REEXAMINING THE RELATIONSHIP OF EARNINGS AND EQUITY WITH SHARE PRICE: A STUDY OF COMPANY SPECIFIC AND UNCONTROLLABLE DYNAMICS IN PAKISTAN

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ABSTRACT: *Determining share price is of major concern to investors at individual as well as institutional level. Different techniques based on diverse schools of thought are used in this regard; however since the market efficiency's notion is aroused, fundamental analysis is getting more attention. Reported information (earnings and equity) are most used variables in stock valuation after dividends.Effects of company specific characteristics and uncontrollable events are considered vital on the relationship of these variables with share price. We chosesix characteristics (Firm Size, Profitability, Dividend, Leverage, Accounting Standards' adoption and financial crisis) and analyzed their impact on the relevance of earnings and book value of equity.We employed the fixed effects estimation technique along with the dummy variables (used for above mentioned attributes)on 2790 firm year observations of non-financial companies listed at Karachi stock exchange for the period of ten years (2001 to 2010).We found no significant effects of firm specific factors. However accounting standards and financial crisis changed the relationship of earnings and equity with share price, significantly.Post adoption period show improved relationship, but during financial crisis relevance was adversely affected. Study concludes that earnings are more relevant throughout the study period and gets attractive for large, profitable and dividend paying firms.*

Keywords:*Share Price, Earnings, Book value, Firm Size, Leverage, Dividend Policy, Accounting Standards, Financial Crisis*

JEL Classification Codes: G11, G14, M41

1. INTRODUCTION

Investors will be better off if accounting information may have some explanatory power for stock price [1]. This feature of information is center to the concept of value relevance. What determine that the information is useful are three criteria: at the earliest the sufficient disclosure, material effect, and co-moments between accounting variables and share price. The principle of sufficient disclosure states that companies should disclose all the relevant information via notes to the accounts, which may affect investor's decision. Authors concluded that all the companies have heterogeneous financial disclosures in relation to the firm size [1]. To be useful, a particular piece of information must have some material effect on investor decision. The last requires that accounting variables must have significant co-relation with stock price.Many researches have been conducted to test third criterion [2,3,4,5].Our study focuses on the third criterion.The objective in this study is to enhance the understanding of value relevance and empirically investigate value relevance of accounting information for companies listed on the KSE (Karachi Stock Exchange). Given varies types of value relevance research methods, welimit our research to only emphasis on value relevance of earnings and equity book values. Motivated by previous studies and the lack of value relevance studies in Pakistan, this study will mainly focus on examining which consequences the financial crisis in 2008 had on the relationship between accounting information and the market values of firms in the Karachi Stock market. To some extent the crisis is still unfolding, therefore there is limited yet insightful empirical evidence addressing value relevance during the economy collapse. Researchers have investigated the association between financial health and value relevance where findings suggests mixed results [6,7,8]. It is therefore very interesting to examine the impact on value relevance in the Karachi stock market when instability in the macroeconomic environment appears.We reexamined the association between the accounting information (earnings and book value of equity) with share price. This revisit comprises the study of these variables in perspective of certain fundamental as well as macroeconomic characteristics. We studies concerned relationships with leverage, profitability/loss reporting, firm size and dividend policy. Similarly to gauge the effect of uncontrollable events we considered accounting standards adoption and financial crisis. For this purpose, we selected 279 companies listed at Karachi Stock Exchange Pakistan. Study used fixed effect method to draw inferences.

2. Literature Review

2.1. History of historical research on value relevance of accounting information

Ball and Brown [5]defined value relevance research as the factor that affect the stock price and return on market value of stock. All the researches held in history have a common

understanding that value relevance research helps the investors to empirically investigate the accounting information [3,9,10,11,12].

Historical researches further claimed that accounting information and value of stock in the market is considered value relevant if statistical relation exist between them. Accounting information which is reflected in earning and book value are used by researchers in value relevance research because it gives summarized information of financial performance and financial position. The first objective of value relevance research is to measure how much variability in stock price is due to accounting variables [4]. In value relevance research model specification approach was developed by Ohlson [2]. This model measures the effect of independent variable over the dependent variable. Dependent variable is denoted as market value of the stock and independent variable is denoted as earning and book value.

