Central European Review of Economic Issues
EKONOMICKÁ REVUE

Is total comprehensive income or net income better for the evaluation of companies' financial performance?

Patrizia GAZZOLA[a*], Stefano AMELIO[b]

[a] *Department of Economics, Faculty of Economics, University of Insubria, Via Montegeneroso 71, Varese, Italy.*
[b] *Department of Management, Economics and Quantitative Methods, Faculty of Economics and Business Administration, University of Bergamo, Via Moroni 255, Bergamo, Italy.*

Abstract

The aim of the paper is to compare the utility of the net income and the total comprehensive income for the evaluation of goodness in connection with companies' investments. For the research, we use the data of the consolidated financial statements for 2010, 2011 and 2012 published online by companies listed on the Prime Market of the Czech Republic Stock Exchange. In the last part of the work, we show the results of empirical research on the income statement of the Czech companies, which have adopted IAS/IFRS principles. The results show that the Czech companies' financial statements have no propensity to separate the income statement section into two statements rather than integrating it into a single one, while the reclassification of the income statements privileges the reclassification by nature. The results show that the total comprehensive income possesses informative content and gives further information for the evaluation of financial performance.

Keywords

IAS/IFRS, net income, other comprehensive income, statement of comprehensive income, total comprehensive income.

JEL Classification: L25, M14

* patrizia.gazzola@uninsubria.it (corresponding author)

ER-CEREI, Volume 17: 39–51 (2014).
ISSN 1212-3951 (Print), 1805-9481 (Online)
doi: 10.7327/cerei.2014.03.04

Is total comprehensive income or net income better for the evaluation of companies' financial performance?

Patrizia GAZZOLA, Stefano AMELIO

1. Introduction

Traditionally, net income was the key performance measure of a business. Over time, however, accounting standard setters came to believe that net income by itself was an insufficient, and possibly even useless, measure of financial performance. The International Accounting Standards Board's (IASB) decision to require the publication of comprehensive income has fuelled the long-time debate regarding the concept of income.

In this research, the utility of the net income and the total comprehensive income reported under International Accounting Standards/International Financial Reporting Standards (IASs/IFRSs) financial statements is compared (Sucher and Bychkova, 2001). Performance measurement has always been a key attribute of accounting. Income is one of the key performance measures. Total comprehensive income represents a key measure of the overall company performance (Dumitrana et al., 2010); it became important after the changes made for IAS 1, revised regarding the obligation to draft a statement of comprehensive income by all the companies applying IFRSs. The aim of the paper is to verify whether total comprehensive income is more value-relevant than net income. For this purpose, accounting and market data regarding companies listed on the Czech Republic Stock Exchanges are analysed for the years 2010, 2011 and 2012.

In the research, we use the financial statement data for the evaluation of the financial performance of companies through other comprehensive income and we determine which format has been adopted by the companies listed on the Czech Republic Stock Exchange for the income statement. We examine the consolidated financial statements for 2010, 2011 and 2012, published *online*, to be prepared according to the International Accounting Standard – IAS 1 – *revised* in 2007.

To perform this analysis, we start with the choices that companies have to make for present profit or loss and other comprehensive income in either a single statement of comprehensive income or two statements: a statement displaying the components of profit or loss (an income statement) and a second statement beginning with profit or loss and displaying the components of other comprehensive income (OCI) (a statement of other comprehensive income).

For the calculation of the performance indicators, we analyse the two opposite orientations present in doctrine; according to them, scholars started a debate before the adoption of the Statement of Financial Accounting Standard (SFAS) 130 in the USA. There are opponents (Linsmeier et al., 1997; Bini, 2007) to the inclusion of other comprehensive income in financial statements intended for publication, who assert that the expanded result would be a configuration that is:

- partly disconnected from the result produced by managerial efforts because it depends on factors related to the market trends; therefore, it cannot be used for the evaluation of the managerial performance;
- highly volatile because it is subject to the same fluctuations in value that many of the balance sheet elements lose out in the market;
- unable to provide relevant evidence for the estimation of future cash flows;
- more subject to the discretion of the editors;
- less reliable in relation to realized accounting income.

On the other hand, there are those who support the configuration of enlarged income for a number of reasons (Robinson, 1991; Beresford et al., 1996):

- better appreciation of the company's performance.
- the ability to predict the future performance of the company;
- the push for greater discipline of managers and financial analysts.

It is difficult to adhere fully to one or the other position because both arguments are worthy of attention.

2. Methodology

From a methodological point of view, the research is developed in the following steps:

a) selection of the companies to be surveyed;
b) selection of the documents to be analysed;
c) choice of indicators to be calculated.

a) In the first step, the financial statements of the listed Czech companies that have adopted the IAS/IFRS principle are checked regarding their preparation, as issuers listed on a regulated market. The target market is the Prime Market of the Czech Stock Exchange. From a limited number of listed companies, all the companies are analysed.
b) In the second step, an analysis is conducted of the financial statements for the years 2010, 2011 and 2012 published on the website of the Czech Stock Exchange.
c) In the third profile (the aspect to be analysed), it should be specified how the research is driven on two levels:
   - the mere empirical description of the existing situation;
   - the calculation of performance indicators.

The main contribution of this line of research is to demonstrate the relevance of total comprehensive income and to contribute to the international debate about which overall company performance should be reported in the IFRS financial statement.

The first part draws on theoretical research about the choices in the income statement. The second part concerns the empirical research on the income statement of the companies listed on the Czech Republic Stock Exchange. In the last part, the results of the empirical research on the income statement of the companies listed in the Czech Republic are presented.

3. The accounting policies in Eastern Europe

The European Union (EU) is characterized by deep differences within the economic, fiscal, regulatory, linguistic, organizational and accounting practices. In recent years, a process of standardization and harmonization of the economic and financial information of a firm has been launched (Tay and Parker, 1990; Emenyonu and Gray, 1996; Murphy, 2000). The standardization and the harmonization within the European Union had very different effects on the individual states (Hove, 1986; Cairns, 1997; Flower, 1997), in particular in Eastern Europe, where national rules continue to influence financial statements. The evolution of the financial statement in European countries provides a clear example of the influence of political and economic changes on the rules and accounting practices.

