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DO POLISH ACCOUNTANTS PRODUCE USEFUL FINANCIAL REPORTS?

1. Introduction

The principal role of Accountants is to construct and present a model which would measure the performance of the firm, and help assess its' current financial position. Thus, accountants produce the income statement, the balance sheet, and the statement of cash flows. Collectively known as financial statements, these models are of fundamental importance for Finance, because they allow investors to make rational investment decisions. Thus, high quality financial statements are imperative for smooth functioning of financial markets, and for that reason are subject to government and private sector regulation: for large companies in the European Union it is the International Financial Reporting Standards.

Financial Reporting Standards (IFRS) stipulate that corporate financial statements „provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions."[1] To that end the standards contain a list of assumptions and qualities that a financial statement should follow, as well as detailed regulations for disclosing various kinds of activities, assets and liabilities. The attributes of IFRS are of high quality accounting standards that are presumed to be more investor friendly: they supposedly provide better information for financial decisions than most local Generally Accepted Accounting Principles (GAAP).

Upon the EU accession in 2004, Poland became subject to EC Regulation No. 1606/2002, under which the IFRS became the standard for European corporations from 2005 onward. Since then, Polish corporations listed at the stock exchange are required to prepare their financial statements in accordance with IFRS, and not the Polish Accounting Act. The natural question that arises

1 International Accounting Standards Committee Foundation, International Financial Reporting Standards, Framework, paragraph 12.

is whether the adoption has resulted in higher quality of financial statements which can be measured by examining the alignment of market and book value of equity (so called value relevance).

The transition from local GAAP to IFRS can bring an increase in value relevance, provided the new standard is well implemented and understood by market participants. Before the adoption of IFRS value relevance across Europe varied, but was generally lower than in Anglo-Saxon countries[2], which seems to be an effect of lower timeliness of continental accounting[3]. There is also evidence of value relevance being lower for local GAAP reports than for IFRS reports[4]. In light of this, the adoption of IFRS, often criticized for forcing continental Europe to follow Anglo-Saxon accounting principles, should increase value relevance of earnings. In fact, Jermakowicz et al. (2007) provide evidence of an increase in value relevance after the adoption of IFRS or US GAAP by German DAX-30 companies[5].

It is important to note, that the transition to IFRS is associated with significant changes in accounting numbers. Jaruga et al. identify these changes upon the adoption of IFRS in Poland[6]. The changes occurred in areas where Polish GAAP differed from IFRS: especially valuation of fixed assets and goodwill, financial instruments, share-based payments, business combinations, and financial instruments. In their sample of 79 companies, 51 noted an increase in value of total assets, while there were 25 decreases. The biggest increase was of over 63% and was caused mainly by changes in valuation of fixed assets. As a result of changes in accounting standards most companies in the sample showed an increase in equity of over 10%. Income increased by a similar factor, although in extreme cases it doubled or even tripled.

Such differences in accounting reporting under two systems may be an indication that Polish GAAP did not allow companies to recognize true value of important assets: after the adoption of IFRS the financial reports can give investors more reliable and relevant information. However, the question is whether investors recognize this benefit. If they do, the increased relevance and accounting numbers should be reflected in closer alignment of book and market

2 Dumontier, P., & Raffournier, B.: *Accounting and capital markets: a survey of the European evidence*. „European Accounting Review", 2002, Vol. 11(1), 119-151.

3Ball, R., Kothari, S. P., Robin, A.: *The Effect of International Institutional Factors on Properties of Accounting Earnings.* „Journal of Accounting and Economics", 2000, Vol. 29 (1), 1-51.

4Bartov, E., Goldberg, S., & Kim, M.: *Comparative Value Relevance Among German, U.S., and International Accounting Standards: A German Stock Market Perspective*. „Journal of Accounting, Auditing & Finance", 2005, Vol. 20(2), 95-119.

