria; email: waussen@pop.tuwien.ac.at; Phone: +43 1 58801 33082; Fax: +43 58801 33098.
We would like to thank Ranko Jelic, Wayne Landsman, as well as seminar participants at the University of Birmingham, the University of North Carolina at Chapel Hill (Kenan-Flagler Business School), the University of Graz, the Vienna University of Technology, and the Winter Global Conference on Business and Finance, January 2009, Atlantic City, for helpful comments and suggestions. We also thank Reuters GesmbH Vienna for providing data.
[2] Department of Finance and Corporate Control, Vienna University of Technology; Address: Favoritenstrasse 9-11, A-1040 Vienna, Austria; email: petra.inwinkl@tuwien.ac.at; Phone: +43 1 58801 33084.
[3] Department of Business Administration, University of Paderborn; Address: Warburger Str. 100, 33098 Paderborn, Germany; email: Georg.Schneider@notes.uni-paderborn.de; Phone: +49 5251 60 2914.

pothesis 3). And finally, we presume that firms with a higher financial leverage tend to engage more in earnings management (Hypothesis 4).

2. Data and Earnings Measures

For testing our four hypotheses with 15 earnings management measures we use the following data: Our database consists of all public traded firms available in Compustat Global (Version 2006) for 15 European Member States plus Switzerland and Norway. The total time period available starts with the fiscal year 1995 and ends with the fiscal year 2005. The starting sample consists of 4,745 public traded companies with overall 52,195 firm-years (4,745 x 11 years).

Although our sampling period starts in 1990, we exclude in our analysis the years 1990 until 1994, as the number of IAS/IFRS observations and the availability of all necessary accounting items is too low in the early 1990s. Financial companies are also excluded, as their financial statements significantly differ from those of other firms. We further exclude all firm-years with one or more missing accounting information necessary to compute all our 15 earnings management measures. These exclusions reduce the number of firm-years in our sample from 52,195 to 25,204.

To mitigate the influence of outliers and potential data errors we truncate important accounting items at the 1st and 99th percentile and furthermore delete firm-year observations with a zero operating cash flow and/or total assets below €1 Mio. This truncation procedure reduces the number of available firm-years to 23,804.

The study categorizes 15 measures for earnings management into five groups. The first group is based on discretionary total accruals, one measure for discretionary total accruals (DTAC) and one for discretionary current accruals (DCAC). To make these measures comparable among firms and over time both are scaled by lagged total assets (TA_{t-1}). DTAC and DCAC are estimated using the modified Jones model.[4]

Burgstahler and Dichev (1997), and Degeorge et al. (1999) note, that U.S. firms often use accounting discretion to avoid small losses. Therefore, the second group of earnings management measures considers the relation between the number of small profits and the number of small losses. We compute for each unit three different earnings management measures based on the intervals ± 0.5%, ± 1%, and ± 2%.

In the literature it is assumed that earnings can be temporary inflated (or deflated) due to accrual choices, whereas cash flows should be unaffected.[5] Group 3 is therefore based on the relationship between accruals and cash flows from operations.

The fourth group of our earnings management measures is associated with earnings smoothing. Earnings smoothing (as a variant of earnings management) implies that the volatility of earnings should be lower than the volatility of cash flows from operations. Following the corresponding approaches in the literature (see, e.g., Burgstahler et al. (2006), and Lang et al. (2006)), we are computing for each homogeneous group of firms (units: based on the dimensions country, industry, and year) the corresponding standard deviations.

The fifth group also relates to earnings smoothing, but uses the correlation between changes in total accruals and changes in cash flow from operations. Different to Leuz et al. (2003) and Burgstahler et al. (2006), we are using, besides total accruals, also discretionary total accruals, current accruals, and discretionary current accruals to calculate the corresponding correlation coefficients.

---

[4] Total accruals are estimated in line with, e.g., Dechow et al. (1995) or Burgstahler et al. (2006). Current accruals are calculated as defined in Teoh et al. (1998a, 1998b).

[5] See, e.g., Leuz et al. (2003) or Burgstahler et al. (2006).

3. Earnings Management Index

On the bases of the 15 earnings management measures we compute an aggregated earnings management index. In a first step, each of our 15 earnings management measures are transformed into percentage ranks, from zero to 100. All 15 measures are constructed in a way that a higher value and therefore a higher percentage rank is indicating higher earnings management. This ranking yields an earnings management index for each of the 15 measures (EM Index_1, … , EM Index_{15}).

In a second step, we calculate, based on our 15 individual measures an overall earnings measurement index. As earnings management is not directly observable, each proxy measure is more or less biased. If the idiosyncratic error components of each measure are not perfectly correlated, the aggregated measure should provide a more robust overall estimate of earnings management.

4. Empirical Results

To test our four hypotheses we conduct (besides a set of univariate analyses) three different regressions with the total average earnings management index (EMI) as dependent variable. In the first regression we include as independent variables an indicator variable for IAS/IFRS, the variable Time to control for time effects and indicator variables for the regions Scandinavian legal origin and English legal origin. The latter are motivated by the observation that these two regions have already prior to IAS/IFRS adoption a much lower earnings management level than other regions in Europe.