From the historical division of Europe, we can identify two groups of states: the EU member states and the former Soviet Union. Before some members of the former USSR joined the EU, the differences between the two groups were statistically significant. The reunification of Germany and the disintegration of the Soviet Union led to the entry into the European Community in 2004 of several Eastern European countries: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. In 2007, Bulgaria and Romania became EU members. This led to the requirement for compliance with European Directives. The European Union has in fact implemented a process of convergence from a phase of harmonization to a phase of standardization and, in more recent times, the adoption of international accounting standards (IASs/IFRSs) for certain types of companies.

The development of rules for the preparation of financial statements in Eastern and Central Europe has been implemented with discontinuities; furthermore, none of these countries has completely broken with its past and the influences of the communist period remain today. In fact, this process has been influenced by the accounting traditions of each member state.

The existence of a very sophisticated system of local accounting standards and the need to improve the quality of financial data have prompted many former communist countries (Bulgaria, the Czech Republic, Estonia, Latvia and Lithuania) to adopt IFRSs for the financial statements of listed companies. The accounts of the Eastern European countries bore many similarities to those of Germany. In the absence of capital markets, the emphasis was on the protection of creditors and *tax collection* and it was preferred to use a plan of national accounts. Eastern Europe, for example, was forced to adopt the plan of German accounts during the Second World War and the Russian chart of accounts at the end of the conflict (Nobes and Parker, 2006).

In the communist period, the main objective was the prediction of financial accounting systems in the plan of national planning; it was in each case, in accordance with the concept of faithful representation, true and correct.

The transition to an open market, after the collapse of the communist economy in Central and Eastern Europe, had important implications for accounting practices; they became an instrument for the economy. The Ministry of Finance in these countries acquired a key role in economic reforms, reflecting the need for new legislation and tax accounting in accordance with the European Directives. The IASB has attempted to influence the very reforms of post-communist countries, but several states have made different choices in the wake of internal political influences (Ordelheide, 1990, 1993, 1996; Alexander, 1993, 1996). The conceptual differences between IFRSs, national accounting and tax rules seem to be a major barrier to accounting harmonization in many countries of Eastern Europe (Vellam, 2004).

4. Accounting regulation in the Czech Republic

In the Czech Republic, the first Accounting Act was approved by the Parliament in 1991, initiating the process of transition from a centrally planned economy to a market economy. The annexation of the European Union in 2004 also gave a strong impetus for a series of reforms of the Czech accounting system. The last years can be divided into three phases (Žárová, 2009):

- The first period (1991 to 2002), during which the accounts and balance sheets were subordinated to the demands of a centrally planned system. For the accounts it was required to adopt a fixed chart of accounts and an analysis of the company's financial position was not required. The Accounting Act in 1992 and the Charts of Accounts and Accounting Procedures for Business began the reformation of the accounting practices in 1993. The Ministry of Finance issued, in addition to the Accounting Act, obligatory detailed guidance, the adoption of which was required for tax matters: it concerned on the one hand the introduction of a chart of accounts for different types of enterprises, accounts kept according to the double-entry method, and on the other hand another specifying the structure and content of financial statements and accompanying notes:
- In 2003, the structure was changed and made temporary in preparation for the Czech Republic's admittance into the EU and the adoption of IASs/IFRSs.
- After 2003, the Accounting Act was amended to incorporate the IFRS standards, which became obligatory for all publicly traded companies. Decrees were further changed with balance sheet and income statement changes involving materiality and the classification of expenses. Since 2004, three levels of accounting regulation have finally entered into force: the Accounting Act, the decrees of the Ministry of Finance and the National Standards.

The general character of the Czech accounting system is a continental European approach with a strong influence from tax regulations.

The *target user* of financial statements in the Czech Republic is still the tax administration, not the investor or the owner. Moreover, unlike the international standards, Czech accounting standards do not have a glossary of definitions of the basic elements of the financial statement, so we use the definitions applied by the IFRSs (Strouhal and Deari, 2010).

There were several obstacles to the implementation of International Accounting Standards (Sucher and Jindrichovska, 2004). As the voluntary application of IFRSs was not allowed until 2010, Czech companies prepared financial statements according to Czech legislation for statutory purposes (Bartůňková, 2012). However, for consolidation purposes, they had to provide their parent companies with financial statements prepared in compliance with IFRSs. Starting from 2011, selected companies could opt to prepare statutory financial statements based on the IFRSs voluntarily (Procházka, 2011).

5. The statement of comprehensive income and the comprehensive income

IAS 1 provides a single document setting out the income *extended* period (total comprehensive income, TCI): the name of the prospectus is the statement of comprehensive income (Bhamornsiri and Wiggins, 2001). There is a single result: the expanded income, which is an indicator of the overall performance of the company (Bamber et al., 2010).

In the statement of comprehensive income, the result is an income statement that includes the net income (obtained from the balance between revenues and operating costs) with changes in the value of assets that are recognized only concerning the equity: the other comprehensive income – OCI (Goncharov and Hodgson, 2008; Fernandez and Carro Arana, 2010). In this way, the performance is not only potential but is enlarged to all the elements that meet the definition of income and expenses.

According to the revised IAS 1 of the International Financial Reporting Standards, since 1 January 2009 there have been two alternatives for presentation (Van Cauwenberge and De Beelde, 2007; Solomon and Dragomirescu, 2009):

a) a single statement of comprehensive income, which presents all the items of income and expense recognized in the period, or
b) *two* separate income statements comprising:
    - an *income statement* displaying the components of profit or loss and
    - a *statement of comprehensive income* that *begins* with profit or loss (the bottom line of the income statement) and displays the items of *other comprehensive income* for the reporting period (IAS 1, 2007).

There are two options to present OCI components:

- Net of tax effects;

- Before tax effects, with a single amount presented for the total income tax expense or benefit associated with the items in OCI.