5 Jermakowicz, E. K., Prather-Kinsey, J., & Wulf, I.: *The Value Relevance of Accounting Income Reported by DAX-30 German Companies*. „Journal of International Financial Management & Accounting", 2007, Vol 18(3), 151-191.

6Jaruga A., Fijałkowska J., Jaruga-Baranowska M., Frendzel M.: *The Impact of IAS/IFRS on Polish Accounting Regulations and their Practical Implementation in Poland*. „Accounting in Europe", 2007, Vol. 4, No. 1, 67- 78.

value of equity. We test this hypothesis with the use of value relevance methodology for Polish companies registered at the Warsaw Stock Exchange.

2. Value relevance of accounting earnings

There is a considerable volume of research showing empirical evidence of a positive association between stock returns and reported earnings: a relationship referred to as value relevance. The research of value relevance dates back to the seminal paper of Ball and Brown[7] who were the first to attempt a value-relevance analysis. Abundant literature on value relevance has emerged since then with most of it conforming to the positive association of stock returns and accounting earnings.

Value relevance studies examine the empirical relations between stock market values and changes in values, in relation to accounting numbers by investigating the correlation between accounting numbers and stock returns. As it has been noted in the text above that financial statements are a cornerstone of rational investment decisions, the claim can be verified by empirical modelling of accounting numbers and stock returns to check the relation between them and the degree to which they are correlated. For reasons of clarity in presenting the value-relevance theory studies, below we categorise the studies in three classes following Watts R.L. and Holthausen R.W (2001) paper[8].

A relative association study refers to the study of association of stock market values and other bottom line measures. For instance this category centres on investigating if the association of earnings calculated under international or foreign accounting standards is more highly associated with stock returns than earnings under local GAAP. These studies usually test for disparities in R^2 of regressions using different bottom line accounting numbers. The accounting number with a greater R^2 is considered to be more value-relevant[9].

Incremental association studies are categorised as the study that examines whether a specified accounting number of concern can aid in revealing the value or the stock returns over lengthy periods given other known variables[10]. Thus, the specified accounting number is considered value relevant when its estimated regression coefficient is significantly different from zero. This could be the incremental association of the fair value of risk management derivatives in a regression of equity market value on a variety of on/off balance sheet items.

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7 Ball, R., Brown, P.: *An Empirical Evaluation of Accounting Income Numbers.* "Journal of Accounting Research", 1968. Vol. 6, Issue 2, pp. 159-178.

8 Watts R.L., Holthausen R.W.: *The Value Relevance Literature for Accounting Standard Setting.* „Journal of Accounting & Economics", 2001. Vol. 31, 3-79.

9 Dhaliwal D., Subramanyam K.R., Trezevant R.: *Is comprehensive income superior to net income as measure of firm performance?* "Journal of Accounting and Economics" 1999 Vol. 26 43-67.

10 Watts R.L., Holthausen R.W.: *The Value Relevance Literature…*, op.cit.

Another category is the marginal information content studies. This category comprises all studies that examine whether a specified accounting number provides additional information to investors[11]. These studies usually use event studies to verify whether the release if accounting numbers is associated with the changes in value or stock returns. Thus, conditional on other information released price reactions are normally considered as evidence of value relevance.

A specification from Ohlson[12] shows that given a dividend valuation model and clean surplus accounting, stock prices can be written as a linear function of earnings as book value of equity. In this case abnormal earnings can be thought of as an attribute to investors' value; and information link to earnings is not required. Amir et al. (1993) use this approach in a relative association study. Although a lot more researchers have used this model as a motivation for specification of their empirical tests, only few use specifications that include both earnings and book value as independent variables, others regress returns on earnings and earnings changes. In many studies, the valuation model is not explicitly specified.

The methodology used in our paper is a relative association study which checks whether the association of earnings numbers calculated under a proposed standard is more highly associated with the stock market values or returns than those calculated under local GAAP. Klimczak thoroughly discusses methodological issues of association studies[13]. Following that discussion we use an empirical model, where stock returns are regressed on earnings yield to book value (or return on equity). Positive influence of IFRS would show as a positive and significant coefficient for IFRS earnings yield.

