

THE IMPACT OF THE ACCOUNTING POLICIES ON THE SHARE PRICES OF COMPANIES AND BANKS

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Abstract:

This article concerns the impact of accounting policies on the share price of companies and banks in Poland. The article draws attention to the profit and loss account, which contains an increasing number of records that are not a reflection of actual operations, but for example the valuation of balance sheet items in fair value. Therefore, the result which is calculated on an accrual basis is different from the result calculated on cash basis. The study shows the degree of differences between the results in the profit and loss account and the results in the cash flow statement. It is noted that the degree of differences for banks is lower than in the case of companies. Then the correlation coefficient between changes in stock prices and the gap between the income statement and cash flow statement is calculated. It is shown that the correlation coefficient is very weak.

Key Words: Fair value, profit and loss account, cash flow statement, market value of company

Introduction

The accounting policies have a very big impact on the financial statements. Investors during the decision process are guided by the information which is contained in the financial statements. Recently accounting principles have changed. As a result, fair value was introduced for valuation of the items of balance sheet. The effects of this valuation are reported also in the income statement. In addition, other operations are recognized in profit or loss statement which are not associated with cash flow. As a result, earnings calculated in the profit and loss account (on an accrual basis) differ from the financial results calculated in the cash flow statement (on cash basis).

The study attempts to show how big the differences are and how the share prices change under the influence of these differences. The study was conducted on a group of selected companies and banks operating in Poland. According to the author's knowledge, such studies have not been conducted for the Polish market before.

The paper consists of two parts. The first part will discuss the accounting policies and their impact on the financial statement. The valuation of balance sheet items with using fair value will be presented especially. The second part will be devoted to research in Poland. Methodology of the study, the results and their interpretation will be presented at the end of this paper.

Impact of accounting policies on the information content of financial statements

Profit and loss account, now called the statement of comprehensive income, shows the ability of a company to generate profits. These gains in fact contain transactions with other entities, but not only them. The revenues and expenses that are not related to the actual transactions, but caused by the accounting policies, also have impact on the financial result. The way of recognizing and measuring components of the balance sheet has a very large impact on the ingredients of profit and loss account. The valuation of assets and liabilities has recently become the most controversial, in particular the valuation using the fair value method.

To improve the quality of the valuation balance sheet items, at the beginning of the 1970s American Organization Accounting Principles Board (APB) considered the introduction of an approach based on market valuation for certain financial instruments. Unfortunately, the members of this body did not support this idea. Later, the Financial Accounting Standards Board (FASB) again tried to deal with this problem. However, due to the intervention of the Securities and Exchange Commission (SEC) the project has not been completed on a larger scale. The Federal Reserve System

(Fed), was strongly opposed to the introduction of the method of "mark-to-market accounting". In 1975, only the Statement of Financial Accounting Standards (SFAS) standard nr 12 was issued, which addressed some of the problems associated with the valuation of short-term securities. The concept of "mark-to-market accounting" was introduced to the accounting, along with the speech of R.C. Breeden, the chairman of the SEC on August 10, 1990. During his speech, R.C. Breeden called for the use of market prices in the valuation of financial institutions. This valuation was called as "mark them to market," and later as "mark-to-market accounting".

Fair value is defined both in the U.S. accounting and the International Financial Reporting Standards (IFRS). These definitions differ slightly. According to U.S. standards [SFAS 157] "the fair value is the price that would be received for selling an asset or paid to transfer the liability in a normal transaction between market participants at the measurement date." Fair value is defined by IFRS as "the amount at which an asset could be exchanged, or a liability settled, between well informed, interested and not related parties of transaction."

According to B. Micherda (2006) the introduction of fair value was a response to the information needs of investors, for which the information is presented on the basis of historical cost. In this situation the use of the precautionary principle was not entirely useful.⁸⁹

The idea of fair value seems to be correct. The point is to include the market value of assets and liabilities or other value close to the market in the financial statements. The supporters of this method emphasize that it allows to show the actual value of financial assets. For example, Nick Le Pan, former head of the Organization Financial Institutions, explained that the fair value is only a messenger and should not be criticized for delivering bad news reflecting the weak economic performance.⁹⁰

The opponents of the method "mark-to-market accounting" underline that market values are often unavailable, and their acquisition can be costly. As a result, the financial instruments for which there is no effective market are valued by a company on the basis of assumptions that are reflected expectations of market participants. As a result, the mathematical models are used for valuation of the balance sheet items at fair value. These mathematical models base the calculation on the situation of the market. Opponents also fear that the credibility and verifiability of financial statements are undermined with the introduction of the accounting fair value. The fair value is based on estimates for future cash flows or the market value. As we all know, no one can predict the future, you can only check the validity of hypotheses and estimates the forecasts. For as long as there is no sale transaction, you can not be sure of the price. This uncertain valuation is the opposite of historical valuation, which can be always verified.

