A DYNAMIC COMPARATIVE ANALYSIS OF NET INCOME AND OTHER COMPREHENSIVE INCOME ON ROMANIAN PHARMACEUTICAL LISTED COMPANIES

Natalia-Ioana (Pantelimon) FOLTEAN[1]**,** ORCID: 0000-0002-1798-5155
Victoria BOGDAN[2]**,** ORCID: 0000-0003-2315-0071

Abstract: Issues of net income comparatively to comprehensive income relevance are still similar to "black boxes" even though it has been the subject of more and more studies on financial reporting relevance and assessment of overall financial performance. We aim to add value to the existing knowledge by analyzing comparatively the reported information on net income and comprehensive income for several Romanian pharmaceutical listed companies. Hence, the current research aimed to identify the differences between the reported net income and comprehensive income, but also to examine the nature of other comprehensive income components of the financial statements prepared under IFRS. Data collected covered the years 2018, 2019 and 2020. Results of the content analysis showed that the reported gain or loss for the revaluation of tangible fixed assets may influence the performance of companies measured by profitability metrics.

Introduction

Accounting information is a fundamental tool on which users make business decisions. In order to make justified and appropriate decisions, accounting information must have certain specific features. One of the most important features is the relevance of financial information, so that users can make the best decisions. Information is delivered to stakeholders through the channel of financial statements, which are prepared and published based on compliance with an accounting and financial reporting framework. Romanian private companies that exceed certain size criteria (turnover, total assets and average number of employees) provided in the accounting regulations (Order 881/2012, Order 2844/2016, Order 3456/2018) are required to prepare annual financial statements in compliance with International Financial Reporting Standards (IFRS) starting with 2012. Thus, these companies must prepare and disclose a complete set of financial statements as required by revised IAS 1. Consequently, private listed entities must present a statement of comprehensive income which must include both the result of the financial period and information on other elements of the result that have role of adjusting it and present the comprehensive economic income. The comprehensive income statement of the overall result concerns both the current investors, as well as the potential investors in order to make business decisions. Other comprehensive income includes all the remaining income or expenses as we found in the revised Conceptual framework for financial reporting set up by IASB (2018). Therefore, the accumulated other comprehensive income related to an asset or liability is calculated as a difference between the

carrying amount of the asset or liability in the statement of financial position, and the carrying amount that would have been calculated applying the measurements parameters for the preparation of the statement of profit or loss.

In this paper we followed a comparative content analysis of the net result and comprehensive income for the selected pharmaceuticals companies in the period 2018 – 2020, considering the current worldwide situation, caused by the COVID-19 pandemic, which generates an impact on financial reporting of all economic entities. In a business environment marked by risks, uncertainties and vulnerabilities such as the current one, we considered it of major interest to examine the value relevance of financial information on comprehensive income presented in the annual financial statements. In carrying out our scientific approach we formulated the following research questions to which we sought to formulate answers:

RQ1: *To what extent does the information reported on net income differs from that reported by comprehensive income and whether performance is likely to be affected ?*

RQ2: *Which are the key elements that adjust the net income in comprehensive income for the investigated period?*

Theoretical background and literature review

The income statement is the primary source of information for interpreting an entity's financial performance for a given reporting period. This accounting modeling tool presents and describes the formation of the result of the financial year and most users of financial statements in their analysis of the financial performance of companies choose the result as key indicator or main barometer of financial health (Lepădatu et al., 2020). However, a real-time understanding of an entity's financial performance for the reporting period requires an effective analysis of all recognized income and expenses, including income and expenses disclosed in other comprehensive income, as well as an analysis of other information included in the financial statements (IASB, 2018).