We receive the following results: First, the coefficient of the IAS/IFRS indicator variable is negative and significant. This indicates a significant lower earnings management level for IAS/IFRS firms (in the remaining three regions) and thus contradicts hypothesis 1, which implies no difference in earnings management. This result is in line with earlier predictions mentioned in the literature. We confirm these predictions by using more recent data than some of the earlier studies. We also find that the influence of the Time variable is not significant. While there seems to be a slight downward trend in earnings management over time (the coefficient of Time is negative) this trend is not statistically significant. This observation somehow contrasts Land and Lang (2002) who detect that accounting quality is improving worldwide. Finally, the coefficient of the dummy variables for the two included regions are significantly negative, suggesting that earnings management in Anglo-Saxon and Northern European countries is less pronounced than in the rest of Europe.

In the second regression we include as independent variables a dummy variables for IAS/IFRS, the variable Time, the log of total assets to control for firm size effects, as well as three variables to test our hypotheses 2 to 4: revenue growth (in %), operating cash flow scaled by lagged total assets (in %), and the debt/equity ratio.

The coefficient of the IAS/IFRS-dummy variable is still negative but in contrast to the previous regression not significant. This indicates, in line with our univariate findings, that earnings management only tends to be significantly lower for IAS/IFRS firms compared to local GAAP firms in two regions (German law countries: Austria, Germany, Switzerland, and three French law countries: Belgium, France, the Netherlands). The remaining eleven countries do not show a significant decline in earnings management by applying IAS/IFRS standards. As mentioned above, this is especially true for our two Anglo-Saxon and our four Scandinavian countries.

Again, we do not observe a significant time effect, neither do we observe a firm size effect. In contrast, there is a positive effect for revenue growth and the debt/equity ratio. This confirms hypothesis 2 and 4. Riskier firms tend to engage more in earnings management. Finally, the coefficient for cash flows from operations is significantly negative. This confirms hypothesis 3 and indicates that firms with more cash flows from operation have less incentives to engage in earnings management.

And finally, regression model three is an extension of regression model two, where we (again) control for regional differences in earnings management levels. As La Porta et al. (1998) note countries in our regions 4 (Scandinavian countries) and 5 (United Kingdom and Ireland) have higher investor protections than the countries in the remaining three regions.

In controlling for regional earnings management aspects, we again receive a significant coefficient for the IAS/IFRS dummy. This implies that IAS/IFRS firms in German legal origin countries (Austria (AT), Switzerland (CH), and Germany (DE)), French legal origin countries (France/Benelux area (Belgium (BE), France (FR), and the Netherlands (NE)), the southern European countries (Greece (GR), Italy (IT), and SP (Spain)), experience on average a significant lower earnings management level than their local GAAP counterparts. In addition, the extension of regression two by controlling for regional effects does not influence the confirmation of our hypotheses 2 to 4. Still firms with a larger revenue growth and a larger financial leverage experience higher earnings management, whereas less risky firms with more cash flows from operation have significantly less incentives to manage earnings. Anew, also in regression model three, time and firm size have no influence on the earnings management level.

5. Conclusion

In comparing the results for 15 earnings management measures we can conclude that different measures seem to capture different dimensions of earnings management. Overall we find that the earnings management level is lower for IAS/IFRS firms compares to their local GAAP counterparts. In addition, the overall results highly depend on the legal origin. While this result holds for German and French legal origin countries (depart from some Southern European countries), there is no change in earnings management in English and Scandinavian legal origin countries. We also show that the time period and firm size have no effect on earnings management.

Furthermore, growth firms tend to engage more in earnings management. The same applies for firms with higher financial leverage. On the other hand, firms with more cash flows from operations tend to engage less in earnings management. They tend to be less risky and can, therefore, - on average - reach certain earnings targets more easily.

References

Burgstahler, D. & Dichev, I. (1997). Earnings Management to Avoid Earnings Decreases and Losses. *Journal of Accounting and Economics*, 24, 99-126.

Burgstahler, D., Hail, L. & Leuz C. (2006). The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms. *Accounting Review*, 81, 983-1016.

Dechow, P., Sloan, R. & Sweeney, A. (1995). Detecting earnings management. *Accounting Review*, 70, 193–225.

Degeorge, F., Patel, J. & Zeckhauser, R. (1999). *Earnings Management to Exceed Thresholds, Journal of Business*, 72, 1-33.
Land, J. & Lang, M. H. (2002). Empirical Evidence on the Evolution of International Earnings. *Accounting Review*, 77, 115-133.
Lang, M., Raedy, J. S. & Wilson, W. (2006). Earnings Management and Cross listing: Are Reconciled Earnings Comparable to US Earnings?, *Journal of Accounting and Economics*, 42, 255-283.
Leuz, C., Nanda, D. & Wysocki, P. D. (2003). Earnings Management and Investor Protection: an International Comparison. *Journal of Financial Economics*, 69, 505-527.
Teoh, H. S., Welch, I. & Wong, T. J. (1998a). Earnings Management and the Long-Run Market Performance of Initial Public Offerings. *Journal of Finance*, 53, 1935-1974.
Teoh, H. S., Welch, I. & Wong, T. J. (1998b). Earnings management and the under-performance of seasoned equity offerings. *Journal of Financial Economics*, 50, 63-99.