Over 1000 research papers have been published in the past 3 decades to investigate the relationship of financial market and financial statements in different journals of finance and accounting [13]. In U.S most of the empirical researches have been published in the journals such as Journal of Accounting Research, Journal of Accounting & Economics and The Accounting Review. These Journals have served as benchmarks in statistical research of value relevance. There are many other unpublished studies which aggregate the depth of value relevance. For example, unpublished study of Gjerde, Knivsflå, and Sættem [12] conducted study on the OSE (Oslo stock Exchange) and concluded that earning value relevance has increased gradually over the previous four decades. The finding of Gjerde, Knivsflå, and Sættem [14] not consistent with a published study of Francis and Schipper[3] which concluded that illustrative strength of earning information has decreased over the time. Now the question arises why there are contradictions among these studies. The key reasons may be:

- The difference in sample used in study
- The difference is sample size.
- The difference in model specifications

In the following section different perspectives of empirical research and evidence over time is discussed.

2.2. Classifications of value relevance studies

Studies in value relevance can be classified on many bases however three are familiar in literature: modeling, aspects, and interpretation. These are discussed individually in detail.

Holthausen and Watts [14] classified value relevance into three categories. (1) Relative association studies in which researchers test the differences in the explanatory power of R^2 applying regression analysis to measure the association between the financial market and alternative bottom line measures. The most popular method among researches is the explanatory power of R^2 because it allows researchers to compare their findings with the similar researches. Accounting numbers with greater R^2 is more value relevant. (2)The study of incremental association helps to explain whether return or value given other specified variables can be explained by accounting number of interest. If estimated regression coefficient are not zero then accounting information is more value relevant. (3) Marginal information content studies investigate whether accounting information provides additional information to investors. If there is a change in the stock price due to some accounting information, it is considered as value relevant information. According to Beaver [15] capital market research has five perspectives. These perspectives identify the key research areas that have great contribution to accounting knowledge. These five areas are:

- Market efficiency
- Feltham-Ohlson modeling
- Value relevance
- Analysts' behavior
- Discretionary behavior

Author characterized the first two areas as the basis of understanding accounting in capital market. The last three areas help some form of accounting structure or individual behavior. Beaver [15] claimed that value relevance perspective has two unique features. The requirement of first characteristic is an in-depth knowledge of research and requirement of second characteristic is the issue of timeliness. Timeliness represents value relevance research as level studies where market value at a point in time is treated as a function of a set of accounting variables, such as assets, liabilities, revenues, expenses, and net income. Level study does not consider timeliness factor like event study. Event study considers stock price fluctuations over the short time period on announcement dates, while level studies identify the factors that affect the stock price over long time period. Beaver [15] further question that why timeliness is not the key issue and concludes that researches are interested in variety of factors while timeliness is just a single dimension for a researcher's problem of discussion. For instance, timeliness in not an important factor to in case of examining what type of accounting information is reflected in firm value while finding the value of the firm over the time period, timeliness must be considered [15]. Ball and Brown [5] explained the importance of timeliness in empirical research. They also said that content of income statement was considerable useful. Empirical finding of the research showed that half of the bread regarding disclosure of income statement is put in the pouch while the other half is thrown in the market. By these empirical findings, Ball and Brown [5] concluded that value relevance of earning information is high.

Francis and Schipper's [3] gave four possible interpretation of value relevance. First one considers accounting information as leading stock prices by capturing intrinsic share values. Value relevance will be measured as the profits generated from the implementation of accounting based trading rules. Second interpretation is that if variables used in valuation models originate form financial statement information, the information is termed as value relevant. The third interpretation is whether accounting information is used by investors in setting prices based on the statistical relation between stock value and accounting information. Forth and last interpretation is based on long term correlation between accounting information and market values. The last two interpretations are catching more

attention of researchers in the recent value relevant studies[4,13,16,17].

2.3. The value relevance of earning

Kam[1] clarifies a very diligent point in a very simple way that income statement is the most integral and essential report among all other financial reports because it depicts the operational picture of company affairs in a specific time period. Ball and Brown [5] also claimed that income statement is the most important report. Their Empirical finding of the research showed that same year's income statement contains 50% of the available information.Many researchers supported their finding that content of income statement is important than other financial statements[9,18,19].

Lev and Zarowin [19] explained two possible ways to gauge the value relevance of accounting information. First one is the explanatory power of R^2. R^2 is generated form the regression analysis.It enables to find the degree of association between the earning and return on stock. Second measure is the combined ERC (earning response coefficient) which is defined as the sum of the slope coefficients of the level and change of earnings measuring the sensitivity of the stock price to earnings. This measure find the average change in the price of the stock associated with one dollar change in earning. Low slope coefficient determine that reported earnings are not informative to the investors, while high slope coefficient determines investor's belief that earning has a hugeinfluence on the stock price [19].