3. Methodology

Our sample consists of annual financial statement data reported by 68 companies listed at the Warsaw Stock Exchange over the years 2004, 2005 and 2006 obtained from Notoria database. Only companies for which Notoria provided three consecutive reports were included. Banks, insurers and other financial institutions were excluded from the sample, because their financial statements differ from those of other companies. We also removed two largest companies – TP SA and PKN ORLEN – whose size is incomparable to other companies in the sample and which are cross-listed in foreign exchanges, which makes them apparent outliers.

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11 *Ibidem.*

12 Ohlson, J. A., *Earnings, Book Values, and Dividends in Equity Valuation* "Contemporary Accounting Research" 1995 Vol. 11, No. 2, pp. 661-687.

13 Klimczak K.M.: *Testing Value Relevance of Accounting Earnings: Theory and method.* [w:] Górowski I. [red.] „General Accounting Theory: Evolution and Design for Efficiency", WAiP, Warszawa 2008, 361-374.

We use consolidated reports where available (129 out of 304 reports). Upon the adoption of IFRS in 2005 all consolidated reports had to be prepared according to the new standards (whereas this was the case for only one report in 2004, when IFRS was optional). In total 35 out of 68 companies used IFRS in 2005, and 44 in 2006. Table 1 outlines the basic statistics for the sample.

Table 1

Sample descriptive statistics

Variable	Statistic	Non-IFRS	IFRS	Tests	
R	minimum	-0.7948	-0.4925		
[%]	mean	0.8151	0.5496	Difference of means	-0.2655
	maximum	25.0952	3.6405	Statistic	-1.0841
	standard dev.	2.5092	0.8571	P(t)	0.2799
EYBV	minimum	-0.5521	-0.6348		
[%]	mean	0.1381	0.2357	Difference of means	0.0977
	maximum	2.4226	4.0166	Statistic	1.2963
	standard dev.	0.3343	0.6160	P(t)	0.1976
SALES	minimum	4692	9583		
[000 PLN]	mean	400388	814695	Difference of means	414307
	maximum	7149416	12862860	Statistic	1.9290
	standard dev.	781214	1815619	P(t)	0.0566

Source: authors' calculations in R statistics package.

We test for value relevance by regressing stock returns on contemporaneous earnings scaled by book value of equity[14]:

$$R_{it}=a_0+a_1EYBV_{it}+u_{it},$$

where R_{it} is the stock rate of return over the reporting year, $EYBV_{it}$ is the earnings yield to book value, and u_{it} is the residual. This model is then extended to include a dummy variable for adoption of IFRS, which takes value one for all reports prepared in accordance with the new standard, and zero otherwise. We use this dummy to multiply the base variable, $EYBV_{it}$, so that we can detect

14Klimczak K.M.: *Testing Value Relevance… op.cit.*

changes in the slope coefficient of earnings, rather than in the intercept. In order to allow for random time effects, we used two approaches: period dummy variables and an equally weighted stock index for the sample. The latter would allow us to detect any influence the changes in stock market trends have on rates of return. The index variable was insignificant in all regressions and was removed. As a result, the final model takes the following form:

$$R_{it}=b_0+b_1EYBV_{it}+b_2(EYBV_{it}*IFRS_{it})+b_3SALES_{it}+b_4p2005_{it}+b_5p2006_{it}+u_{it},$$

where $IFRS_{it}$ is the dummy variable for firms that adopted the standard, $SALES_{it}$ is a control variable for size, equal to net revenue from sales, and $p2005_{it}$ and $p2006_{it}$ are period dummies for respective years.

