

## INTERNATIONAL FINANCIAL REPORTING STANDARDS VS. UKRAINIAN NATIONAL ACCOUNTING STANDARDS: THE COMPARISON OF FINANCIAL RATIOS CASE STUDY

*The purpose of the paper is to determine the differences in financial ratios analysis under International financial reporting standards (IFRS) and Ukrainian national accounting standards. The comparative case study analysis of financial ratios under both standards is performed. The results confirm differences in such ratios as: profitability ratios, market to book value ratio, dividend pay-out ratio (increased under IFRS); assets utilization ratios, price to earnings ratio and price to book value per share ratio (decreased under IFRS).*

**Keywords:** International financial reporting standards (IFRS); financial ratios; financial statement analysis; Ukrainian national accounting standards; comparative case study.

**Background.** Financial statement analysis (FSA) has always been a vital part of financial science and practice. Today it becomes far more important for Ukraine due to the close connections of Ukrainian economy to world markets. The 2008 financial crises showed that it is important to be able to evaluate company's financial performance and activities properly and objectively in order to estimate business risks. The differences in the methodologies of FSA restrict companies and their investors from performing the analysis correctly. The crisis deterred companies' financial positions and the results of their business activities. It increased the demand for the fair and transparent financial statement reporting and analysis methodologies. As the result, in 2011 Ukrainian government adopted a resolution on obligatory disclosure of financial statements (FS) under the International financial reporting standards (IFRS) for publicly traded companies, banks and insurance companies [4]. It aimed to provide more trustful financial data and, consequently, more reliable FSA results. Now Ukraine confronts a unique situation: two different accounting standards are in force and the question of their influence on FSA is in place.

**The purpose of the research.** The research objective is to compare results of financial ratios analysis under IFRS and Ukrainian national accounting standards (P(S)BO) in Ukraine in order to determine whether differences in ratio values exist. The following tasks were established: to study international methodology of evaluating differences in FSA results under different accounting standards; to analyze and summarize the influence of IFRS adoption on FSA results in other countries; to evaluate changes in ratios caused by switch

from P(S)BO to IFRS in case of OJSC Myronivsky Hliboproduct (Ukraine); to provide recommendations and potential outcomes of IFRS implementation on FSA results in Ukraine.

**Analysis of the contemporary sources and publications.** The diversity of FSA has been widely discussed in international literature [3; 5; 6; 7; 8; 9; 12]. Most authors conclude that differences in the FSA are influenced by such factors as: 1) nature of business ownership and financing system, 2) stage of economic development, 3) legal systems and business environment, 3) taxation rules, 5) culture, 6) history, age and size of accountancy profession, 7) language. It is also highlighted in the literature that diversity of FSA results may be caused by the discrepancies in financial statement data due to application of different accounting standards and principles. This topic has become crucial in the time of adoption of IFRS in Europe. It has given a rise to both theoretical and empirical research of impact of such transition on FSA. Despite the fact that Ukraine commenced IFRS adoption couple years ago, its impact on FSA has not been researched. Ukrainian authors primarily concentrate on necessity of such adoption and its macro- and micro-level-outcomes [1; 2].

**Explanation of the basic material.** FSA results are strongly influenced by application of specific accounting standards and principles. That is, if a company discloses FS under different accounting standards, there is a high possibility that the numbers in some similar items in FS will differ. Using both of these items separately in ratio or other type of FSA would lead to distinct results, and, consequently, to different decisions of FS users (investors, creditors, owners, etc.).

Nevertheless, there are some factors that facilitate unification of reporting standards as well as FSA. First of all, it is functioning of various international institutions, such as the United Nations, the International Financial Reporting Council, the European Commission, etc. The second factor is the globalization of capital markets and the need for investors to choose foreign companies to invest based on the results of FSA. Last but not least, more and more countries interact and cooperate on international level [3, p. 107]. These leads to the harmonization – the process aimed at facilitating and enhancing the comparability of FS produced under different accounting standards [12, p. 519]. This facilitates the identification of the differences between accounting standards as well as their comparability and helps to understand how these standards affect financial performance measures. Consequently, IFRS are being presently adopted worldwide to fulfill everything mentioned above.

Many foreign researchers, especially from countries that have just adopted IFRS or that are going to do so in the nearest future, studied the impact of IFRS adoption on FSA and showed evidence of differences in FSA due to different accounting principles.

We have considered examples of such research on the works of the following authors: A-M. Lantto and P. Sahlström (comparison of Finland domestic accounting standards and IFRS) [8, p. 341–361], O. Duangploy and D. Gray (Japanese-GAAP and US-GAAP) [5, p. 225–230], and G. Iatridis (the UK GAAP and IFRS) [7, p. 165–172]. The main aim of these studies was to analyze the differences between financial ratios calculated before and after conversion from domestic accounting standards to IFRS; to test statistical significances of such differences and to provide explanations for them.