Two of the regression models are popular and widely used by researches; price regression and return regression [3,9,12,19]. In price regression stock price is represented as dependent variable and earning per share (EPS) is represented as independent variable. Return regression represents abnormal earning as dependent variable and variability of regression model is denoted by the independent variable of unexpected earning. While some researchers denote return received as dependent variable and earning or change in earning as independent variable in return regression. In this study only price regression is considered.

Easton and Harris [20] concluded that returns are explained by earning variable. They conducted research to confirm the association between earning and variability in earning explaining stock return. They used multiple cross sectional regression of annual returns and their finding show a significant coefficient on earning in all 19 years, while the coefficient on the variability in earnings is significant in less than half the years. Researches that investigate the return regression using the relationship between abnormal earning and unexpected earning might relieve the effect of measurement errors because of including both earning and change in earning variables as measure of unexpected earning [20]. They assumed in this setting that both earnings variables measure unexpected earnings with errors.

Many researchers conducted study to find the change of earning value relevance. Collins, Maydew and Weiss [9] conducted a research over a 40 year period (1953-93) using cross sectional regression and concluded that incremental value relevance has decreased over the time period. Theyconcluded that incremental value relevance is decreased over the time because value relevance is shifted from earning to book value, an increase in the frequency of negative earning, development of intangible assets, and average increase in the size of the firm [9]. Lev and Zarowin[19] performed a cross sectional regression study over the 20 year time period in US to gauge the relationship between stock return and change in earning and show supportive evidence of this decline. Their finding showsdecrease in the association between earning measured by R^2 and return on stock over the time period of 1977-96. The found decrease of 6% to 12% in the early ten years and 4% to 8% decrease in the later ten years of observation. From their finding they concluded that earning explain only 5%-10% disturbances in stock return every year.

Kormendi and Lipe [21] concluded that poor relationship between change in earning and return on stock was due to earning abidance. Easton and Harris [20]concluded that previous researches used short term perspective. They empirically examined correlation between earning and return on stock using long term accounting data information and found it to be positively correlated. Their long term interval approach showed an improved association between change in earning and return on stock[22]. They characterize the price earnings relation as a system of a simultaneous equation. In a price regression, the independent variable (earnings) and the dependent variable (price) can act as if they are both endogenously determined because they are affected by information which are explicitly difficult to specify. Beaver, McAnnally and Stinson [22] provide evidence that changes in the variables, price and earnings, are endogenous implying that a portion of the single equation bias can be mitigated via joint estimation.

Marquardt and Wiedman [23] studied the impact of earning on the value relevance of accounting information. They examined two types of firms; the first is the company which feels in ease to disclose earnings forecasts nine months prior to offering and the second is the company which doesn't follow the above mentioned custom and doesn't disclose earnings forecasts.They stated that mangers of the firms who release earnings forecasts have two advantages; First advantage is that by selling their own shares they participate in secondary equity issues. The second advantage is that it improves the position of the manager in the firm which enables them to influence financial reporting. No empirical result was found that firms releasing future earnings forecasts have significant earning management nor decreased earning value relevance.

While empirical finding of Marquardt and Wiedman [23] showed value relevance of earning decrease and earning management is significant of the firms who don't release earnings forecasts.

Value relevance of earning may also be effected by volume and trading. Beaver [18] was the first researcher who examined the impact of volume and trading on earning value relevance. His finding showed that if income statement has the information content, the number of shares traded is likely

to be higher when reported earning is released. Beaver [18]testified the association between the stock price and volume of trading and concluded that reported earning is the fundamental ingredient on which the consideration castle of investor is built and neglects all other variables.Cready and Myanatt [24] used annual report release dates to measure the effect of information content on the trading activity. Their empirical finding provided no evidence of a price response but a little evidence of volume of shares response is found at annual report dates. These empirical results show that annual earnings report give valuable information to investors. These results were consistent with Hakansson[25].Cready and Myanatt [24]also concluded that the two parallel groups differ from each other in taking basic decision about investment. The former which is considered a small investor believes in shortlisted displayed information that is thrown in the market. The latter which is identified as crocodile of the market doesn't rely upon the thrown bait in form of information rather they clutch the inner most private information.

2.4. The value relevance of book value

Several researches consider valuation as components of balance sheet as the net market value of firm's equity equals its total market value of assets minus total market value of liabilities. This approach is known as balance sheet model [15]. Researchers usually apply price level regression to evaluate the book value relevance. Most common method used which represents share price as dependent variable, and book value per share (BVS) as explanatory variable. Another similar method, which represents market value as dependent variable and assets and liabilities as explanatory variables, is practiced by the researchersfor price level regression [3]. However, several researches concluded that book value of equity is highly associated with stock price. Furthermore, statistical relation between share price and book value of equity is stronger than change in earning and return on stock [3,9,19,26].

