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The Effect of Other Comprehensive Income Reporting on Accruals-based Earnings Management Activities

Wpływ informacji o pozostałym wyniku całościowym na intencjonalne kształtowanie raportowanych wyników finansowych

Keywords: comprehensive income; OCI; earnings management; discretionary accruals

Słowa kluczowe: zysk całościowy; pozostały wynik całościowy; zarządzanie zyskami

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Introduction

The obligation to disclose comprehensive income in financial reporting has enabled the users of financial statements to gain wider access to a company's information transparency. This information should be characterized by availability, completeness, relevance, quality and, what is particularly important, reliability that relates mainly to the issue of earnings management practice, understood as the actions of managers who use judgement in financial reporting and in structuring transactions to alter financial reports so as to either mislead some stakeholders about the underlying economic performance of the company or influence managerial contractual outcomes [Healy, Wahlen, 1999, pp. 365–383].

In this paper, we investigate the role of other comprehensive income statements in mitigating the management's actions aimed at reporting a certain level of earnings by

using discretionary accruals. Thus, the central question we address is whether other comprehensive income (OCI) reporting affects the extent of earnings management.

Presentation of the OCI category, which is, together with net profit, a component of comprehensive income, creates the need to analyse the company's profits and losses that are the result of its all activities, regardless of their place in the financial reporting system. It can, therefore, be assumed that the publication of OCI components is necessary for users of financial statements who, on the basis of this information, can assess some of the managerial activities more accurately and thus can recognize the managers' engagement in upward earnings management.

The scope of the OCI has a much wider capacity than the net profit and includes many important elements affecting companies' future profitability that are omitted in the traditional income statement. Its potentially wider information range combined with the lack of overloading creates satisfactory conditions of high information competency for the stakeholders, which may significantly impede the managers' actions aimed at active management of earnings. This leads to the hypothesis we posit in this paper: other comprehensive income is negatively related to the level of earnings management.

This supposition results from the conjecture that the disclosure of the OCI components with their changes enables users of financial statements to examine the external and internal determinants of the company's efficiency more completely and accurately. Thus, it increases the discipline of managers in financial reporting, which can be depicted by the negative relationship between the OCI and earnings management.

1. Literature review

An investor assessing a company's future financial results should take into account several aspects: the low probability of their realization, limitations resulting from the adopted accounting policy, the relationship with the subjectively assessed risk, the dependence on the estimates, and thus, the vulnerability to manipulation [Gierusz, 2013, p. 36].

The presentation of comprehensive income in financial reporting is related to the use of the valuation model, in which "clean surplus accounting" is applied. According to the concept of comprehensive income, profit is generated when a value of net assets at the end of the accounting period is higher than their value at the beginning of that period [Sajnóg, 2017, pp. 487–488]. The most important assumption of this model is that any change in the value of the company's net assets should be included in its income statement [O'Hanlon, Pope, 1999, p. 459]. An alternative concept – a "dirty surplus accounting" – allows a solution in which specific changes in net assets are recognized directly in equity, bypassing the income statement [Szychta, 2012, p. 67]. Users of financial statements often find such items difficult to identify, which in turn makes it easier for the management to manipulate.

It is worth emphasizing that comprehensive income is a change in the company's equity in a given reporting period that results from economic transactions and other occurrences taking place in relationship with firms and individuals other than owners [Epstein, Nach, Bragg, 2010, p. 77]. It is comprised of net profit and OCI, which components should be presented in two groups (see Table 1).

Table 1 shows that the items of OCI consist largely of unrealized profits and losses, which are the result of several internal and external factors, often macroeconomic or market components, over which the company's managers have no control and therefore are not an area of earnings management. This fact is confirmed by the research, according to which comprehensive income reflects occurrences that are clearly beyond the managers' control [Yen, Hirst, Hopkins, 2007, p. 63].

