# A TEST OF THE OHLSON MODEL ON THE ITALIAN STOCK EXCHANGE

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**ABSTRACT**

*This article belongs to the current in research literature, which is concerned with value relevance. Its main aim is to test the impact of the current and future accounting variables on the firm's market value, by analyzing these relations with reference to the financial sector of the Italian Stock Exchange. To pursue this objective we carried out a multiple linear regression analysis, within a model inspired by the Ohlson model (1995). The model employed verified the research hypotheses for following (subsequent) stages by testing at first the impact of the current accounting variables, then of the future ones on the firm's market value. The results of the analysis show that the relation between the accounting variables (current and future) and the market price, after controlling for market risk, is fully proved on the Italian market, meaning that investors price accounting data in their firm's evaluation process. The article contributes to expand the number of empirical research studies on the value relevance of accounting variables, by analyzing this theme on a Stock Exchange market not yet explored from this perspective. The main originality of the article consists in its being one of the first research studies to test the validity of the Ohlson model (1995) in its original version on the Italian market.*

**JEL:** G14, G21, G22, M41

**KEYWORDS:** Value relevance, Ohlson model, analysts' forecasts, financial sector.

## INTRODUCTION

The present work belongs to the strand of literature known as *Value Relevance Analysis* (VRA), which, since 1995, has seen significant development and whose objective is that of estimating the relevance of an accounting value in the determination of market value. (Courteau, 2008). The theoretical basis on which the study is founded is represented by the Ohlson model (1995) - the main point of reference in market based accounting research (Giner and Iniguez, 2006 b) - the success of which amongst accounting scholars is due to its development of a rigorous theory for firm evaluation in terms of accounting. In this model, market evaluation is a function both of the fundamental accounting variables, and the "other information" variable ($v$), which contains all the information affecting future firm profitability and thus market forecasts. Although the model undergone to several empirical tests, particularly in the United States, much has yet to be learned on the market value/accounting values ratio in other geographical contexts, as well in as environments characterized by different forms of accounting regulation (Courteau, 2008). For the above reasons, we have chosen to test the validity of the model on a national market, which presents different characteristics both in terms of size (number of quoted firms), and orientation- towards the market or towards banks (Brealey *et al.*, 2007).

The present work has two aims: 1) To test the influence of the accounting variables *earnings* and *book value* on the firm's market value. 2) To test the influence of future profitability (approximated by financial analysts' forecasts on future earnings) on the market value of the firm. To verify the research hypotheses we conduct a regression analysis with a model inspired by the original version of the Ohlson model (1995). The research model tested the hypotheses in stages: first by testing the impact of the accounting variables on market value, and later the impact of financial analysts' forecasts on market value. The findings confirm the existence of a positive relationship between accounting values and market values.

The analysis focused on a particular area of the Italian capital market, the financial sector. The particular characteristics of this sector compared with others tend to induce market researchers to exclude it from their analysis. In the present study, by contrast, we focused our attention precisely on this sector in an attempt to establish whether the Ohlson model holds validity in this context. The year considered closed on 31/12/2009. The choice of limiting the data to the 2009 financial year is due to a desire to verify whether the relation between accounting and market values is still valid after the global financial crisis of 2008.The research favors an increase in knowledge from both the theoretical and the empirical points of view. As regards the theory, our research contributes to the spread of the value relevance model in the Italian context, which has not yet enjoyed particular attention from scholars. From the empirical point of view, the study contributes to the growing number of empirical studies in the field of value relevance. The originality of the present work consists in its being one of the first studies in Italy which aims at testing the validity of the Ohlson model (1995) in its original version.

The paper follows a positive methodological approach, which, as is widely known, extrapolates the research hypotheses from a fundamental theory. The remainder of the paper is as follows. Section 2 briefly discusses the relevant literature on the Ohlson model (1995). Section 3 describes research hypotheses and research methodology. Section 4 describes the best proxies for the risk, while Section 5 illustrates the empirical model used, while Section 6 illustrates data selection. Section 7 provides analysis and interpretations of the empirical findings and Section 8 concludes the paper.