In both cases, entry disclosure is required in the notes on the effect of tax on each component of other comprehensive income.

An entity shall present an analysis of expenses using a classification based on either the nature of its expenses or the function of the expenses within the entity, whichever provides information that is reliable and more relevant.

The result of the statement of comprehensive income is the comprehensive income; it is the change in equity (net assets) of a company during a period from transactions and other events and circumstances from non-owner sources. The statement of comprehensive income illustrates the financial performance and results of the operations of a particular company or entity for a period of time.

The statement of comprehensive income aggregates the income statement and other comprehensive income that is not reflected in the profits and losses. *The total comprehensive income is the change in equity during a period resulting from transactions and other events, other than those changes resulting from transactions with owners in their capacity as owner* (IAS 1).

It is important to understand that comprehensive income includes the traditional net income as well as the effects of changes recorded in *other comprehensive income*. As we know, the difference between net income and comprehensive income is referred to as other comprehensive income. Other comprehensive income includes items such as the unrealized investment gains and losses on certain marketable securities, unrealized gains and losses on derivatives used in cash flow hedging, gains and losses relating to pensions and other post-retirement benefits, foreign currency translation adjustments, etc.

Although comprehensive income is a more complete measure of income, which offers a better picture of the economic events impacting on the organization in an accounting period, the International Accounting Standards Board (IASB) recognizes the importance of profit or loss (the net income line) and is committed to maintaining this important number.

Net income is reported on the income statement and is included in the retained earnings section of stockholders' equity. Other comprehensive income items are not reported in the income statement; they are included in the accumulated other comprehensive income section of stockholders' equity.

The amendments of the IASB for the second-step review of the Presentation of Financial Statements are effective for financial years beginning on or after 1 July 2012. The aim is to group together items within OCI that may be reclassified in the profit or loss section of the income statement.

The OCI will be grouped into two distinct categories, and not just listed by nature: it will, in fact, be necessary to distinguish among the other components of comprehensive income, which may revert to more or less between the revenues and costs accruing. The first group includes, for example, changes in the cash-flow hedges and foreign currency conversion. It is not recyclable; however, fair value is not passable for the income statement under IFRS 9. There are also small changes in the representation of income taxes. The possibility of using the OCI for the net or gross of the tax is confirmed, but in this case it is necessary to explain and distribute the taxes into the two categories above.

6. ROE and comprehensive income

Traditionally, the income statement was considered the principal medium to report the financial performance of a company and net income was literally the bottom line of the income statement. Over time, however, accounting standard setters came to believe that net income by itself was an insufficient, and possibly even useless, measure of financial performance. In 1987, the Financial Accounting Standards Board (FASB) stated that *it is important to avoid focusing attention almost exclusively on* the bottom line, *earnings per share, or other highly simplified condensations* (Statement of Financial Accounting Concepts (SFAC) No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*). More recently, the FASB and the IASB have seriously considered banishing net income entirely from income statements (Reilly, 2007).

Net income has lost its importance for the standard setters, but another measure of financial performance, comprehensive income, has gained status. Comprehensive income is a more complete measure of an entity's financial performance than net income is, especially from the perspective of the entity's owners. There is even a whole topic of the FASB's Accounting Standards Codification [TM] (ASC) devoted to comprehensive income (CI) (Topic 220), whereas there is no topic devoted exclusively to net income (NI). Comprehensive income is becoming increasingly important as an indicator of corporate performance at the international level.

Not all the research supports the assertion that comprehensive income is superior to net income for evaluating company performance. Advocates of the *all-inclusive concept* argue that comprehensive income statements provide better measures of company performance than other summary income measures. On the other hand, those who advocate the *current operating performance* view of income argue that net income without the inclusion of extraordinary and non-recurring items has a better ability to reflect the firm's future cash flows (Robinson, 1991; Brief and Peasnell, 1996).

Within the context of these trends in international financial information, we analyse the return on equity (ROE) calculated pursuant to the comprehensive income (Gazzola and Mella, 2004) and the ROE calculated with the net income. The ROE is one of the most important financial ratios and profitability metrics. It is often said to be the ultimate ratio or the *mother of all ratios* that can be obtained from a company's financial statement. It measures how profitable a company is for the owner of the investment and how profitably a company employs its equity. It is possible to calculate the ROE with the net income, but instead of the net income**,** the comprehensive income can be used in the formula's numerator.

One of the goals of our research is to understand whether the two results have different degrees of importance.

7. Which format is used for the income statement in the Czech Republic?

The analysis of the format choice of the consolidated income statements was completed in December 2010, allowing us to reach the conclusions reported in Table 1, while the analyses of the format choice of the consolidated income statements, which ended in December 2011 and in December 2012, are synthesized in Table 2 and in Table 3. In them, the results for the two main areas of discretion granted by the European legislator in relation to the drafting of the financial document (the type of approach – one-statement approach/two-statement approach – and the reclassification criterion of items – by nature/by function) are synthesized.

(1) At first sight, it might seem to be arranged on the basis of the two-statement approach. In reality, two elements lead to the opposite conclusion:
   a) the loss (loss for the period) is not repeated before the listing of the other comprehensive income;
   b) the distinction between *loss attributable* and *total comprehensive income attributable* is shown at the end of the table.

(2) Although the indication of selling, general and administrative expenses is in a single aggregate, it suggests that the mode of classification adopted is by destination (function).

(3) The financial statement is related to the period 1 January 2011–30 June 2011.

(4) *Other comprehensive income* has not been listed; presumably it is included in the categories *net gain/(loss) from fair value adjustments on investment property* and *other operating income*.

(5) The indication of the heading *Cost of goods sold* might give the impression that the writer of the statement has opted for the mode of classification by destination/function.

(6) At first sight, it might seem to be arranged on the basis of the two-statement approach. In reality, two elements lead to the opposite conclusion:
   a) the net income (net profit for the period) is not repeated before the listing of the other comprehensive income;
   b) the distinction between *net income attributable* and *total comprehensive income attributable* is shown at the end of the table.