Since the introduction of the accounting fair value measurements, scientists are trying to see how investors react to this type of information. Therefore, a study was conducted that focused on the financial results of U.S. companies over the past 20 years. According to these studies it is clear that there is a strong correlation between the price of the shares of listed companies and the fair value of their assets. However, the correlation between the price of shares and the value of its historical assets is much weaker.⁹¹

An interesting study was also conducted by V. Bernard, R. K. Merton and K. Palepu. They take advantage of the fact that for many years the Dutch accounting standards regarding commercial banks were based on the mark-to-market valuation of assets. It turned out that the book value of Dutch banks using the fair value has provided more reliable information for investors than the book value of U.S. banks based in the same time on the historical value. The results are surprising, although the authors indicated that Dutch and U.S. stock market are different enough that they should not be compared with each other.⁹²

It is also worth to recall scandals of the early XXI century, for example Enron. It is good example of consequences of replacing the existing methods of valuation at historical prices by mark-

⁸⁹ B. Micherda, *Problemy wiarygodności sprawozdania finansowego*, Difin, Warszawa 2006, p. 53

⁹⁰ see J. McFarland, J. Partridge, *Mark-to-market' accounting rules fuel debate*. The Globe and Mail – Report on Business, November 20, 2008

⁹¹ see M.E. Barth, W.H. Beaver, W.R. Landsman, *The relevance of the value relevance literature for accounting standard setting: another view*, Journal of Accounting and Economics 31, 2001, p. 77 - 104

⁹² see V. Bernard, R. Merton, K. Palepu, *Mark-to-Market Accounting for Banks and Trifits: Lessons from the Danish Experience*, Journal of Accounting Research 33 (Spring) 1995, p. 1 - 32

to-market valuation and allowing the managers alone at the same time to choose the prices for valuation of the contracts.⁹³

This is confirmed by a recent study. It is clear that the fair value gives more freedom in the measurement of assets and liabilities. It could potentially undermine the credibility of financial statements. For example, Aboody D., M.E. Barth and R. Kasznik found that managers freely choose parameters for option pricing model. These results raise the question whether, in the future, managers will behave similarly, choosing the parameters of the model for measuring the fair value of the other financial instruments.⁹⁴

M. Gmytrasiewicz draws attention to the financial result, which becomes the result only on paper and is based on unrealized income and expenses items. This result can be determined as a function of the increase or decrease in net asset value (often estimated), and this result is not the algebraic sum of the values of real operations. This result does not describe the effects of real economic processes⁹⁵.

Contemporary accounting allow the profit and loss statement to cover more and more items that do not reflect real operations, but are the results of the application of fair value measurement, reserve creation, write-offs, etc. As a consequence, the results calculated on accrual basis in the profit and loss statement differ increasingly from the cash flows presented in the cash flow statement.

Description of studies

Aim of the study

In view of the fact that the financial results from the profit and loss statement are increasingly affected by the operations that are not the result of actual transactions (but e.g. of valuation of the ingredients of balance sheet at fair value, creating reserves, etc.), a question arises how this has an impact on the valuation of a business unit, namely the market value of a company. In other words, it is necessary to analyze the reactions of investors, when they see large differences between the results of the income statement and cash flow statement. Do they, in such a situation, sell off shares of the company fearing that the result calculated on an accrual basis is the result of the operation unreal? Or perhaps the differences between the results of the income statement and cash flow statement are not so important to them?

Thus the aim of the study is to analyze the reaction of investors to the differences between the results of the income statement and cash flow statement. Logic dictates that in such a situation, investors should sell their shares (and the price of shares should fall). The explanation for this behavior of investors may be the fear of creating financial results in isolation from actual operations and the concern of using creative accounting by the entity. Although the financial statements of companies whose shares are traded on the stock exchange are audited, it is not 100% guarantee of the accuracy of the financial statements.