## LITERATURE REVIEW

The Ohlson model (1995) is the best known of the models of value relevance aimed at formalizing the relationship between accounting values and firm value. This model constitutes a solid theoretical framework for market evaluation based on fundamental accounting variables (capital and income), as well as on other kinds of information which may be relevant in predicting firm value. The Ohlson model (1995) focused on three main assumptions (Dechow *et al.*, 1999). The first considers firm value as the actualization of expected dividends (*Dividend Discounted Model* – DDM). The second assumption, known as *Clean Surplus Relation* (CSR), establishes that all modifications to the value of net firm assets classify as income or as dividends. The third assumption, known as *Linear Information Dynamics* (LID), shows that the residual earnings in time ( $X^a_{t+1}$ ) depend in part on the residual earnings of the previous year ( $X^a_t$ ), and partly on a series of other pieces of information ($v_t$), known to the market at time *t*, but not yet incorporated in the accounting system and, thus, excluded from the calculation of ( $X^a_t$ ). This assumption confers originality on the model and leads to its formulation in the way considered in the present study. According to Ohlson, starting from DDM and combining the above-mentioned assumptions, the market value of firm is as follows:

$$MV_t = B_t + \alpha_1 X^a_t + \alpha_2 v_t \qquad (1)$$

Equation (1) shows how the value of a firm at any moment *t* is equal to the sum of three terms: its current net assets ( $B_t$ ), which depend on the current residual earnings ( $X^a_t$ ), and a term, which depends on the information available through extra-accounting sources at time *t,* ( $v_t$ ).

In theoretical terms, the Ohlson model (1995) bases itself on a number simplifying assumptions. It assumes that investors are risk-neutral, that accounting is unbiased, that a clean surplus relation always holds, that no information asymmetries exist, that tax rates faced by shareholders are irrelevant, that market does not take explicitly into account real options and that abnormal earnings and '*v*' evolve in an autoregressive manner. To overcome limitations deriving from these simplifications, Ohlson himself, with other authors, intervened in the debate on the base model expressed by equation (1) (Ohlson 1995,

2001; Feltham and Ohlson 1995). Other authors focused on the question of firm-specific risk (Gebhardt *et al.*, 2001), information asymmetry (Hand and Landsman, 1999), taxes (Collins and Kemsley, 2000; Harris and Kemsley, 1999), real options (Yee, 2000) the time-series properties of abnormal earnings (Dechow *et al.,* 1999) and the linearity of function (Yee, 2000).

In the case in hand, we decided to use the base line version of the Ohlson model. We based our decision on a recent empirical study (Giner and Iniguez, 2006 b), which shows that models based on the original version are able to explain share prices with greater accuracy and fewer distortions of the real data than more complex models, such as, for example, that of Feltham-Ohlson (1995).

Research testing the OM (1995) and its subsequent versions have been widespread and most of the literature refers to the USA (Baumann, 1999; Myers 1999; Dechow *et al*., 1999; Callen and Morel 2001). Exceptions to this include the studies of McCrae and Nilsson (2001), Ota (2002) and Giner and Iniguez (2006 a) which consider the Swedish, Japanese and Spanish markets respectively. In order to use the Ohlson model (1995) of the equation (1) in their regression analyses, researchers modified it as follows:

$$MV_t = \beta_0 + \beta_1 B_{it} + \beta_2 X^a_{it} + \beta_3 v_{it} + \varepsilon_{it} \quad (2)$$

The role of the intercept and the residual term (ε) is to capture that part of share price variation, not explained by the variables on the right hand side of equation (2).
Lastly, as the regression models used in the study of value relevance often substitute residual earnings with net earnings, equation (2) can be re-written as follows:

$$P_t = \beta_0 + \beta_1 B_{it} + \beta_2 X_{it} + \beta_3 v_{it} + \varepsilon_{it} \quad (3)$$