Financial information can be considered relevant if it is able to make a difference in the users decision making process. On daily basis, decision makers, even without being fully aware of the differentiation process, select the information according to their relevance for business processes. As mentioned in the theoretical conceptual framework of the IASB (2018), financial information is able to make a difference in decisions, so it is considered relevant if it has predictive value, confirmatory value or both. The interdependence between the predictive value and the confirmatory value of financial information is often used in annual financial analyzes. Thus, the information on comprehensive income for the current year, which can be used as a basis for estimating the overall result in the following years, can be compared with the forecasts on comprehensive income for the current year that were made in previous years. The results of these comparative analyzes can help a user to review, adjust, and improve the processes that underpinned previous predictions. In the followings we will briefly highlight the opinions of some authors regarding the relevance of comprehensive income and net result, as well as the impact of COVID-19 crisis on financial reporting and the value relevance of information disclosed by private companies. In the view of (Rajakarier et al., 2020) the steps taken in response to the spread of COVID-19 have led to a considerable disruption of economic transactions and a substantial increase in economic uncertainty, with more volatile asset prices and exchange rates, as well as a significant decrease in long-term interest rates in developed and emerging economies. (Park et al., 2020) believes that this COVID-19 pandemic has dealt a devastating blow to the global economy. This non-financial crisis has led to a sharp slowdown in economic activity and a series of turmoil in global financial markets, which have caught some companies in debt at the time of crisis, leading us to a defining moment in our world history. The response of IFAC and other international professional organizations and bodies came quickly, the crisis of the COVID-19 pandemic and its economic effects mean that investors and other stakeholders need high-quality financial information

more than ever. As a result, regulators, IFAC member organizations, accounting firms and other actors have provided advice and guidance on the accounting and financial reporting requirements that will need to be considered in addressing the financial effects of COVID-19 in preparing financial statements.

In the documentation process, accessing the WOS database, we obtained 264 results that show the number of publications that examined the relevance of financial information disclosed in comprehensive income statement, or other information related to comprehensive income, in the period 2018-2021. Within these studies, 76% represent studies published in the field of business and finance, 33% are in the economic field, 15% in the field of management, 12% are publications in business journals and the rest are studies published in various journals. As can be seen in Figure 1, from year to year the number of scientific publications on this topic in prestigious journals has increased significantly proving that the relevance of comprehensive income information and the net result is a topic of great interest to researchers.
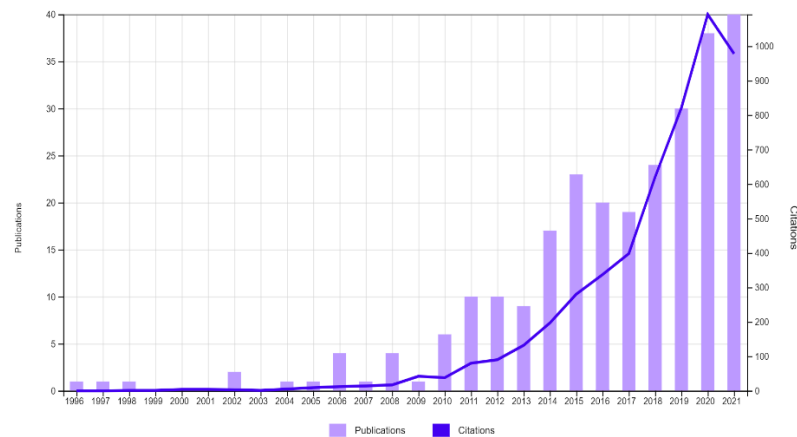

Fig. no. 1. Number of publications on comprehensive income relevance in Wos database

In the following we have stopped on several studies that we considered that obtained relevant results to our approach and we have briefly examined the contributions of these scientific investigations. In this respect, we found that (Müller et al., 2011) consider that comprehensive income is not the optimal indicator to assess performance, because of the other elements of global income that are perceived as a "black box" comprising complex elements, generated by the use of different accounting standards, while (Pășcan, 2014) argued that there are no statistically significant differences between the net result and the comprehensive income reported by Romanian listed companies. The results presented by (Pășcan, 2014) also showed that the net result is more strongly associated with stocks price compared to the overall result, this idea generates the fact that the comprehensive income is not more relevant to the value of stocks than the net result. In terms of other comprehensive income items, (Mironiuc and Huian, 2016) admit that these elements can be taken into account by the investors of companies in support of their decision to maximize the profitability of shares.

(Huang et al., 2021) showed that net income information is less relevant in the single-statement approach compared to the two-statement approach, while the relevance of other comprehensive income information is marginally improved. They also found that dynamics of the net income and other comprensive income information relevance in the single-statement approach is determined by the dynamics of operating income. Findings of (Aqel, 2021) revealed that the book value of equity, net income and comprehensive income for the examined Palestinian listed companies are positively and significantly associated to stock prices. (Aqel , 2021) observed that revaluation reserve and foreign currency translation adjustments are in positive but insignificant correlation with stock prices, whilst gains or losses generated by financial instruments through other comprehensive income has negative on stock prices. (Djaballah and Fortin, 2021) in their study

conducted on the Canadian market find no evidence that comprehensive income is more value relevant than net income for stock prices, yet they argued that several other comprehensive items are incrementally value relevant beyond net income. The correlations between the components of other comprehensive income and returns on shares are affected when data during the financial crisis are excluded, some correlations even changing after the adoption of IFRS. Hence, in opnion of (Djaballah and Fortin, 2021) the results are usefull both for Canadian accounting regulators and stakeholders of financial statements in decision-making process related to Canadian market. From the brief analysis of the literature we can conclude that empirical investigations on the relevance of comprehensive income compared to the relevance of the net result are becoming increasingly useful for investors, managers, standards setters and other regulators, and also professional bodies.