4. Results

The model was regressed on the full 2004-2006 sample in order to identify significant correlations. Model fit was low (5%), which is not uncommon for value relevance tests over annual periods (fit increases with an increase in sampling interval)[15]. More importantly, coefficients for two variables were highly significant: earnings yield and earnings yield multiplied by the IFRS dummy. As a result the F-statistic shows high model significance. All other coefficients were not significant (table 2).

Table 2

Regression results

Variable	Estimate	Standard Error	t-value	Pr(>|t|)
Intercept	0.3758	0.2682	1.401	0.1627
EYBV	2.096	0.5394	3.886***	0.0001
EYBV*IFRS	-2.001	0.6316	-3.168**	0.0018
SALES	-2.304e-08	1.078e-07	-0.214	0.8310
p2005	9.967e-02	0.3556	0.280	0.7796
p2006	4.499e-01	0.3550	1.267	0.2066
Adjusted R-squared = 0.05127, F statistic = 3.151 (P = 0.0093)				
Notes: EYBV stands for Earnings Yield to Book Value, SALES is net revenue from sales, p2005 and p2006 are dummy variables for the respective years, t-value significance is denoted *** for P(t)<0.01, ** for P(t)<0.05.				

Source: authors' calculations in R statistics package.

The results indicate, contrary to expectations, that adoption of IFRS does not lead to higher value relevance of earnings. In fact, it causes the earnings coefficient to effectively drop to zero: the base coefficient is 2.096, while the

15Easton, P. D., Harris, T. S., & Ohlson, J. A. (1992). *Aggregate accounting earnings can explain most of security returns*. "Journal of Accounting & Economics", 15(2/3), 119-142.

dummy coefficient is almost equal but negative (-2.001). It is also interesting, that the stock market should so strongly react to increases in book value of equity of non-IFRS companies. Note that a one percentage point increase in earnings yield (which is effectively the same as return on equity) is associated with an increase of the rate of return on company stock of two percentage points. This could be a result of an upward trend in the market: to test this hypothesis we estimated the model again with a market index variable, but the coefficient for the added variable was insignificant.

The negative impact of IFRS adoption could also be a result of other factors which changed from year to year, especially that IFRS was introduced in most companies in 2005. However, the dummy variables for periods (p2005 and p2006) are insignificant, which means there was no change in average rate of return attributable to this periods. For robustness, we checked if using multiplicative, instead of additive period dummies would make a difference: again both coefficients were insignificant, while the EYBV*IFRS variable remained significant and negative. Firm size, measured by net sales, is not a significant factor, although firms that adopted IFRS tended to be larger (see table 1) – mostly because Polish implementation of the regulation requires only consolidated reports to be prepared according to IFRS. However, some companies adopted IFRS even though their reports were not consolidated. Since 18 of the IFRS reports in our sample were non-consolidated, we tried adding a consolidation dummy in the same way the IFRS dummy was used, but found the new variable non-significant. Apparently it is IFRS adoption that matters, and not the consolidation.

Conclusions

Our results indicate that the transition from Polish GAAP to IFRS did not lead to closer alignment of book and market values of equity. Firms that adopt IFRS experience lower correlation between income numbers and return on stock value, which in accounting research is defined as a measure of quality of accounting reports. Our results are contrary to extant research carried out in other European countries, reviewed in the introduction. On the other hand, there is research that suggests there may be country specific concerns in IFRS implementation: a study of IFRS adoption in Spain shows a decrease in the alignment of market and book value of equity after adoption[16]. Further research is required to identify causes of the decline of value relevance. IFRS framework defines quality requirements for financial statements: understandability, reliability, comparability and relevance. Which of these is missing in the case of Poland? Are Polish accountants not able to use the new standard according to quality requirements set by the IFRS framework? Are market participants

16Callao S., Jarne J.I., Lainez J.A.: *Adoption of IFRS in Spain: Effect on the comparability and relevance of financial reporting.* „Journal of International Accounting, Auditing and Taxation", 2007. Vol. 16, 148-178.

suspicious of the new standard? Or are the IFRS accounting earnings not responsive to underlying economic phenomena to which the market value responds?