The above equation is the one most widely used by scholars in empirical research (Aboody, 1996; Amir and Lev, 2001; Barth *et al.*, 1999). Focusing on the "other information" variable, we note how up until 1998, all empirical research based on the Ohlson model ignored the '*v*' variable because of the difficulties entailed in its identification (Hand, 2001; Hand and Landsman, 1998). Few researchers took this variable into consideration, each following an intuitive and individual course rather than seeking to derive it from a formal rational process (amongst others, Amir and Lev, 1996; Ittner and Larcher, 1998; Myers, 1999; Dechow *et al.*, 1999; Barth *et al.*, 1999). Ohlson himself intervened in the debate in 2001 (Ohlson, 2001), clarifying that ignoring the '*v*' variable reduces the model's empirical content and that, although the variable could be termed as a "mysterious" variable, it can be approximated with predictions of future earnings made by financial analysts. The authors of the present work, therefore, have chosen to apply the original version of the Ohlson model (1995) including the '*v*' variable as analysts' forecasts on earnings (Ohlson, 2001).

## RESEARCH HYPOTHESES AND METHODOLOGY

In line with the theoretical framework of the Ohlson model described above and other studies which have empirically tested the value relevance of accounting variables (Gallizo and Salvador, 2006; Ragab and Omran, 2006; Mui-Siang Tan and Yeow Lim, 2007), the following research hypotheses were formulated:

*H1: there is a positive relation between market value and book value*

*H2: there is a positive relation between market value and earnings*

*H3: there is a positive relation between market value and analysts' forecasts on future earnings*
The methodology employed to verify the research hypotheses (H1-H3) was the econometric technique of

multiple linear regression with the least squares method (*Ordinary Least Squares - OLS*). Firstly, the regression function used to test the research hypothesis is as follows:

$$P_i = \beta_0 + \beta_1 BVPS_i + \beta_2 EPS_i + \beta_3 EPS_i^* + \varepsilon_i \quad (4)$$

It should be noted that the data used in the research is taken into consideration 'by shares' (i.e., divided by the number of shares in circulation), following a technique called scaling. Ohlson himself (2000) suggests this technique in order to avoid distortions in the calculation of coefficients of the line of regression, which may lead to misleading results (Courteau, 2008). According to the model expressed by equation (4), not only the Book Value Per Share (BVPS) and the Earning Per Share (EPS), but also the '*v*' variable contribute to the share price; the latter variable should express facts known to the market at time *t* and not (yet) incorporated into the accounting system, but nonetheless able to affect future earnings. The decision to render explicit the '*v*' variable with the financial analysts' forecasts ($EPS^*$) is justified by the consideration that such information of a perspective nature summarizes the most relevant part of all the information of a non-financial nature which can have an impact on a firm's future performance (Zhang, 2002; Byard and Cebenoyan, 2007).

In order to assess the impact of the financial analysts' forecasts on share prices correctly, it is necessary to neutralize the action of other factors which affect both the dependent variable (P) and the explanatory variables, referring both to actual balance sheets (BVPS and EPS) and future prospects ($EPS^*$). As is widely known, these are the factors, which, from a statistical point of view, known as control variables. In a model such as that of Ohlson, one cannot ignore the role played by market risk, given the fundamental relationship between risk and expected returns, and the implications of such a relationship both on market value (dependent variable) and on profitability (independent variable). Hence, in equation (4), we have inserted risk as a control variable:

$$P_i = \beta_0 + \beta_1 BVPS_i + \beta_2 EPS_i + \beta_3 EPS_i^* + \beta_4 risk_i + \varepsilon_i \quad (5)$$