Table 1. Grouping of OCI items under the amendments to IAS 1

Specification	Accounting regulation
OCI items that cannot be reclassified into profit or loss	
Changes in revaluation surplus	IAS 16 and IAS 38
Actuarial gains and losses on defined benefit plans	IAS 19.93A
Gains and losses from investments in equity instruments measured at fair value through OCI	IFRS 9
For those liabilities designated at fair value through profit or loss, changes in fair value attributable to changes in the liability's credit risk	IFRS 9
OCI items that can be reclassified into profit or loss	
Foreign exchange gains and losses arising from translations of financial statements of a foreign operation	IAS 21
Effective portion of gains and losses on hedging instruments in a cash flow hedge	IAS 39

Source: [IFRS, 2011].

According to many researchers, effects resulting from extraordinary events or changes in the macroeconomic environment that affect the market value of assets and liabilities on which managers have no or very limited influence should be eliminated from the income statement and disclosed in other parts of the financial statements, e.g. in the statement of changes in equity or directly in the balance sheet. For this reason, managers are the biggest supporters of the operating profit concept instead of the comprehensive income idea [Biddle, Choi, 2006, p. 2]. The insightful characterization of all OCI components allows stating that they all are characterized by lack of durability over time, and almost all are beyond the control of managers, which hinders active earnings management [Rees, Shane, 2012, pp. 796–797].

Generally, it is believed that the concept of comprehensive income seen as a clear surplus is internally coherent, consistent with the theory of valuation and, what is more important, less prone to manipulation by the company's managers. Hirst and Hopkins [1998, p. 49] emphasize that the presentation of OCI in the income statement instead of the statement of changes in equity is more effective from the point

of view of revealing managerial earnings manipulation. Their research indicates that disclosing mainly one of the OCI components, i.e. unrealized gains and losses on available-for-sale securities, contributes heavily to revealing aggressive accounting. Lee, Petroni and Shen [2006, pp. 655–692], after analysing insurance companies, agree with this conclusion. Other authors note that managers using the aggressive earnings management avoid a more transparent OCI presentation [Bamber et al., 2010, pp. 97–126]. Hunton, Libby and Mazza [2006, pp. 135–157] state explicitly that managers are more likely to get involved in earnings management with OCI components when they are reported in the statement of changes in equity. Thus, it indicates a negative relationship between the transparency of OCI reporting and the tendency to manage earnings. However, they also point out that there is still little evidence on the increase in informativeness of the income statement resulting from OCI reporting, and empirical studies remain inconclusive.

2. Research methodology

Our main sample consists of companies listed on the Warsaw Stock Exchange (WSE) between 2009 and 2016. This sample period reflects the current legal status of the financial reporting of public companies. We are only interested in companies from the industry sector that present their financial statements in accordance with IFRS. Industrial companies are the most represented on the WSE. What is more, this type of limitation enables us to avoid the issue of sample heterogeneity when assessing the scale of earnings management. We retrieve all required accounting data from individual financial statements available in the Notoria Service database or, if necessary, we hand-collect it from the websites of the analysed companies. In addition, we use pairwise missing deletion, yielding a final sample of 86 companies and a total of 576 firm-year observations.

To investigate the effect of OCI disclosure on earnings management in industrial WSE-listed companies, we employ a panel least square (unbalanced) model using year fixed-effects regression:

$$DACC_{i,t} = \beta_0 + \beta_1\, OCI_{i,t} + \beta_n\, Controls_{i,t} + \varepsilon_{i,t}$$

The dependent variable, DACC, denotes discretionary accruals, which is our proxy of earnings management. We decided to employ discretionary accruals because they are a deliberate effect of activities of managers, who intentionally shape the financial statement to present particular financial results [Zarowin, 2015, p. 2]. Following prior studies [e.g. Teoh, Welch, Wong, 1998, pp. 1935–1974] to measure the degree of earnings management, we use the abnormal accruals from the modified cross-sectional Jones model [Dechow, Sloan, Sweeney, 1995, pp. 193–225], which assumes that nondiscretionary accruals result from changes in sales ($\Delta SALES_t$), fluctuations in trade