Research methodology and design

The research methodology is performed through a set of descriptive methods and techniques such as induction, deduction and analysis of quantitative and qualitative data. The general method used in this paper is the analysis and synthesis of quantitative data and the content analysis. The research instrument or tool is the case study. Also, considering the health crisis generated by the COVID-19, the dynamic comparative study was used in order to observe its impact on the overall result of the examined entities. For these reasons we are of the opinion that our approach also has qualitative characteristics. In search of answers to the research questions we chosed a case study to examine the dynamic evolution of the elements of comprehensive income and the net result and to understand how to construct a relevance analysis of these information in dynamics.

The comprehensive income is a financial statement of the reversal of an entity's income and expenses, which have been recognized in the profit or loss for the analysed financial year, as well as those recognized in equity, providing information on the overall performance of the company. The statement of comprehensive income is comprised of all items in profit or loss for the financial year and other comprehensive income. The comprehensive income in addition to net income includes a number of other net items, such as: changes in the revaluation surplus of tangible assets, actuarial gains / losses on pension and benefit plans, gains / losses on the conversion of operations abroad, revaluation gains / losses financial assets for disposal, gains / losses from hedging, gains / losses from revaluation of real estate investments, the part of the overall result that belongs to the associated entities (Pop, 2020). In this paper we also analyzed the return on equity (ROE) ratio, this indicator being of particular interest to investors, through it having the opportunity to assess whether the investment is profitable or not. According to the literature, ROE expresses the entity's ability to generate profit through the use of its own capital. Also, we were interested in the profit margin rate as an indicator of profitability, highlighting how profitable the activity of an enterprise is. For the case study we chose companies from the pharmaceutical industry, listed on Bucharest Stock Exchange (BSE) and the investigated period was 2018-2020. The selection of pharmaceutical companies listed on BSE was made according to the trading of shares regardless of the classification of companies on BSE (Dănescu and Popa, 2020) (BSE) and the level of turnover in recent years. We eliminated Medlife company because it mainly obtains revenues from medical services and thus the analysed sample was composed of the following companies: Antibiotice, Biofarm, Farmaceutica Remedia, Ropharma and Zentiva.

Data collection

The study was conducted on a sample of five Romanian private listed companies from pharmaceuticals industry. Farmaceutica Remedia and Ropharma companies are from the trade sector, and Antibiotice, Biofarm and Zentiva are from the manufacturing industry. To analyze the value relevance of accounting information related to net result and comprehensive income we used the data available for the above mentioned companies on the website of BSE and the websites of the entities. Data was collected from the statement of income, statement of comprehensive income and

the explanatory notes included in the financial statements and the annual reports of the pharmaceutical companies for each financial year, 2018, 2019 and 2020. Table 1 summarizes the data collected for the selected companies and the period investigated.

Table no.1. Summary of data collected

FARMACEUTICA REMEDIA S.A.			
Indicatori / An	**2018**	**2019**	**2020**
Net income	3.032.873	2.441.116	37.771.574
Comprehensive income	3.032.873	2.441.116	37.771.574
Profit margin rate	0,65%	0,55%	8,56%
Return on equity - ROE	0,07%	0,05%	0,47%
ROPHARMA S.A.			
Net income	7.828.958	6.418.647	6.766.140
Comprehensive income	10.055.416	9.953.251	14.952.934
Profit margin rate	1,76%	1,16%	1,37%
Return on equity - ROE	0,05%	0,04%	0,04%
ANTIBIOTICE S.A.			
Net income	34.303.788	30.823.278	26.388.049
Comprehensive income	73.675.244	30.823.278	121.075.545
Profit margin rate	9,39%	7,89%	7,74%
Return on equity - ROE	0,07%	0,06%	0,46%
BIOFARM S.A.			
Net income	38.424.940	50.881.819	54.264.580
Comprehensive income	38.919.110	50.881.819	54.264.580
Profit margin rate	20,61%	25,24%	24,70%
Return on equity - ROE	17,05%	19,78%	18,61%
ZENTIVA S.A.			
Net income	262.620.976	43.750.672	65.635.440
Comprehensive income	262.620.976	43.750.672	83.364.157
Profit margin rate	56,92%	7,83%	11,76%
Return on equity - ROE	0,42%	0,06%	0,08%