References

1. Ball, R., Brown, P.: *An Empirical Evaluation of Accounting Income Numbers.* “Journal of Accounting Research”, 1968, Vol. 6, Issue 2, pp. 159-178.
2. Ball, R., Kothari, S. P., Robin, A.: *The Effect of International Institutional Factors on Properties of Accounting Earnings.* „Journal of Accounting and Economics”, 2000, Vol. 29 (1), 1-51.
3. Bartov, E., Goldberg, S., & Kim, M.: *Comparative Value Relevance Among German, U.S., and International Accounting Standards: A German Stock Market Perspective*. „Journal of Accounting, Auditing & Finance”, 2005, Vol. 20(2), 95-119.
4. Callao S., Jarne J.I., Lainez J.A.: *Adoption of IFRS in Spain: Effect on the comparability and relevance of financial reporting.* „Journal of International Accounting, Auditing and Taxation”, 2007. Vol. 16, 148-178.
5. Dhaliwal D., Subramanyam K.R., Trezevant R.: *Is comprehensive income superior to* net *income as measure of firm performance?.* “Journal of Accounting and Economics”, 1999, Vol. 26 43-67.
6. Dumontier, P., & Raffournier, B.: *Accounting and capital markets: a survey of the European evidence*. „European Accounting Review”, 2002, Vol. 11(1), 119-151.
7. Easton, P. D., Harris, T. S., & Ohlson, J. A.: *Aggregate accounting earnings can explain most of security returns*. „Journal of Accounting & Economics”, 1992, Vol. 15(2/3), 119-142.
8. Jaruga A., Fijałkowska J., Jaruga-Baranowska M., Frendzel M.: *The Impact of IAS/ IFRS on Polish Accounting Regulations and their Practical Implementation in Poland*. „Accounting in Europe”, 2007, Vol. 4, No. 1, 67- 78.
9. Jermakowicz, E. K., Prather-Kinsey, J., & Wulf, I.: *The Value Relevance of Accounting Income Reported by DAX-30 German Companies*. „Journal of International Financial Management & Accounting”, 2007, Vol 18(3), 151-191.
10. Klimczak K.M.: *Testing Value Relevance of Accounting Earnings: Theory and method.* [w:] Górowski I. [red.] „General Accounting Theory: Evolution and Design for Efficiency”, WAiP, Warszawa 2008, 361-374.
11. Ohlson, J. A., *Earnings, Book Values, and Dividends in Equity Valuation.* “Contemporary Accounting Research”, 1995, Vol. 11, No. 2, pp. 661-687.
12. Watts R.L., Holthausen R.W.: *The Value Relevance Literature for Accounting Standard Setting.* „Journal of Accounting & Economics” 2001. Vol 31, 3-79

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Czy polscy księgowi przygotowują użyteczne sprawozdania finansowe?
Podsumowanie

W artykule przedstawiono badania ilościowe przeprowadzone na próbie rocznych sprawozdań finansowych polskich spółek giełdowych w latach 2004 do 2006. Celem badania było określenie wpływu wprowadzenia Międzynarodowych Standardów Sprawozdawczości Finansowej (MSSF) na związek pomiędzy stopą zwrotu z akcji, a księgową stopą zwrotu z kapitału własnego. Badania wykazały, że wprowadzenie MSSF przez spółkę ma negatywny wpływ na korelację pomiędzy jej wartością rynkową i księgową.

Do Polish accountants produce useful financial reports?

Summary

This paper investigates the changes in value relevance of accounting earnings after the adoption of International Financial Reporting Standards (IFRS) in Poland in 2005. We use a sample of annual reports of Polish listed companies for three years, from 2004 to 2006, to determine the correlation between stock rates of return and earnings yield per book value. Results show that adoption of IFRS has a significant, negative impact on the relevance of accounting earnings.