receivables (ΔAR_t), and gross property, plant and equipment (PPE_t). DACC are the differences between the company's lagged asset-scaled total accruals (TACC, i.e. the difference between net earnings and cash flow from operation) and nondiscretionary accruals estimated on the basis of the model, which is represented by the residual:

$$\frac{TACC_t}{TA_{t-1}} = \alpha_0\left(\frac{1}{TA_{t-1}}\right) + \alpha_1\left(\frac{\Delta SALES_t - \Delta AR_t}{TA_{t-1}}\right) + \alpha_2\left(\frac{PPE_t}{TA_{t-1}}\right) + \varepsilon_t$$

where:
TA_{t-1} – total assets at the beginning of the year t
α_0, α_1, α_2 – the regression coefficients
ε_t – the error term in a regression equation

The main variable of interest is OCI, which is the ratio of other comprehensive income standardized by total assets at the beginning of the year t. In accordance with our hypothesis, we analyse the coefficient (β_1) on OCI. We expect a negative and statistically significant value, which would signal that reporting of OCI is associated with less earnings management activity.

In line with suggestions of the prior research [Lemma, Negash, Mlilo, 2013, pp. 8–12], we also control other factors affecting earnings management behaviour. Specifically, we use the natural logarithm of total assets as a proxy of the firm size (SIZE), cash flow from operating activities scaled by lagged total assets (CFO) as it affects the value of total accruals, book-to-market ratio (BVMV) to measure of growth opportunities, debt ratio (DR) to control the capital structure and dividend yield (DIV) as a proxy for the dividend policy.

3. Results and discussion

Table 2 presents the descriptive statistics of discretionary accruals, OCI and control variables for the sample of 576 firm-years. Although the DACC, on average, amounts only to -0.07% of total assets, it does not mean that these companies have not practiced earnings management. The level of this variable is significantly varied and ranges from -142.59% to 86.67%, with the median of -0.02%.

Table 2. Descriptive statistics

Specification	Mean	Std. Dev.	Min	Median	Max
DACC	-0.0007	0.1476	-1.4259	-0.0002	0.8667
OCI	0.0071	0.0632	-0.3282	0.0000	0.8446
SIZE	12.2814	1.0625	8.3395	12.2466	15.5300
CFO	0.0435	0.1049	-0.4119	0.0415	0.4516
BVMV	1.3279	1.2029	0.0625	1.0101	14.2857
DR	0.4123	0.2079	0.0011	0.3934	1.7086
DIV	0.0229	0.0592	0.0000	0.0000	1.1590

Source: own calculations.

Regarding OCI components, on average, the ratio of OCI to total assets is 0.71%, with a maximum value of 84.46%. The average firm size is about 215.64 (exp(12,2814)) million PLN, and it varies from 4.19 (exp(8,3395)) to 5553.8 (exp(15,5300)) million PLN. All companies in each year use debt. The average cash return on the assets ratio is 4.35%, while the median is slightly lower. The vast majority of firms have generated a positive CFO. The average (median) BVMV is 1.3279 (1.0101). Table 3 reports pairwise correlation coefficients between the variables.

Table 3. Correlation matrix

Specification	DACC	OCI	SIZE	CFO	BVMV	DR	DIV
DACC	1.0000						
OCI	-0.0704*	1.0000					
SIZE	0.0657*	0.1002**	1.0000				
CFO	-0.1117***	-0.0069	-0.0076	1.0000			
BVMV	-0.2654***	0.0114	-0.0734*	-0.1231***	1.0000		
DR	-0.2165***	0.0382	-0.0162	0.0224	0.1155***	1.0000	
DIV	0.0123	-0.0208	0.0463	-0.0053	-0.0637	-0.0443	1.0000

*, **, *** represent statistical significance at the 10%, 5%, and 1% levels

Source: own calculations.

There are significant correlations between DACC and almost all explanatory variables, with the exception of DIV. Taking into account our main interest, the coefficient for DACC versus OCI is negative and statistically significant. This result aligns with our earlier predictions.