Table 1 The companies listed on the Prime Market of the Czech Republic Stock Exchange (2010)

N.	Company	Approach	Reclassification criterion
1	AAA Auto Group N.V.	One statement approach	By nature
2	CETV – Central European Media Enterprises LTD	Two statement approach	By nature
3	CEZ	Two statement approach	By nature
4	ECM Real Estate Investments A.G.	One statement approach (1)	By nature
5	ERSTE Group Bank	Two statement approach	By nature
6	FORTUNA Entertainment Group N.V.	Two statement approach	By nature
7	KITD – Kit Digital Inc.	Two statement approach	By nature (2)
8	Komercni banka	Two statement approach	By nature
9	NWR – New World Resources (3)	Two statement approach	By nature
10	ORCO Property Group	One statement approach (4)	By nature (5)
11	PEGAS Nonwovens	One statement approach (6)	By nature
12	PHILIP MORRIS CR	One statement approach	By function
13	TELEFONICA 02 Czech Republic a.s.	One statement approach	By nature
14	UNIPETROL a.s.	One statement approach	By function
15	VIG – Vienna Insurance Group	Two statement approach	By nature

In relation to the first profile of the analysis, the observation of the consolidated financial statements of the fifteen companies gives a particular result: about half of the companies (8 companies out of 15, so 53%) have opted for the two-statement approach (namely, the adoption of two statements) and the other half (7 companies out of 15, so 47%) have opted for the one-statement approach (i.e. the adoption of a single statement of comprehensive income), demonstrating a slight predominance of the first option.

This result demonstrates the equal validity of the two solutions.

Moving our attention to the second of the two elements considered, the observation of the financial statements highlights particularly significant results: 87% of the companies (namely 13 out of 15) have opted for classification by nature, while only 13% of the companies (i.e. 2 out of 15) have adopted the mode by destination (the criterion that contributes to achieving the best results in the field of financial statement analysis).

Table 2 The companies listed on the Prime Market of the Czech Republic Stock Exchange (2011)

N.	Company	Approach	Reclassification criterion
1	AAA Auto Group N.V.	One statement approach	By nature
2	CETV – Central European Media Enterprises LTD	Two statement approach	By nature
3	CEZ	Two statement approach	By nature
4	ECM Real Estate Investments A.G.	One statement approach (1)	By nature
5	ERSTE Group Bank	Two statement approach	By nature
6	FORTUNA Entertainment Group N.V.	Two statement approach	By nature
7	KITD – Kit Digital Inc.	Two statement approach	By nature (3)
8	Komercni banka	Two statement approach	By nature
9	NWR – New World Resources	Two statement approach	By nature
10	ORCO Property Group	One statement approach	By nature (4)
11	PEGAS Nonwovens	One statement approach (5)	By nature
12	PHILIP MORRIS CR	One statement approach (6)	By function
13	TELEFONICA 02 Czech Republic a.s.	One statement approach	By nature
14	TMR – Tatry mountain resort, a.s. (2)	One statement approach (5)	By nature
15	UNIPETROL a.s.	One statement approach	By function
16	VPG NV	One statement approach	By nature
17	VIG – Vienna Insurance Group	Two statement approach	By nature

As shown in the table above, the reclassification criterion by destination represents the mode adopted by the companies that have opted for the one-statement approach, implying the existence of a causal relationship. However, it is not possible to observe the same relationship for the other variable: a classification criterion by nature does not in fact always correspond to the adoption of the two-statement approach (except in 8 cases of 13).

By extending the profile of analysis to the same 15 consolidated financial statements on 31 December 2011, we can note that there are no changes in the type of approach adopted by the companies (whereas companies no. 4, 7 and 12 are no longer part of the Prime Market and companies no. 14 and 16 were not present in the Prime Market in the year 2010).

(1) At first sight, it might seem to be arranged on the basis of the two-statement approach. In reality, two elements lead to the opposite conclusion: a) the loss for the period is not repeated before the listing of the other comprehensive income; b) the distinction between *loss attributable* and *total comprehensive income attributable* is shown at the end of the table.

(2) Semi-annual report.

(3) Although the indication of selling, general and administrative expenses is in a single aggregate, it suggests that the mode of classification adopted is by destination (function).

(4) The indication of the heading *Cost of goods sold* might give the impression that the writer of the statement has opted for the mode of classification by destination/function.

(5) At first sight, it might seem to be arranged on the basis of the two-statement approach. In reality, two elements lead to the opposite conclusion: a) the net profit for the year is not repeated before the listing of the other comprehensive income; b) the distinction between *net income attributable* and *total comprehensive income attributable* is shown at the end of the table.

(6) At first sight, it might seem to be arranged on the basis of the two-statement approach. In reality, one element leads to the opposite conclusion: the net profit for the year is not repeated before the listing of the other comprehensive income.

By considering the same fifteen companies that we considered for the 2010 analysis (thus, by considering companies no. 4, 7 and 12 and by omitting companies no. 14 and 16), we can reach the same conclusion that we reached in our previous study. This demonstrates that over time, the considered companies have not changed either the approach or the reclassification criterion.

By extending the profile of analysis to the same 15 consolidated financial statements on 31 December 2012, we can note that, also for this year, there are no changes in the type of approach adopted by the companies (whereas companies no. 1, 4 and 7 are no longer part of the Prague Stock Exchange, company no. 12 is no longer part of the Prime Market and, finally, companies no. 13, 14 and 15 were not present in the Prime Market in the year 2010).

The results of the analysis are summarized in Table 3.