Source: author's processing

Descriptive statistics

The results of descriptive statistics revealed that over the analysed period in the case of Farmaceutica Remedia (RMAH), Antibiotice (ATB) and Zentiva (SCD) companies significant changes in the overall result were reported. Thus, as we can see in the charts bellow (Figure 2), in the case of Farmaceutica Remedia and Zentiva companies, the evolution of the comprehensive income and the net income is the same, in the case of Antibiotice significant differences between net income and comprehensive income are reported for 2018 and 2020. We sought to find out the causes of these differences in the financial statements of the company.
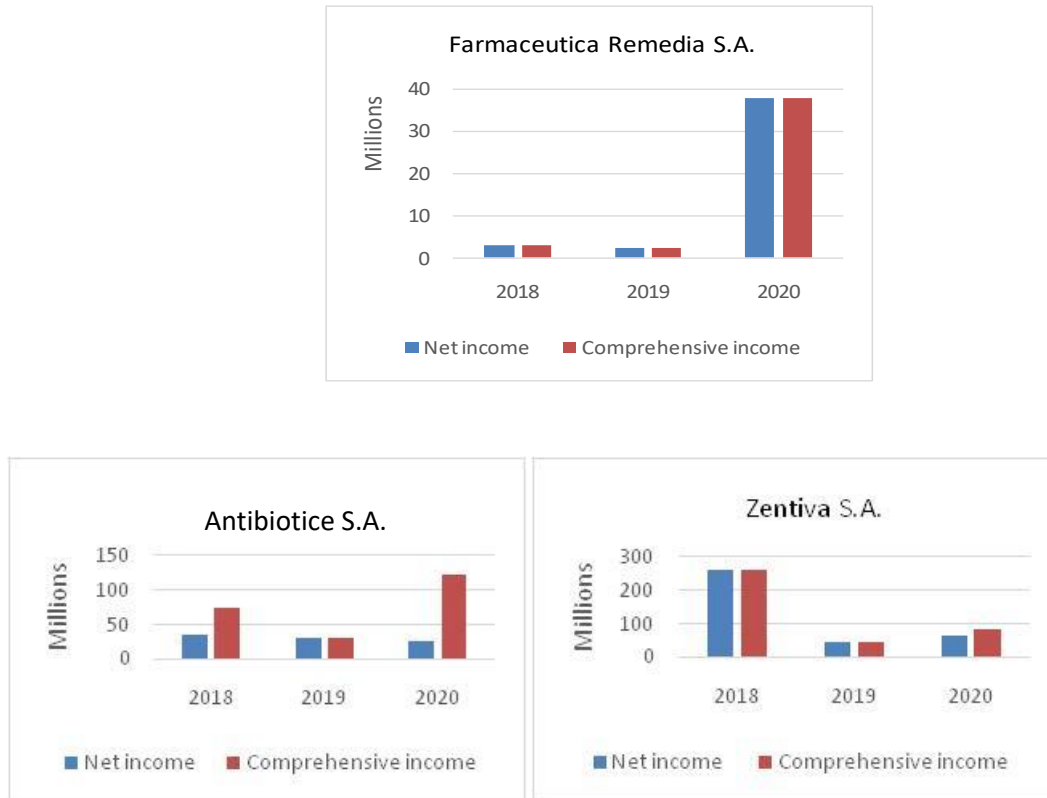
Fig. no. 2. Evolution of net income and comprehensive income
(ATB, RMAH, SCD) during the period