The Definition of the Best Proxies of Risk

In order to define the best risk proxies, we needed to define a) the model to which to refer (mono-dimensional or multidimensional; b) the variables to choose as risk proxies. The main reference model that has theorized the risk-yield relationship is the Capital Asset Pricing Model (CAPM), elaborated independently by Sharpe (1964) and Lintner (1965), which establishes a connection between the performance of a share and its riskiness, measured by a sole risk factor, known as beta (β). In 1993, Fama and French, based on a series of empirical results, which highlighted the inadequacy of the CAPM, perfected a multidimensional model of risk (three-factor model) which takes into consideration, as well as the market *beta,* the other two variables, *size* and *book-to-market* in explaining share performance. The debate on the validity of the CAPM is not yet been solved; as well, the three-factor model is still the object of empirical testing, aimed at ascertaining whether results that hold for the American market are valid also in different contexts and periods. In this article, we have followed a multi-factor risk approach. In detail, starting from the Fama and French (1993) model and considering its application to the Italian context (Barontini, 1997; Beltratti and Di Tria, 2002; Bruni *et al.*, 2006; Brighi and D'Addona, 2008; Alesii, 2006; Aleati *et. al.*, 2000; Cavaliere and Costa, 1999), we choose the following risk proxies *beta, size* and *leverage*.

Our decision to choose to include *beta* as risk proxy is due to the key role played by beta in multidimensional models of risk assessment, even though results in the Italian sample provide mixed results with regard to its role in explaining share returns (Fama and French, 1993). The debate on the role of *size* as a risk factor (Banz, 1981) finds its most important motivation in the observation that small

firm's shares give greater returns than big firms do. One of the most persuasive explanations of the phenomenon, confirmed in different territorial contexts, is that the operators have information fluxes, which are less consistent and accurate when dealing with smaller firms. Financial markets translate this high level of uncertainty into a higher risk and, therefore, into higher demanded returns (Cavaliere and Costa, 1999). In the sample of studies under examination, the relation between size and yield holds. The Italian market thus seems to consider this factor in risk analysis, and hence we include 'size' amongst the explanatory risk variables. As regards the issue of size measurement, the chosen solution was that of expressing size through the most widely used indicator in econometric analysis, namely the number of employees to the firm's total sales (Juma and Payne, 2004) as suggested by the European Commission (European Commission 2003). Finally, a natural risk proxy is the firm *leverage*, for which Bhandari (1998) finds empirical evidence of its relation with firm revenue.

We have chosen to insert this variable in the present study for various reasons. Firstly, in the financial sector it is not possible to disregard such a risk indicator. Secondly, numerous studies on the Fama and French three-factor model have inserted leverage as an additional variable (Derwall and Verwijmen, 2006). Lastly, in agreement with Bandhari (1988) we believe that leverage is a catchall proxy, useful when a risk measure is unknown or difficult to measure. In the regression equation elaborated in the present study, the indicator used to measure leverage has been the total debts/total assets ratio. The reason for the exclusion of the third Fama & French's risk factors, the *book-to-market* ratio, is due to the circumstance that this ratio has had alternate success in empirical studies. It results highly relevant for US firms, whereas in Italy several studies have been unable to prove the existence of a link between this indicator and share revenue (Barontini, 1997; Aleati *et al.*, 2000; Bruni *et al.*, 2006). This circumstance and similar considerations demonstrated in numerous other studies (Reinganum, 1981; Banz, 1981; Banz and Breen, 1986) that size absorbs the value effect, has led us to use size as a proxy of the book-to-market effect.