The following methodology was used by the authors. First, they tested the null-hypothesis that there are no significant differences between the domestic accounting standards and IFRS. As the second step, a comprehensive database of FS information prepared under both standards was created (both for the same year). The number of companies represented in the works depended on the ability to find appropriate set of FS. For example, A-M. Lantto and P. Sahlström had a sample of 91 firms; G. Iatridis – 241; and due to the limited data access in Japan O. Duangploy and D. Gray used FS of only 11 firms [5, p. 225; 7, p. 165–172; 8, p. 341–361]. The researchers applied various techniques to evaluate the transition to IFRS on financial ratios. For instance, A-M. Lantto and P. Sahlström

prepared the sign test and the Wilcoxon signed-rank test, which were used to determine the existence of the difference before and after the conversion to IFRS. G. Iatridis implemented logistic regression analysis of dummy dependent variable with two values: 1 – for firms reporting IFRS-restated FS and 0 – for the same set of firms reporting accounting figures under the UK GAAP [7, p. 165–172]. The simplest tool – descriptive statistics – was applied by O. Duangploy and D. Gray due to small sample [5, p. 225–230].

As it can be seen after literature analysis, one of the difficulties that might occur is a lack of an appropriate data. In our research, we faced the same problem as O. Duangploy and D. Gray [5] – there were insufficient number of firms to analyze. In order to test IFRS adoption on FSA in Ukraine, we had two possibilities: to choose the data either from companies that are obliged to present FS under IFRS since 2012 or from the ones that conducted a voluntary switch to IFRS. The former were restricted to publicly traded companies (banks and insurance companies involve special type of FSA), only one year of available observation and absence of comparative statements under P(S)BO. That is why our choice fell on early voluntary IFRS adopters. However, there we faced the limitedness on the number of representative firms for conduction of econometric analysis and decided to research an impact of IFRS adoption on FSA in Ukraine in the form of case-study.

For this purpose OJSC Myronivsky Hliboproduct (MHP) was chosen. The company prepares its FS under IFRS since 2008 – the year that it started to trade its shares at London Stock Exchange and was obliged to present its FS under IFRS [10]. What is more, MHP FS under P(S)BO were simultaneously disclosed by State Institution `Stock Market Infrastructure Development Agency of Ukraine` (till mandatory disclosure under IFRS) [11]. The principal business activities of MHP are poultry, grain growing and other agricultural operations (meat processing, cultivation and selling, etc.). We started with comparison of MHP FS items in statement of financial position and statement of comprehensive income under both standards. IFRS and P(S)BO gave almost the same numbers in the balance sheet (table 1); however, IFRS tend to show lower revenue, operating profit and EBITDA amounts, while increasing other earnings items.

Then we conducted ratio analysis under both standards. We reached the following results: almost all liquidity ratios are higher under IFRS, except of accounts receivables turnover. What is more, it is highly expected that cash ratio and



Table 2. Comparison of OJSC Myronivsky Hilboproduct Main Financial Ratios under PSBO and IFRS

Ratio	2008			2009			2010					
	P(S)/BO	IFRS	delta	delta, %	P(S)/BO	IFRS	delta	delta, %	P(S)/BO	IFRS	delta	delta, %
Current ratio	1,460	1,539	0,079	5,40	1,462	1,495	0,033	2,28	2,766	2,966	0,200	7,22
Quick ratio	0,809	0,787	-0,023	-2,80	0,532	0,545	0,012	2,28	1,368	1,470	0,101	7,41
Cash ratio	0,214	0,246	0,032	15,16	0,076	0,078	0,002	2,28	0,139	0,162	0,023	16,35
Accounts receivable turnover	- <sup>b</sup>	-	-	-	19,775	18,806	-0,969	-4,90	20,012	19,424	-0,588	-2,94
Accounts payable turnover	-	-	-	-	7,735	10,390	2,655	34,33	10,689	14,811	4,123	38,57
Debt ratio	0,640	0,626	-0,014	-2,24	0,602	0,566	-0,036	-6,02	0,586	0,574	-0,012	-2,06
Equity to total assets	0,360	0,374	0,014	3,99	0,398	0,434	0,036	9,10	0,414	0,426	0,012	2,91
Total debt to equity	1,777	1,670	-0,106	-5,99	1,511	1,302	-0,209	-13,86	1,416	1,348	-0,068	-4,83
Long-term debt to equity	1,043	1,037	-0,006	-0,58	0,861	0,724	-0,137	-15,92	1,017	0,986	-0,031	-3,02
Times interest earned	0,964	0,996	0,032	3,29	3,938	3,946	0,008	0,21	4,087	4,241	0,154	3,78
Return on assets (NI)	0,27	- <sup>a</sup>	-	-	14,10	14,77	0,007	4,74	15,07	15,87	0,008	5,32
Return on assets (EBIT)	3,54	3,81	0,003	7,62	19,08	19,28	0,002	1,07	19,77	19,60	-0,002	-0,87
Return on equity	0,74	-	-	-	36,99	36,18	-0,008	-2,19	37,00	36,96	0,000	-0,12
Earnings per share	0,1781	-	-	-	10,4168	10,8009	0,384	3,69	15,0281	15,9080	0,880	5,85
Gross profit margin	33,25	29,58	-0,037	-11,03	33,02	34,75	0,017	5,24	30,05	30,99	0,009	3,13
Operating profit margin	37,16	30,33	-0,068	-18,38	29,33	30,66	0,013	4,52	26,49	27,20	0,007	2,68
Net income (Profit) margin	0,47	0,65	0,002	38,77	21,37	22,50	0,011	5,28	22,02	22,82	0,008	3,63
Fixed assets turnover	0,937	0,936	-0,001	-0,06	1,151	1,087	-0,065	-5,60	1,247	1,200	-0,046	-3,71
Total assets turnover	0,575	0,594	0,019	3,32	0,712	0,684	-0,028	-3,93	0,718	0,693	-0,025	-3,43
Current assets turnover	1,490	1,627	0,137	9,19	1,864	1,844	-0,020	-1,09	1,692	1,640	-0,051	-3,04
Price to earnings ratio	308,555	-	-	-	4,825	4,653	-0,172	-3,56	7,128	6,734	-0,394	-5,53
Earnings yield	0,003	-	-	-	0,207	0,215	0,008	3,69	0,140	0,148	0,008	5,85
Price to book ratio	0,965	0,960	-0,006	-0,58	2,440	2,218	-0,222	-9,10	2,839	2,751	-0,088	-3,09
Book value per share, \$	3,107	3,126	0,018	0,59	4,057	4,463	0,406	10,01	6,023	6,215	0,192	3,19