Analyzing the content of statement of comprehensive income we found that the differences come from other items of comprehensive income which contain gains from revaluation of tangible fixed assets and profit tax on other comprehensive income items. In the case of Ropharma (RPH) company the difference between the reported value of comprehensive income indicated a a slight increase from 2019 to 2020 compared to the increase in net income (see Figure 3).
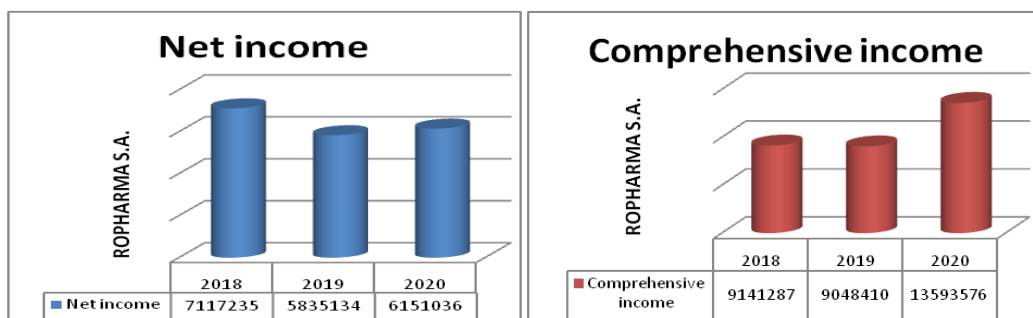

Fig. no. 3. Evolution of net income and comprehensive income (RPH) during the period

The net income reported by Biofarm (BIO) differs from the comprehensive income, for the financial year 2018 through the revaluation of property, plant and equipment component, but at the level of financial reports for 2019 and 2020 there are no differences (see figure 4).
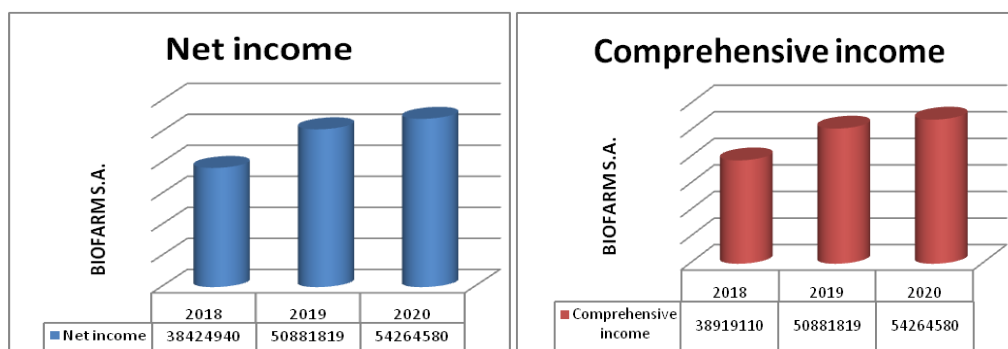
Fig. no. 4. Evolution of net income and comprehensive income (BIO) during the period

Discussion of results

Considering the descriptive statistics and the content analysis in the following we point out some relevant aspects. Antibiotice in 2019 recorded an increase in sales revenues by 7%, but due to increased expenses with staff, depreciation and impairment of assets, as well as other operating expenses, the net income was lower than in the previous year. In the first quarter of 2020, the export of medicines decreased drastically compared to the previous period, due to the fact that the implications of the COVID-19 pandemic appeared, such as: the adoption of the emergency regulations regarding the prohibition of exports of medicines manufactured in Romania, increasing transport prices, and last but not least, delays in the supply of raw materials, however the company registered an upward trend in revenues by September 2020. Regarding the profit margin rate, we noted that it is a stable one because it is in the range of 1% -15%, as follows: 9.39% in 2018, 7.89% in 2019 and 7.74% in 2020. Biofarm Company in 2019 registered an ascending trend regarding the net income with a percentage of 31% compared to 2018. The financial year 2020 ended with a 7% increase in net profit compared to the previous year. We observed that given the health crisis, this company has not had a significant increase of the net income in 2020 due to the fact that the business activities are mainly focused on food supplements. The profit margin rate indicates a volatile dynamics because the percentage of 15% is exceeded, 20.61% in 2018, 25.24% in 2019 and 24.70% in 2020.