Research Model

Two subsequent stages tested research hypotheses (H1-H3). Firstly, we verified the hypothesis relating to the existence of a positive relation between market value and book value (H1) and between market value and earnings (H2). We then verified research hypothesis H3 (the existence of a positive relation between market value and financial analysts' forecasts). The regression function used to test hypotheses H1 and H2 was determined starting from equation (5), in which we inserted the risk proxies as determined in the previous section:

$$P_i = \beta_0 + \beta_1 BVPS_i + \beta_2 EPS_i + \beta_3 beta_i + \beta_4 size_i + \beta_5 leverage_i + \varepsilon_i \qquad (6)$$

P stands for the share price of the *i*-nth firm three months after the end of fiscal year. $\beta_0$ represents the intercept, BVPS is the book value per share, EPS is the earning per share. Beta is the systematic market risk index, size and leverage are firm-specific risk indicators and $\varepsilon$ represents the error term, for which we consider a normal distribution, an average of zero and the absence of a correlation with the other variables in the model.Given that there is a problem of time lag between the explanatory variables and the dependent variable, as share prices take time to incorporate accounting information, we took them at the end of the first trimester of the period under consideration. On the other hand, we took accounting explanatory variables (BVPS and EPS) and the risk variables at the 31/12 of the period under consideration. The equation (6), determined adding the financial analysts' forecasts ($EPS^*$) to the explicative variables, shows the regression function used to test all the three hypotheses:

$$P_i = \beta_0 + \beta_1 BVPS_i + \beta_2 EPS_i + \beta_3 EPS_i^* + \beta_4 beta_i + \beta_5 size_i + \beta_6 leverage_i + \varepsilon_i \qquad (7)$$

Sample Selection and Data Collection

The sample of firms selected to test the research hypothesis was made up of firms quoted on the Italian Stock Market which constitutes the so-called financial sector including banks, insurance companies (both life and non-life insurance) and firms from the "other financial services" sector. The Italian market was chosen for two reasons: 1) to obviate the current lack of empirical studies aimed at verifying the relations between market value and accounting values; 2) to test the validity of the Ohlson model on a market with significantly different characteristics compared to the Anglo Saxon one (Courteau, 2008; Brealey *et al.*, 2007). One significant preliminary difference of the Italian market is that it is bank-orientated, whereas the US market is decisively market-orientated, allowing firms to enjoy easier access to alternative sources of funding (Onado, 2008).

Further, the national regulation system has a legislative matrix, whereas in the Anglo-Saxon experts in the sector draw up markets accounting regulations. Moreover, whilst in the Italian market we see a substantial connection between ownership and control of firms, the Anglo-Saxon markets present a wider ownership of the equity capital (Courteau, 2008). Further peculiarities of the Italian market are identifiable in the high concentration of shareholders and the limited diffusion of a managerial culture amongst investors (Brealey *et al.*, 2007). The listed characteristics, together with the scarcity of empirical studies in the Italian context, have encouraged the authors to investigate the validity of the Ohlson model (1995) on the domestic market. In particular, we choose the financial sector to fill the void in empirical market research, which has hitherto excluded the financial sector from analysis.

The criteria followed for the sample selection were the following: we included the firms quoted in the year 2009; we took into consideration only firms not banned by regulators; we eliminated observations relating to quoted firms in which one or more of the key variables necessary to the calculation of the indicators were missing.

The Italian financial sector taken into consideration thus consisted of 53 firms, 20 of which belonging to the banking sector, 8 to the insurance sector and 25 to the financial services sector. Owing to the quantity of missing data, the final sample consisted of 30 firms, 15 of which belonging to the banking sector, 7 to the financial services sector and 8 to the insurance sector. Once defined the sample, we proceeded with the collection of the necessary secondary accounting data through the widely used *DataStream* database. The data thus collected, then re-elaborated in Excel spreadsheets, produced the input variables for the econometric model employed. To verify whether the investigated relation is still valid after the financial crisis of 2008, we decided to refer our analysis only to 2009. Table 1 reports the summary statistics of the variables employed in the estimation.