Table 3 The companies listed on the Prime Market of the Czech Republic Stock Exchange (2012)

N.	Company	Approach	Reclassification criterion
1	CETV – Central European Media Enterprises LTD	Two statement approach	By nature
2	CEZ	Two statement approach	By nature
3	ERSTE Group Bank	Two statement approach	By nature
4	FORTUNA Entertainment Group N.V.	Two statement approach	By nature
5	Komercni banka	Two statement approach	By nature
6	NWR – New World Resources	Two statement approach	By nature
7	ORCO Property Group	One statement approach	By nature (1)
8	PEGAS Nonwovens	One statement approach (2)	By nature
~~9~~	~~PHILIP MORRIS CR~~	~~One statement approach~~	~~By function~~
10	TELEFONICA 02 Czech Republic a.s.	One statement approach	By nature
11	UNIPETROL a.s.	One statement approach	By function
12	VIG – Vienna Insurance Group	Two statement approach	By nature
13	BOREALIS Exploration Limited	One statement approach	By nature
14	TMR – Tatry mountain resorts, a.s.	One statement approach (2)	By nature
15	VGP NV	One statement approach	By nature

(1) The indication of the heading *Cost of goods sold* might give the impression that the writer of the statement has opted for the mode of classification by destination/function.

(2) At first sight, it might seem to be arranged on the basis of the two-statement approach. In reality, two elements lead to the opposite conclusion: a) the net profit for the year is not repeated before the listing of the other comprehensive income; b) the distinction between *net income attributable* and *total comprehensive income attributable* is shown at the end of the table.

The results obtained for the years in question are homogeneous and constant, and they allow us to reach the conclusion that, most of the listed Czech companies being parts of foreign groups, they prepare their financial statements according to the group accounting rules based on the IFRSs. Therefore, we cannot really say that the companies in question have opted for the solution that best fits the Czech national tradition.

8. Performance appraisal through other comprehensive income

Having highlighted the choices made by the companies listed on the Prime Market of the Czech Republic Stock Exchange, we continue the analysis by investigating other profitability aspects of particular relevance.

In particular, the purpose of this paragraph is to understand whether the other comprehensive income and, consequently, the total comprehensive income represent useful quantities for investors in the process of investment appraisal. Starting from the assumption that income is the classic measure of business performance, we wonder whether the OCI provides additional information for this evaluation with respect to the simple net income.

The proposal of the IASB and the FASB, theorized in the 2008 Discussion Paper (IASB/FASB 2008), to draw up a single scheme of income statement (a single statement of comprehensive income), in which the net income would be a mere intermediate result compared with the Omni total comprehensive income, would seem to bring out the orientation of standard setters towards the consideration of the OCI and the TCI as key measures of performance evaluation, at the expense of the commonly used net income (Le Manh, 2010).

In this regard, we analyse the results of studies conducted on the theme described above and it is possible to highlight two opposite guidelines:

- OCI (and TCI) provide more information than net income, thereby accepting that the business performance is not limited only to the performance under the control of the manager. These studies also demonstrate that net income is not the only useful indicator for the performance appraisal (Cahan et al., 2000; Biddle and Choi, 2006);
- OCI (and TCI) do not have greater informational potential than net income and the use of the historical cost is a key element (Ijiri, 1975; Belkaoui, 1992; Cheng, 1998; Dhaliwal et al.,

1999; Ramond et al., 2007; Kanagaretnam et al., 2009; Zülch and Pronobis, 2010).

On the basis of the studies listed above, most of which analyse the correlation between the comprehensive income and the market value of the company, the results are conflicting and have more than a few critical elements. Therefore, it is difficult to conclude whether the new quantities introduced by the European legislator (in adherence to what has already happened in the USA) are relevant to the evaluation of corporate performance or not and, in particular, it is arduous to state that they own a greater information content than that presented by the net income.

9. Some performance indicators

Although, as we have seen, it is not possible to provide a clear answer to the question on performance evaluation through the use of comprehensive income in place of net income, we have proceeded along the route towards constructing some indicators in order to investigate different profitability aspects of particular significance. In this way, we have tried to explain the results that could be obtained from the use of the new quantities (OCI, TCI) in addition to the sizes commonly used (NI).

In order to proceed in this direction, the first operation to be performed is to highlight the algebraic sign of the other comprehensive income values in the 11 considered companies and then compare this value with other economic–financial quantities. To standardize the analysis, we only consider the companies that, starting from 2010, are listed on the Prime Market of the Prague Stock Exchange until 2012 (a4).

This table shows statistic/quantitative data: in 2010, 64% of the listed Czech companies (that is, 7 companies out of 11) have a positive value for other comprehensive income and this implies a positive impact on the total comprehensive income (the final total of the scheme), which consequently assumes a higher value than the net income. Instead, 3 companies assume a negative total OCI and, consequently, a lower total than the net income. Finally, 1 company does not indicate other comprehensive income separately (overall, it represents 9% of the companies). In 2011, the situation has partially changed: only 2 companies out of 11 have a positive value for other comprehensive income (18%), while 8 companies out of 11 have a negative value (73%); finally, 1 company does not indicate other comprehensive income separately (9%). In 2012, the situation has improved: the number of companies that assume a positive value for other comprehensive income has risen to 9 (82%), while only 1 company has a negative value (9%) and 1 company does not indicate other comprehensive income separately (9%).

Table 4 The OCI value

N.	Company	VALUE 2010	VALUE 2011	VALUE 2012	Currency
1	CETV – Central European Media Enterprises LTD	–17.586	–59.430	28.651	US$ '000
2	CEZ	1.617	–8.153	5.810	CZK '000.000
3	ERSTE Group Bank	137.830	–286.599	758.875	EUR '000
4	FORTUNA Entertainment Group N.V.	1.206	–3.025	1.892	EUR '000
5	Komercni banka	320	5.735	10.631	CZK '000.000
6	NWR – New World Resources	39.121	–52.192	38.830	EUR '000
7	ORCO Property Group	Not indicated	Not indicated	Not indicated	EUR '000
8	PEGAS Nonwovens	3.497	–3.014	–503	EUR '000
9	TELEFONICA 02 Czech Republic a.s.	–107	110	65	CZK '000.000
10	UNIPETROL a.s.	–8.361	–24.561	88.260	CZK '000
11	VIG – Vienna Insurance Group	45.065	–243.731	486.925	EUR '000

As mentioned above, another type of analysis that could give good statistical/quantitative indications of the health state of Czech society consists of reporting the OCI for other parameters, such as total comprehensive income (TCI) and equity (E). These indicators, in fact, allow us to understand new important reports, which may not have been quantifiable previously (Table 5).