In addition, the study tried to find out whether the reaction of shareholders of the banks is affected stronger by differences between the result of the profit and loss account and cash flow statements. In the case of banks these differences should be larger, because the banks have significantly more assets that can be measured at fair value in their balance sheets.

Method of studies

The study covers the Polish market. Due to the peculiarities of this market, conclusions based on the study should not be regarded as the universal rules.

The data of 20 randomly selected companies and 10 banks whose shares are listed on the Warsaw Stock Exchange were used in the studies. The analysis covers the period from the second quarter of 2001 to the third quarter of 2012. Studies are based on quarterly standalone financial statements provided by Notoria Service S.A.

The number of banks selected for the study is relatively small. This is due to the particular condition of the Polish banking sector. Actually only 15 banks are listed on the Warsaw Stock Exchange. Only 10 banks were chosen among them, because the other banks were involved in mergers and acquisitions during analyzed period. The financial results of the latter, therefore, may not

⁹³ see R. Weil, *After Enron, „mark to market” accounting gets scrutiny*, Wall Street Journal (December 4), 2001

⁹⁴ D. Aboody, M.E. Barth, R. Kasznik, *Firms' voluntary recognition of stock-based compensation expense*. Journal of Accounting Research 42 (2), 2004, p. 123-150

⁹⁵ M. Gmytrasiewicz, *Teoria rachunkowości a Międzynarodowe Standardy Sprawozdawczości Finansowej*, [w:] T. Cebrowska, A. Kowalik, R. Stępień (red), *Rachunkowość wczoraj, dziś, jutro*, SKwP, Warszawa 2007, p. 115

be comparable with the former. Of course, there are more banks on the Polish market, but those are local.

First, the differences between the net financial result (from the profit and loss account) and the sum of net cash flows (from statement of cash flows) were calculated. Since we are interested in differences between these two results, therefore we took into consideration the absolute value. Then this amount was divided by the value of the assets. It could help to make comparisons over time and between different units. For simplicity, let's call this relationship as A. It will be expressed by the following formula:

$$\frac{|net\ financial\ result - sum\ of\ net\ cash\ flows|}{sum\ of\ assets} \quad (A)$$

Then the investors' reactions to the published financial statements were analyzed. For this purpose, the average price of the shares during seven days before the date of publication, and the average share price during seven days after the publication of the financial statements were calculated. Share prices were taken from Internet service of Warsaw Stock Exchange (www.gpw.pl). Then these values were used to determine the rate of change in average share prices.

The findings and conclusions of the study

The correlation coefficient calculated for the chosen companies between the rate of change in average share prices and the relation A is 0.04. The same relation was calculated for banks. The result is 0.0186.

Our results therefore indicate a lack of significant correlation between changes in stock prices and the discrepancies between the results calculated on a cash basis and accrual basis. For the banks, the correlation coefficient is even lower than for the other companies.

The correlation coefficient for the individual company was the highest (0.42) for Prima Moda SA. Table 1 shows the results for the companies that have the highest and the lowest correlation coefficients.

Table 1: The correlation coefficients for selected companies

Short name of the company	Prima Moda	Próchnik	Redan	Indykpol	Wawel
The correlation coefficient between relation A and the change in average prices of shares	0.387841	0.246572	0.048472	0.021152	0.071508

Source: Author's table

Table 2 shows the correlation coefficients for the banks that have the highest and the lowest correlation coefficients

Table 2: The correlation coefficients for selected banks

Short name of the bank	BRE	Kredyt Bank	Handlowy	Pekao	PKO	BPH
The correlation coefficient between relation A and the change in average prices of shares	0.123153	-0.12208	-0.03385	0.050852	0.063464	0.048044