Table 1: – Summary Statistics

| Variable | Observations | Mean | Std dev | Min | Max |
|---|---|---|---|---|---|
| March closing price | 30 | 5.44 | 5.17 | 0.28 | 23.36 |
| BVPS | 30 | 6.32 | 6.20 | 0.40 | 24.28 |
| EPS | 30 | 0.19 | 0.22 | 0 | 0.81 |
| EPS* | 30 | 0.42 | 0.42 | -0.02 | 1.7 |
| Beta | 30 | 1.01 | 0.36 | 0.36 | 1.84 |
| Leverage | 30 | 26.86 | 18.56 | 0 | 68.78 |
| Size | 30 | 0.01 | 0.03 | 0.0002 | 0.15 |

P-values showed in the table refer to the t-test, which is the coefficient divided by the standard errors. Standard errors were corrected for the White test, which keeps heteroskedasticity problems in check; further, multicollinearity of the dependent variables, which could have an impact on the significance test, was tested through a correlation analysis, not included here, which revealed no problems of collinearity.
The first three columns in table 2 report the results of the OLS regressions where the March closing price

is regressed independently on BVPS, EPS, EPS*. The second three columns show the March closing price regressed independently on explicative variables after controlling for the three risk proxies (beta, size, leverage). The inclusion of the control variables in all cases improves the fit of the model to the collected data.Finally, the last two columns show the results of the regression equation (6) and (7).

## REGRESSION RESULTS

Table 2 shows the results of the regression analysis that tested the research hypotheses H1-H3.

Table 2: Results of the Regression Equation (7)

| Variables | Predicted Sign | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 |
|---|---|---|---|---|---|---|---|---|---|
| Book value per share (BVPS) | + | 0.61*** | | | 0.63*** | | | 0.58*** | 0.11** |
| Earnings per share (EPS) | + | | 11.47*** | | | 10.50** | | 7.58*** | 2.44** |
| Forecast Earnings per share (EPS*) | + | | | 11.91*** | | | 11.77*** | | 10.05*** |
| Beta | - | | | | -0.64 | 1.76 | -0.26 | -0.12 | -0.25 |
| Size | + | | | | 10.14 | -18.87 | 5.50 | 12.75 | 9.06 |
| Leverage | - | | | | -0.09** | -0.05 | -0.02 | -0.07** | -0.03** |
| Cons | ? | 1.55 | 3.22*** | 0.39 | 4.37** | 3.06 | 1.25 | 2.19 | 0.90 |
| $R^2$ | | 54.4% | 23.42% | 94.48% | 63.33% | 29.37% | 95.03% | 72.60% | 96.34% |
| *F* test | | 33.40*** | 8.56*** | 479.05*** | 10.79*** | 2.60** | 119.38*** | 12.72*** | 100.79*** |

****, **, * show 1%, 5% and 10% level significance respectively.*

Model 7 tested whether investors include accounting information on the value of net equity (H1) and profitability (H2) in their firm evaluation. The variables of interest are thus the values assumed by parameter $\beta_1$ and $\beta_2$ of the regression equation (6), which should be positive and statistically significant if the research hypothesis is valid. From the analysis of Model 7, it emerges that both hypotheses H1 and H2 appear to be demonstrated, as the book value per share (BVPS) and earnings per share (EPS) coefficients are significant *(p-value <0,001)* and they vary in the predicted direction (positive relation between assets value and firm profitability, on the one hand, and market value on the other). Of the two coefficients, the EPS seems to be the more significant. Lastly, the signs of the control variables vary in predicted direction. The model appears apt for describing the relation between market value and the explanatory variables ($R^2$= 72.60%) and the diagnostic statistical F, which measures the overall significance of the coefficients together, is significant.

The last column shows the results of the regression analysis, which tested research hypothesis H3. Once again, the research hypothesis to test is whether investors in their firm evaluation process, include information on future profitability. Generally, researchers use the predictions of market experts to proxy the future earnings. In our research, we use the analysts' forecasts on earnings. This information is publicly available, in accordance with the regulations of CONSOB (Italian National Commission for the monitoring of companies listed on the Stock Exchange) and the Italian Stock Exchange.