Not forgetting that various companies have adopted different currencies (namely, different units), first of all it seems appropriate to proceed with the euro '000 conversion of these values (Table 6).

The first indicator calculated above (OCI/TCI) allows us to identify the relationship between the changes in the assets' value, partial results not covered by the ante-introduction of the IAS legislation and Omni comprehensive income (even the latter is not expected before the entrance of the new statement) that OCI contributes to the form. This indicator has a dual purpose: firstly, it identifies the size of the values that form in the absence of transactions with third economies compared with the total income; secondly, by the difference, it provides information on the incidence of the net income in the total comprehensive income. As noted above and as it can be seen from the table, in 2010, 64% of the listed companies have a positive OCI/TCI ratio, as a demonstration of

Table 5 Some indicators (2010)

N.	Company	OCI/TCI	ROE_OCI (OCI/E)	ROE	ROE_TCI (TCI/E)
1	CETV – Central European Media Enterprises LTD	–22.21	–1.41	7.76	6.35
2	CEZ	3.32	0.71	20.77	21.48
3	ERSTE Group Bank	10.41	0.81	6.93	7.73
4	FORTUNA Entertainment Group N.V.	5.62	2.32	38.95	41.27
5	Komercni banka	2.33	0.42	17.63	18.05
6	NWR – New World Resources	31.03	4.66	10.35	15.01
7	ORCO Property Group	0.00	0.00	62.55	62.55
8	PEGAS Nonwovens	14.25	2.71	16.30	19.01
9	TELEFONICA 02 Czech Republic a.s.	–0.88	–0.15	16.78	16.64
10	UNIPETROL a.s.	–0.90	–0.02	2.41	2.39
11	VIG – Vienna Insurance Group	9.83	0.90	8.22	9.11

Table 6 Some indicators (2011)

N.	Company	OCI/TCI	ROE_OCI (OCI/E)	ROE (NI/E)	ROE_TCI (TCI/E)
1	CETV – Central European Media Enterprises LTD	24.86	–5.84	–17.64	–23.48
2	ČEZ, a.s.	–25.01	–3.51	17.56	14.05
3	ERNSTE GROUP BANK AG	33.75	–1.89	–3.71	–5.59
4	FORUNA Entertainment Group N.V.	–29.38	–6.48	28.52	22.04
5	Komercni banka, a.s.	37.11	7.01	11.87	18.88
6	NWR – New World Re-sources Plc	–67.24	–6.94	17.25	10.32
7	ORCO Property Group S.A.	0.00	0.00	–18.70	–18.70
8	PEGAS NONWOVENS SA	–27.52	–2.31	10.68	8.38
9	TELEFÓNICA C.R. – Tele-fónica Czech Republic, a.s.	1.25	0.16	12.57	12.72
10	UNIPETROL, a.s.	0.41	–0.06	–18.00	–18.08
11	VIG – Vienna Insurance Group	–122.99	–4.83	8.75	3.93

the fact that the changes in the assets' value impact positively on the total income. In only 3 cases, this value is negative. Finally, 1 company does not indicate OCI. In 2011, 5 companies (45%) have a positive ratio, while 5 companies (45%) have a negative value. In addition, in this case, 1 company (9%) does not indicate OCI. In 2012 (Table 7), 64% (7 companies) have a positive OCI/TCI ratio, while 3 companies (27%) have a negative value. Finally, 1 company does not indicate the OCI.

The second indicator makes explicit the relationship between other comprehensive income and business equity, a classical measure that highlights the company size. This ratio allows us to highlight the management's ability to produce additional income as compared with the net income. Thus, it represents a sort of ROE_OCI (return on equity of OCI) not calculated in relation to the net income (NI) but considering the new aggregate introduced by the IAS 1. In parallel to the previous indicator, the companies that exhibit a negative OCI/TCI ratio show an OCI/E ratio of the same sign, except 3 cases in 2011 and 2 cases in 2012, in which, regardless of whether the first ratio is negative/positive, the second one is greater/lower than zero.

Table 7 Some indicators (2012)

N.	Company	OCI/TCI	ROE_OCI (OCI/E)	ROE (NI/E)	ROE_TCI (TCI/E)
1	CETV – Central European Media Enterprises LTD	–5.53	4.54	–86.56	–82.02
2	ČEZ, a.s.	12.64	2.29	15.80	18.08
3	ERNSTE GROUP BANK AG	54.60	4.65	3.86	8.51
4	FORUNA Entertainment Group N.V.	13.31	3.87	25.17	29.03
5	Komercni banka, a.s.	42.76	10.57	14.15	24.72
6	NWR – New World Re-sources Plc	103.32	5.12	–0.17	4.96
7	ORCO Property Group S.A.	0.00	0.00	–10.36	–10.36
8	PEGAS NONWOVENS SA	–2.46	–0.36	14.79	14.43
9	TELEFÓNICA C.R. – Tele-fónica Czech Republic, a.s.	0.97	0.11	11.19	11.08
10	UNIPETROL, a.s.	–2.65	0.30	–11.56	–11.26
11	VIG – Vienna Insurance Group	51.03	8.47	8.13	16.59

It is possible to calculate a third indicator, which, according to the supporters of the theory on the basis of which OCI and comprehensive income provide more information than net income, should be used by investors to evaluate the goodness of investments. We refer to a new index comparable to the ROE. If the return on equity is calculated as the ratio between net income and equity, the ROE_TCI represents the ratio between comprehensive income and net worth (equity). In both cases, it measures the profitability of a company for the investor, but, while in the first case it takes into account only the values that are under the control of the manager, in the second one the numerator of the ratio also includes all those values that take the name of other comprehensive income and that, as explained above, represent the changes in the value of the assets. In particular, both ROEs are calculated to facilitate a comparison of the results.