In the case of Zentiva Company, although the turnover increased in 2019 compared to 2018, the net income and the comprehensive income are lower due to the records of the indicator other operating income and expenses, which are the consequence of the separation from Sanofi Company. The year 2020 ranks on an upward trend compared to 2019 in terms of net income, but by 50%, the reported turnover was slightly lower than the previous year. The decrease in turnover can be explained by the fact that the product mix has changed by significantly decreasing the share of products for hospitals and chronic diseases, an aspect that is based on the health crisis generated by COVID-19. We observe that the profit margin rate is oscillating, based mainly on a volatile dynamics, regarding the three years analyzed, as follows: 56.92% in 2018, 7.83% in 2019 and 11.76% in 2020. Farmaceutica Remedia SA in 2019 recorded an increase in sales on average 5.4%. In 2020, this company had a spectacular evolution due to the sale of licenses, and last but not least, the allocation of goods mainly by distribution sectors and in hospital units. Compared to the other investigated pharmaceuticals companies, the entity has not reported preliminary data compared to the previous years. From the perspective of COVID-19 influence, we can see that it had a substantial positive impact, according to the financial statement prepared at the end of 2020. The profit margin rate was not spectacular, in the first two years it was below 1%, showing an unstable situation, but in the last year analyzed it increased considerably, 0.65% in 2018, 0.55% in 2019 and 8.56% in 2020. In the case of Ropharma, the net sales in 2019 increased by 24% compared to 2018, but, due to the major investments made, the net income was lower than in the previous year. In

2020, net sales decreased by 10.7% compared to the previous year, but instead, revenues from affiliates portfolio increased by 36%. Compared to other companies, the effects of the COVID-19 were felt in a negative sense. The profit margin rate tends towards instability, even if it maintains a linear trend, as we observe: 0.046% (2018), 0.036% (2019), 0.035% (2020). Regarding the return on equity (ROE) indicator, we noted that in the case of companies Antibiotice (ATB), Farmaceutica Remedia (RMAH), it shows an upward trend (see Figure 5).
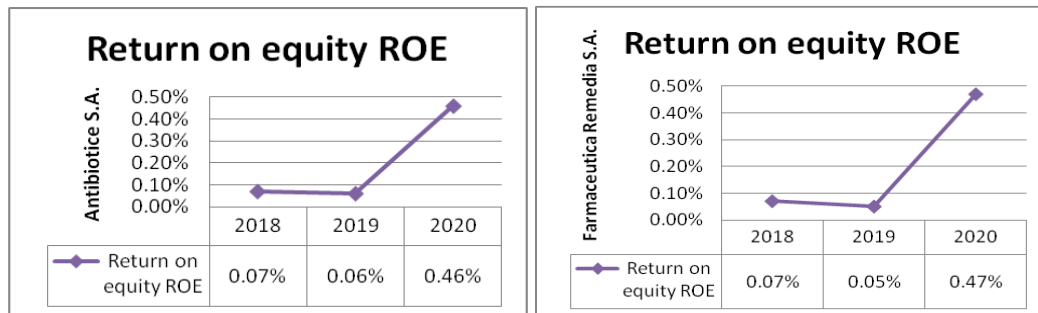

Return on equity ROE (Antibiotice S.A.)	2018	2019	2020
Return on equity ROE	0.07%	0.06%	0.46%

Return on equity ROE (Farmaceutica Remedia S.A.)	2018	2019	2020
Return on equity ROE	0.07%	0.05%	0.47%

Fig. no. 5. The evolution of ROE for ATB and RMAH during the analysed period

Conclusion, limits and future research

The Romanian pharmaceutical market had an increase of 14.7% in 2019 (products with and without a prescription), compared to 2018, according to the market research company IQVIA analysis, the market study being conducted in December 2019. At the same time, the consumption of generic drugs in Romania had an upward trend of 18.6%. According to the same research source, in 2020, the Romanian market of products with and without prescription increased by 3% compared to the previous year, and the market of generic drugs increased by 3.1%. Examining these results we can say that the COVID-19 pandemic had a considerable contribution. Through the analysis performed in this paper, we observe from examined financial statements, the fact that those reported for the financial year 2020 are affected by the COVID-19 due to several factors. One of the factors is the change in the structure of drug use, for instance antivirals, another factor is the increase in demand for drugs used in hospitals for the treatment of COVID-19 and, last but not least, the decrease in other categories required in pharmacies, such as nutritional supplements.

Compared to the study conducted in this paper, we can say that the information disclosed through other comprehensive income is relevant to users because in a dynamic analysis from one financial year to another, the emergence of new elements influences the value of comprehensive income and therefore the interpretations of financial performance measured in terms of profitability, also. Thus, the results of the content analysis showed that other elements of comprehensive income, as the reported gain or loss for the revaluation of fixed assets may influence the overall analysis of companies' financial performance, measured by profitability metrics. From this perspective we consider that further research would be necessary to test the correlations between the elements of the comprehensive income and the return on equity indicator, between comprehensive income and the return on assets and the link or association between comprehensive income and market price of stocks. The main limits of the study are found in the sample selection, data collected and research tools. Although the results of the performed analysis are in line with those from the investigated literature, for a proper measurement of the value relevance influence of other comprehensive income items on the financial and global performance of companies, additional in-depth approaches are needed.