The calculations could not be performed (1) due to absence of IFRS financial statements in earlier periods or (2) due to losses in 2008 under IFRS

volatile throughout the years. Due to inconsistency in expected and observed results we assume that some further analysis of IFRS adoption should be made based on the wider sample of Ukrainian companies.

Foreign researchers also state that capital structure and solvency ratios showing debt amounts (e.g. debt ratio or total debt to equity ratios increase) under IFRS, while the ones for equity such as equity to total assets decrease. MHP ratios contradict it: debt ratios decreased under IFRS, while equity ratios increased. For analysts it is important to remember that companies under IFRS are able to capitalize some amounts of interest, so it may decrease debt ratio. On the other hand, retained earnings generally are higher under IFRS though increasing equity ratios. So the results of these types of ratios may be volatile due to the company's accounting policies and its managers' decisions.

Furthermore, MHP exhibited higher earnings per share under IFRS, similar to the companies examined in the foreign literature. Return on invested capital ratios were not a case for research in earlier works, providing no benchmark. Overall, MHP return on invested capital ratios are higher under IFRS. Nevertheless, it is hard to predict changes from IFRS adoption for Ukrainian companies, because both numerator and denominator of these ratios are highly influenced by changes in accounting principles.

After conversion to IFRS the profitability ratios in other countries increased, while asset utilization ratios tended to decrease. Except for one year, MHP showed higher profitability and lower asset utilization ratios under IFRS. As the result, we can conclude that profitability ratios

are highly expected to grow, while assets utilization ratios – to decrease.

The fair value orientation of IFRS has led to a higher market to book value ratio under IFRS. Ratios involving dividends are higher due to the higher profitability that is reported under IFRS enabling firms to distribute higher dividends. Price to earnings decrease because of higher profit in the denominator. Our MHP results confirm these general assumptions. Consequently, we could assume that under IFRS market to book, dividend pay-out and other similar ratios are going to increase, and price to earnings and price to book ratio are expected to decrease after IFRS adoption in Ukraine.

**Conclusions and perspectives for the future research.** Our case study of MHP financial ratio analysis under IFRS and P(S)BO confirmed the

general assumption that ratio values may vary due to implementation of different accounting standards. As the result, simultaneous usage of IFRS and P(S)BO in Ukraine can lead to distortion of FSA and incomparability of its results from company to company. Although our results are limited by the usage of only one company for research, some of the IFRS adoption trends that took place in other countries are confirmed by our case study. They are: all profitability ratios (gross profit, operating profit and net income margins), market to book value ratio, dividend pay-out ratio and other similar ratios are likely to grow; while assets utilization ratios, price to earnings and price to book value per share ratios are expected to decrease under IFRS usage in Ukraine. All other ratios are subject to further analysis.

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## МІЖНАРОДНІ СТАНДАРТИ ФІНАНСОВОЇ ЗВІТНОСТІ ТА НАЦІОНАЛЬНІ СТАНДАРТИ (ПОЛОЖЕННЯ) БУХГАЛТЕРСЬКОГО ОБЛІКУ УКРАЇНИ: ПОРІВНЯННЯ ФІНАНСОВИХ КОЕФІЦІЄНТІВ

*Метою цієї статті є визначення відмінностей у фінансових показниках, обчислених за даними Міжнародних стандартів фінансової звітності та національних стандартів (положень) бухгалтерського обліку. Проведено порівняльний аналіз фінансових показників за обома стандартами. Результати свідчать про розбіжність у таких фінансових коефіцієнтах, як прибутковість, ринкова та балансова вартість, виплата дивідендів (зростають за умови використання МСФЗ), використання основних засобів, ціна-прибуток та ціна-балансова вартість на акцію (знижуються за МСФЗ).*

**Ключові слова:** міжнародні стандарти фінансової звітності (МСФЗ), фінансові показники, Україна, порівняльний аналіз.

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