A comparative analysis of the values indicated in the tables above leads to the conclusion that in companies in which the OCI/E ratio assumes negative values, the ROE_TCI assumes worse values than the commonly calculated ROE. If we accept the thesis that comprehensive income is the key measure in the performance evaluation, in 2010 the investor would be led to appraise the investment in 7 companies out of 11 (64%) more positively with respect to the assessment based on net income. Conversely, the same decision maker would give a higher vote to the investment on the basis of the ROE in 3 companies out of 11 (27%). Finally, 1 company does not indicate the OCI. As a consequence, the net income coincides with the total comprehensive income and the ROEs calculated on the basis of the two numerators do not differ. In 2011, the investor would be led to appraise the investment in 2 companies out of 11 (18%) more positively with respect to the assessment based on net income. Conversely, the same decision maker would give a higher vote to the investment on the basis of the ROE in 8 companies out of 11 (73%). Finally, 1 company (9%) does not indicate OCI. In 2012, the investor would be led to appraise the investment in 8 companies out of 11 (73%) more positively with respect to the assessment based on net income. Conversely, the same decision maker would give a higher vote to the investment on the basis of the ROE in 2 companies out of 11 (18%). Finally, 1 company does not indicate OCI.

10. Conclusion

The statement of comprehensive income welcomes an income concept extended to changes in the assets value (OCI); it therefore represents a turning point with reference to the mode of representation of the periodic company performance in the financial statements. Over time, to cope with the demands of the subjects for more relevant and meaningful information, the concept of business performance has been aligned with the variation recorded by the members' richness in the period (excluding direct operations with members) and the principle of prudence has been progressively exceeded, by also inserting into the income for the year the profits not yet implemented.

Taking into consideration the reduced number of listed companies on the main market, it has not been possible to undertake a specific study for sectors, an analysis that could be interesting for studying the causal relationships.

The *two-statement approach* option represents a solution with respect to the *one-statement approach* option that is favoured by the IASB. The result shown in our analysis allows us to reach the conclusion that, most of the listed companies in the Czech Republic Stock Exchange being subsidiaries of parent companies of other countries, they have adopted the format (and the classification criterion) selected by the parent company; for this reason, it is not possible to attain a real explanation in terms of cultural attitude and accounting tradition. Therefore, we cannot really say that the companies in question have opted for the solution that best fits the Czech national tradition, contrary to what we expected before the analysis.

According to the analysis, the second result that can be highlighted concerns the possibility to evaluate the business performance through the use of total comprehensive income instead of the commonly used net income (Blanchette et al., 2011). The presence of numerous studies in favour of one or the other argument has been brought to light. The data of the research show that comprehensive income increases the information for the evaluation of the goodness of the investment and therefore it is useful to calculate it because comprehensive income incorporates unrealized gains and losses that bypass the profit of the income statement. A difference between the regular and the comprehensive version of the ROE should prompt further investigation into the underlying causes.

References

ALEXANDER, D. (1993). A European true and fair view? *European Accounting Review* 2(1): 59–80. http://dx.doi.org/10.1080/09638189300000004

ALEXANDER, D. (1996). Truer and fairer: Uninvited comments on invited comments. *European Accounting Review* 5(3): 483–493. http://dx.doi.org/10.1080/09638189600000030

BAMBER, L.S., JIANG, J. (XUEFENG), PETRONI, K., WANG, I.Y. (2010). Comprehensive income:

Who's afraid of performance reporting? *The Accounting Review* 85(1): 97–126. http://dx.doi.org/10.2308/accr.2010.85.1.97

BELKAOUI, A. (1992). *Accounting Theory.* London: Academic Press Limited.

BERESFORD, D., JOHNSON, L., REITHER, C. (1996). Is a second income statement needed? *Journal of Accountancy* 176: 69–72.

BHAMORNSIRI, S., WIGGINS, C. (2001). Comprehensive income disclosure. *The CPA Journal* 71(10): 54–56.

BIDDLE, G.C., CHOI, J.-H. (2006). Is comprehensive income useful? *Journal of Contemporary Accounting & Economics* 2(1): 1–32. http://dx.doi.org/10.1016/S1815-5669(10)70015-1

BARTŮŇKOVÁ, L. (2012). Are compagnies in the Czech Republic ready to implement IFRS for SMEs. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis* 64(7): 39–44. http://dx.doi.org/10.11118/actaun201260070039

BLANCHETTE, M., RACICOT, F.E., GIRARD J.Y. (2011). *The Effects of IFRS on Financial Ratios: Early Evidence in Canada.* Burnaby: Certified General Accountants Association of Canada.

BRIEF, R.P., PEASNELL, K.V. (1996). *Clean Surplus: A Link between Accounting and Finance.* New York: Garland Publishing.

CAHAN, S., COURTENAY, S, GRONEWOLLER, P., UPTON, D. (2000). Value relevance of mandated comprehensive income disclosures. *Journal of Business Finance and Accounting* 27(9): 1273–1301.

CAIRNS, D. (1997). The future shape of harmonisation: a reply. *European Accounting Review* 6(2): 305–348.

CHENG, C.S.A. (1998). Empirical validity of all-inclusive income: An investigation of volatility of aggregated and disaggregated income line items and their explanatory power for return. *Working Paper.* Houston: University of Houston.

DHALIWAL, D., SUBRAMANYAN, K.R., TREZEVANT, R. (1999). Is comprehensive income superior to net income as a measure of firm performance? *Journal of Accounting and Economics* 26(26): 43–67. http://dx.doi.org/10.1016/S0165-4101(98)00033-0

DUMITRANA, M., JIANU, I., JINGA, G. (2010). Comprehensive Income – Past, Present and Future. Analele Stiintifice ale Universitatii "Alexandru Ioan Cuza", din Iasi, special number, 25–40.