Source: Author's table

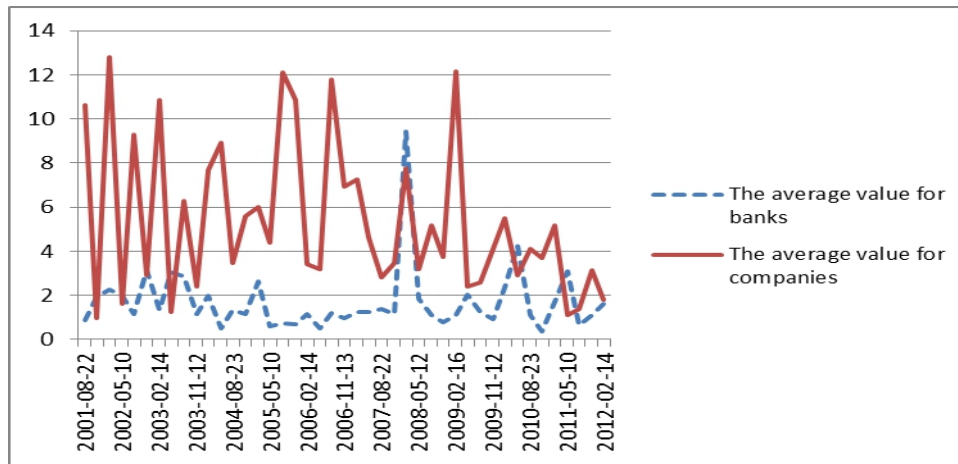
The biggest changes in average share price was recorded in 2008, particularly in the fourth quarter. Regardless of the industry in which the company operated, published reports for the last quarter of 2008 in almost every case marked the decline in stock prices. This was due to the market situation and the fear of the consequences of the financial crisis.

As a result of the studies it has been also noted that the average value of relation A for the banks is much lower than for other companies. The average value of relation A for the banks is 1.699, while the same value for other companies is equal to 5.38. It is very strange, because the banks have in its assets a lot of items which can be measured at fair value. In addition, banks are required to make provisions for bad loans, which are recognized as cost but without any cash flow.

Provisioning was particularly noticeable in 2008. As a result of the financial crisis, the condition of the borrowers has worsened. Then, the relation A reached even the level of 59.36 in one

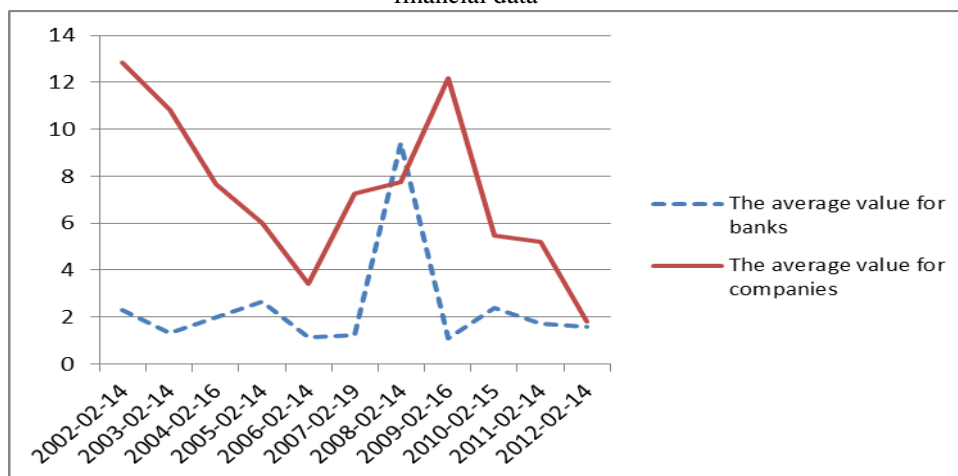
of the banks. However, in general the average indicator A for banks remains relatively low in comparison to the other companies. The average values of relation A for banks and businesses are presented on Figure 1. They were calculated on the base of quarterly data. Therefore, the variation of the ratio is relatively large. However, Figure 2 shows the mean values of relation A calculated for annual data.

Figure 1. An average value of the relation A for selected banks and companies calculated on base of quarterly financial data



Source: Author's figure

Figure 2. An average value of the relation A for selected banks and companies calculated on base of annual financial data



Source: Author's figure

It is clear that the average values of relation A for companies are higher than for banks. This means that companies more often take into account the non-monetary operations in the profit and loss statement.

Conclusion

In consequence, the result of study indicates that investors do not care about the differences between profit calculated on the accrual basis and the cash basis. There is no correlation between the changes in the share prices and the differences between the financial results calculated in the profit and loss account and cash flow statement. Investors do not consider the differences between these results as an attempt to create artificial earnings. In case of such differences they do not sell off shares. It could be argued that investors are aware of the shortcomings of accounting and are able to see them.

Analyzing the relation A, it can be seen that the average value for the companies is much higher than for banks. This means that the companies try to create profit by the non-monetary operations. It is very strange, because banks have more opportunities in this area.

Research is focused on companies and banks operating in the Polish market. The results are drawn from the analysis of selected companies and banks. It may not be appropriate to regard them as universally applicable rule.

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