As regards the regression equation (7), the variable of interest is the value assumed by parameter $\beta_3$. We expected this coefficient to be positive and statistically significant. As we can see from the last column, the resulting data for the fundamental accounting variables (BVPS and EPS) appear robust to the inclusion of the EPS* variable. The value of the EPS* coefficient, which measures the future EPS predictions by financial analysts at the end of the considered period (31/12/2009), is highly significant and its value shows a direct and extremely close relation to market price. The control variables move in the predicted direction but only the leverage variable is also statistically significant. The inclusion in the model of the financial analysts' forecasts improves both the fit of the model to the collected data

($R^2$=96.34%) and the conjoint significance of the coefficients, tested by the diagnostic F.

Concluding Considerations and Suggestions for Future Research

The present work had two aims. Firstly, it tests the influence of accounting variables earnings and book value on the firm's market value; secondly, it tests the influence of future profitability (approximated by the financial analysts' forecasts on future earnings) on the market value of the firm. The methodology used is a regression analysis using a pooled OLS model based on the Ohlson model (1995). The analysis focused on a particular area of the Italian capital market, the financial sector, which comprehends banks, insurance companies and other financial sector companies. The year considered closed on 31/12/2009.

The research model tested the hypotheses in two stages: first by testing the impact of the accounting variables on market value, and second the impact of financial analysts' forecasts on market value. The results of the first stage analysis show that the relation between the accounting variables (current and forward) and the market price, after controlling for market risk, is fully proved on the Italian market, meaning that investors price accounting data in their firm's evaluation process. Such results are in line with those from other international studies, in which $R^2$ is between 70% and 90% (Courteau, 2008). In the second stage of analysis, we included the financial analysts' forecasts on future earnings as an explicative variable of the model. The choice to use the complete Ohlson (1995) model, inclusive of the 'v' variable is justified by the consideration that investors, in evaluating firms, do not consider only current accounting information, but also information on the future firm's profitability.

Therefore, to ignore the impact of these last on the firm's market evaluation could have two negative consequences. Firstly, the limitation of the explicative power of the model, which could be deprived of an explicative variable of considerable importance above all in contexts characterized by environmental uncertainty and turbulence such as that pertaining at present. Another problem could be the statistical bias caused by the omission of an explicative variable of the model. The findings of the second stage analysis confirm the research hypotheses, since the $R^2$ of the model inclusive of the financial analysts' forecasts on the firm's profitability (H3 hypothesis) is bigger than the $R^2$ of the model, which includes only the current accounting variables. Moreover, the statistical diagnostic F, testing the conjoint significance of the explicative variables' coefficients is higher for the model inclusive of the H3 hypothesis. Moreover, these results could be a proof that the relation between accounting and market value is still valid after the financial crisis of 2008.

The main limitations of the paper reside in the limited range of the data examined (referring only to the financial sectors) and in the brief time span considered (2009). For this reason, it is necessary to exercise a degree of caution in drawing conclusions from the findings. Potential improvements to the present study may see its extension to further sectors of the Italian Stock Market, as well as extending the periods and employing sophisticated econometric models. Moreover, the variable relating to market expectations of future firm performance approximated in this work by the forecasts of financial analysts, could be refined to consider not just predictions on future performance, but also those on further relevant accounting variables such as those linked to book value.

Finally, the present work may benefit from an in-depth examination of the issues linked to the choice of variables dealing with risk, i.e., integrating and placing them together with the macroeconomic variables (interest rate performance, economic performance, etc.) and/or considering further variables, successfully tested in other empirical studies using the Ohlson model. As regards future research implications, the results constitute a preliminary verification, on the Italian market, of the validity of the Ohlson model in its original formulation. Moreover, an increased understanding of the determinants, which orientate investment choices, could influence the managerial choices regarding the application of opportune accounting evaluation criteria. In addition, knowledge of the criteria adopted by financial analysts in

forecasting a firm's future profitability becomes crucial for management in identifying the elements to monitor in terms of their influence on future company performance.

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