EMENYONU, E.N., GRAY, S. (1996). International accounting harmonisation in major developed stock market countries: An empirical study. *International Journal of Accounting* 31(3): 269–279. http://dx.doi.org/10.1016/S0020-7063(96)90020-5

FERNÁNDEZ, F.S., CARRO ARANA, M.M. (2010). Effects of comprehensive income on ROE in a context of crisis: Empirical evidence for IBEX-35 listed companies (2004–2008). *2010 IABR & ITLC Conference Proceedings.* Orlando, Florida: IABR & ITLC.

FLOWER, J. (1997). The future shape of harmonisation: The EU versus the IASC versus the SEC. *European Accounting Review* 6(2): 281–303.

GONCHAROV, I., HODGSON, A. (2008). Comprehensive income in Europe: Valuation, prediction and conservatism issues. *Working paper.* Amsterdam: University of Amsterdam.

GAZZOLA, P., MELLA, P. (2004). From values to "value" – From the creation of the value of firms to sustainable growth. *Economia Aziendale 2000 WEB* 3: 1–18.

HOVE, M.R. (1986). Accounting practices in developing countries: colonialism's legacy of inappropriate technologies. *International Journal of Accounting Eall* 22(1), 81–100.

IJIRI, Y. (1975). *Theory of Accounting Measurement.* Sarasota, Fla.: American Accounting Association.

KANAGARETNAM, K., MATHIEU, R., SHEHATA, M. (2009). Usefulness of comprehensive income reporting in Canada. *Journal of Accounting and Public Policy* 28(4): 349–365. http://dx.doi.org/10.1016/j.jaccpubpol.2009.06.004

LINSMEIER, T., GRIBBLE, J., JENNINGS, R,. LANG, M., PENMAN, S., PETRONI, K., SHORES, D., SMITH, J., WARFIELD, T. (1997). An issued paper on comprehensive income. *Accounting Horizons* 11: 120–126.

MURPHY, A.B. (2000). The impact of adopting IAS on the harmonization of accounting practices. *International Journal of Accounting* 35(4): 471–493. http://dx.doi.org/10.1016/S0020-7063(00)00074-1

NOBES, C., PARKER, R. (2006). *Comparative International Accounting.* 9 Ed. London: Prentice Hall.

ORDELHEIDE, D. (1996). True and fair: A European and a German perspective II. *European Accounting Review* 5(3): 495–506. http://dx.doi.org/10.1080/09638189600000031

ORDELHEIDE, D. (1993). True and fair: A European and a German perspective. *European Accounting Review* 2(1): 81–90. http://dx.doi.org/10.1080/09638189300000005

ORDELHEIDE, D. (1990). *Soft Transformation of Accounting Rules of the Fourth Directive in Germany.* Paris: Les cahiers internationaux de la comptabilite.

PROCHÁZKA, D. (2011). Accounting and economic concept of income. *Ekonomická revue* 14(3): 213–226.

RAMOND, O., BATSCH, L., CASTA, J.F. (2007). Résultat et performance financière en norms IFRS: Quel est le contenu informative du comprehensive income? *Comptabilité-Contrôle- Audit* Numéro thématique, décembre: 129–154.

REILLY, D. (2007). Profit as we know it could be lost with new accounting statements. *The Wall Street Journal* on May 12: A4–A5.

ROBINSON, L. (1991). The time has come to report comprehensive income. *Accounting Horizons* 5: 107–112.

SOLOMON, D.C., DRAGOMIRESCU, S.E. (2009). New dimensions in enterprise's financial performance reporting: The statement of comprehensive income. *Journal of Finances, Banks and Accountancy* 18(3): 1170–1175.

STROUHAL, J., DEARI, F. (2010). Financial Reporting Framework: Case of Czech Republic and Macedonia. *Global Review of Accounting and Finance* 1(1): 41–59.

SUCHER, P., BYCHKOVA, S. (2001). Auditor independence in economies in transition: a study of Russia. *European Accounting Review* 10(4): 817–841. http://dx.doi.org/10.1080/09638180120069142

SUCHER, P., JINDRICHOVSKA, I. (2004). Implementing IFRS: A case study of the Czech Republic. *Accounting in Europe* 1(1): 109–141. http://dx.doi.org/10.1080/0963818042000262757

TAY, J.S.W., PARKER, R.H. (1990). Measuring international harmonisation and standardization. *Abacus* 26(1): 71–88.

VAN CAUWENBERGE, P., DE BEELDE, I. (2007). On the IASB comprehensive income project: An analysis of the case for dual income display. *Abacus* 43(1): 1–26. http://dx.doi.org/10.1111/j.1467-6281.2007.00215.x

VELLAM, I. (2004). Implementation of international accounting standards in Poland: Can true convergence be achieved in practice? *Accounting in Europe* 1(1): 143–167. http://dx.doi.org/10.1080/0963818042000262784

ŽÁROVÁ, M. (2009). Accounting reform in the Czech Republic. In: McGEE, R. (Ed.): *Accounting Reform in Transition and Developing Economies.* New York: Springer, 89–100. http://dx.doi.org/10.1007/978-0-387-25708-2_5

ZÜLCH, H., PRONOBIS, P. (2010). The predisctive power of comprehensive income and its individual components under IFRS. *HHL Arbeitspapier-HHL Working paper,* No. 95. Leipzig: HHL – Leipzig Graduate School of Management, 1–35.

Additional sources

BINI, M. (2007). Tra Europa e usa è lite sui conti. *Il Sole 24 Ore*, 30 giugno 2007. Available at: <http://www.analisiaziendale.it/tra_europa_e_usa_e_lite_sui_conti_1001696.html>.

IAS 1 (2007). *Presentation of Financial Statements*, IASB. Available at: <http://www.ifrs.org/>.

IASB/FASB (2008). Discussion Paper: *Preliminary Views on Financial Statement Presentation*. Available at: <http://www.ifrs.org>.

LE MANH, A. (2010). Is comprehensive income required by IAS 1 relevant for users? A review of the literature. In: *SASE Society for Advancement of Socio Economic, Proceedings of the 21th Annual Meeting, Sciences Po Paris.* 2009, July 16–18. Available at: <http://citation.allacademic.com/meta/p306777_index.html>.