To confirm the existence of these correlations, a regression analysis is carried out, the results of which are shown in Table 4.

Table 4. Results of panel least squares regression

Variable	Coefficient	t-Statistic	Prob.
Intercept	-0.1060	-1.8376	0.0667
OCI	-0.1513	-1.9941	0.0466
SIZE	0.0229	4.7173	0.0000
CFO	-0.7459	-16.3443	0.0000
BVMV	-0.0356	-8.6654	0.0000
DR	-0.2307	-9.2989	0.0000
DIV	-0.0281	-0.3495	0.7269
Adjusted R-squared			0.4188
F-statistic			32.8695
Prob(F-statistic)			0.0000

Source: own calculations.

The results from panel least squares regression indicate that a negative relationship exists between the OCI and the use of discretionary accruals. The coefficient on OCI is statistically significant at the 5% level. Thus, the hypothesis we posit in this paper is supported. This finding is consistent with the conjecture that OCI reporting

diminishes the extent of earnings management. A holistic approach of clean surplus accounting in presenting all components of the comprehensive income, including the OCI part, may contribute to diminishing the active management of reported earnings.

With respect to control variables, except DIV, all coefficients are statistically significant and generally consistent with our expectations. The increase of cash return on assets, growth opportunities and the use of debt are negatively associated with the proxy for earnings management we employ, while larger companies are more likely to use such activities when drawing up the income statements.

Conclusions

The process of financial reporting combines the proper use of the accounting system with different management techniques and strategies. Nowadays, in the face of the growing importance of reliable information, this process is particularly important. Some of the most important figures are the ones on the financial profit achieved by the company, or more broadly, about the comprehensive income.

Overall, our empirical results for WSE-listed industrial companies demonstrate the existence of a negative relationship between OCI and the level of earnings management. Companies reporting OCI use less aggressive financial reporting policies, which is revealed in negative link between the value of discretionary accruals, being the proxy for earnings management, and the value of OCI. The correlation coefficients show the negative link between the value of discretionary accruals, being the proxy for earnings management, and the value of OCI.

Based on the empirical results, it can be emphasized that some kind of advantage exists in the presentation of the comprehensive income in the financial statement, which allows, to a certain extent, the inhibition of the effects of managers' intentional influence on the value of the reported earnings. However, the analysis of a limited group of companies representing only one sector does not create a sufficient circumstance for making general sweeping statements. This paper should be treated as an initial contribution to further studies on the processes of financial reporting focused on comprehensive income and its components.

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Wpływ informacji o pozostałym wyniku całościowym na intencjonalne kształtowanie raportowanych wyników finansowych

Niniejszy artykuł prezentuje wpływ raportowania pozostałych wyników całościowych na niwelowanie procesu zarządzania zyskami poprzez zastosowanie uznaniowych rozliczeń międzyokresowych na bazie 83 spółek notowanych na GPW w Warszawie w latach 2009–2016. W opracowaniu posłużono się metodą najmniejszych kwadratów dla danych panelowych z ustalonymi stałymi efektami w postaci roku. Wyniki badań empirycznych wskazują, iż kompleksowe prezentowanie składników wyniku całościowego może mieć znaczące i pozytywne implikacje dla zapobiegania agresywnej księgowości i wspomaga beneficjentów sprawozdań finansowych w bardziej trafnym identyfikowaniu zarządzania wynikami finansowymi.

The Effect of Other Comprehensive Income Reporting on Accruals-based Earnings Management Activities

This study examines the impact of other comprehensive income reporting in mitigating earnings management by using discretionary accruals for a sample of 83 industrial WSE-listed companies over the period of 2009–2016. We apply a panel least square model using year fixed-effects regression. We find that other comprehensive income reporting diminishes the extent of managerial earnings activities. Our findings suggest that a comprehensive income statement may have significant and positive implications for preventing aggressive accounting and helps users of financial statements identify earnings management better.