References

1. Aqel, S., 2021, *Does Comprehensive Income Provide Value Relevant Information?*, Montenegrin Journal of Economics, Vol. 17, No. 1, pp. 185-195., DOI: 10.14254/1800-5845/2021.17-1.14.

2. Dănescu, T., Popa, M.A., 2020, „*Public health and corporate social responsibility: exploratory study on pharmaceutical companies in an emerging market*", Global Health 16, 117, https://doi.org/10.1186/s12992-020-00646-4

3. Djaballah, A., Fortin, A., 2020, *Value Relevance of Comprehensive Income for the Canadian Market*, Accounting Perspectives, Volume 20, Issue 1, Page 49-77, DOI 10.1111/1911-3838.12235.

4. Huang L., Cussatt M., Wong-On-Wing B., 2021, *The value relevance of comprehensive income under alternative presentation formats permitted by ASU 2011-05*, Review of Quantitative Finance and Accounting, 57:1123–1153, https://doi.org/10.1007/s11156-021-00972-7.

5. Lepădatu, G. V., Tilea, D. M., Lepădatu, A. A., Lepădatu, I. A., 2020, *Raportarea financiară în secolul XXI*, Ediția a VI-a, București, Editura Pro Universitaria.

6. Mironiuc M., Huian M.C., 2016, „*Study of the congruence between accounting numbers and stock market variables through comprehensive income: Empirical evidence for Romania companies quoted on the regulated market*", Accounting and Management Information Systems, Vol. 15, No. 3, pp. 498-521.

7. Müller, V. O., Matiş, D. & Ienciu, I.A., 2011, „*Analiza reacţiilor internaţionale la noua abordare propusă de IASB/FASB cu privire la prezentarea performanţelor unei entităţi*", Revista Audit Financiar, no 7: 33-42.

8. Park J. M., Lee H. Y., Park S. H., Han I., 2020 „*Value Relevance of Accounts Receivable Factoring and Its Impact on Financing Strategy under the K-IFRS after COVID-19 from the Perspective of Accounting Big Data*", Sustainability 2020, 12, 10287, doi: 10.3390/su122410287.

9. Pășcan I.D., 2014 „*Does comprehensive income tell us more about an entity`s performance compared to net income? Study on Romanian listed companies*", Procedia Economics and Finance 15 (2014) 1077 – 1082.

10. Pop, Ioana, 2020, „*Comparing the Impact of the Net income versus the Comprehensive Income Over the Share Price for Companies Listed on the Bucharest Stock Exchange*", Studies in Business & Economics, December, Vol. 15, Issue 3, pp. 88-104.

11. Rajakarier S., Joseph R., Alahakoon R., 2020 „*COVID19 Financial Reporting Implications. Interim Reporting Adjusting or Non Adjusting Event*", KPMG in Sri Lanka, www.home.kpmg/lk.

12. Conceptual Framework for Financial Reporting, International Accounting Standards, September 2010, revised March 2018.

13. Bucharest Stock Exchange: https://www.bvb.ro/forcompanies/mainmarket/issuingshares#l3

14. https://corporate.remedia.ro/

15. https://www.zentiva.ro/investors/financial-reports

16. https://www.antibiotice.ro/investitori-php/financial-information/

17. https://www.bvb.ro/

18. https://www.ifac.org/knowledge-gateway/supporting-international-standards/discussion/financial-reporting-implications-covid-19

19. https://static.anaf.ro/static/10/Anaf/legislatie/OMFP_881_2012.pdf (accessed on 08 October 2021)

20. Order of the Minister of Public Finance no. 2844/2016 for the Approval of Accounting Regulations in Accordance with International Financial Standards Reporting, Bucharest.

Available online: https://static.anaf.ro/static/10/Anaf/legislatie/OMFP_2844_2016.pdf (accessed on 15 October 2021)

21. Order of the Minister of Public Finance no. 3456/2018 for Amending and Supplementing Accounting Regulations, Bucharest. Available online: https://static.anaf.ro/static/10/Anaf/legislatie/OMFP_3456_2018.pdf (accessed on 08 October 2021)