Berk and DeMarzo [27] concluded that book value is not an appropriated measure to calculate the actual value of the firm's equity. They claimed that market value of the stock depends on expectations of investor from the stock rather than historical cost of the firm's asset.Horngren and Harrison [28] supported the study of Berk and DeMarzo [27] and further claim that many equity experts believe that book value has no relationship to market value so book value is not useful for investment analysis. Horngren and Harrison [28] indicated that some investors use book value for investment analysis. According to them these investors are called as "value" investors while investors focusing on net income patterns are known as "growth" investors.

Variability of value relevance of book value has been examined by many researches [3,9,12]. Collinset.al [9] finding show that when value relevance of earning decreases, it leads to an increase of book value relevance. Their finding supported similar empirical studies that the book value would be considered essential and influential on an investor's decision making when the ship of earning sinks. It means in the critical situation book value becomes important in comparison to earning when it is negative.

Collins, Maydew and Weiss [9] gave two reasons that why book value is more important relative to earnings (1) book values are better to predict future earning when current earning contains many temporary factors and (2) book values serve as a proxy for the firm's abandonment option. To give a short summery, results indicate that book value and value relevance of earning move in opposite direction, for instance if earning decrease over time, value relevance of book value increases.

2.5. Company Specific Factors and value relevance

Hayn [29] studied the effect of the positive vs. negative earnings on value relevance of accounting information and claimed that the loser firms have less valuerelevance than profitable firms. Accordingly, if the number of loser firms is increases gradually, the value relevance of accounting information will decrease.Hayn [29] finds that the cross-sectional price-earnings relation is much weaker for firms reporting losses than for firms reporting profits. Her evidence is also consistent with the notion that earnings will lose their value relevance if they are sufficiently low as to make the liquidation of the firm preferable to continued operation.Basu [30] finds that earnings response coefficients are higher for positive earnings changes than for negative earnings changes. Jan and Ou [31] report anomalous evidence that the priceearnings relation is consistently and significantly negative for firms that report losses.

2.6. Uncontrollable factors and value relevance

Alford et al.[32] found out that the accounting earnings in Australia, France, Netherland and England has more relevance for investors than in US. Harries et al.[33] compared value relevance of accounting information for the period between 1982-1991 in Germany and US. They realized that the ability of setting share price by book value of equity per share in Germany is meaningfully less than US, while the ability of setting share price by the earnings in these two countries does not have a meaningful difference.

Khanagha[34] examined the value relevance of accounting information in preand post-periods of International Financial Reporting Standards implementation using the regression and portfolio approaches for sample of the UAE companies. The results obtained from a combination of regression and portfolio approaches; showed accounting information was value relevant in UAE stock market.

3. Research Design

3.1. Sampling and Data Collection

Study used 279 companies listed at Karachi Stock Exchange (KSE) among all listed non-financial companies. Companies are selected on the basis of data availability, and can be explained from Table-1.

Data is collected from annual reports of concerned companies, Karachi stock exchange, and State Bank of Pakistan'spublications for ten years (2001 to 2010). So a total of 2790 firm year observations are used to draw inferences.

3.2. Variables of Study

Study used total nine variables: one dependent, two independent and six dummy variables. Dependent variable is the closing share price;independent variables are earnings

per share and book value of equity per share. Four dummy variables are used to measure the firm specific attributes: firm size, leverage, dividend policy and profitability. Two dummies measure the presence or absence of uncontrollable factors: accounting standards and financial crisis.

3.3. Hypotheses of Study

Based on the literature reviewed and aims of study we designed following hypotheses to test:

H_1: There is significant positive relationship between earnings and share price.

H_2: There is significant positive relationship between equity and share price.

H_3: The relationship between earnings and share price is stronger for large firms than small firms.

H_4: The relationship between equity and share price is stronger for large firms than small firms.

H_5: The relationship between earnings and share price is stronger for profitable firms than firms reporting loss.

H_6: The relationship between equity and share price is stronger for profitable firms than firms reporting loss.

H_7: The relationship between earnings and share price is stronger for dividend paying firms than non-dividend paying.

H_8: The relationship between equity and share price is stronger for dividend paying firms than non-dividend paying.

H_9: There is negative relationship between value relevance of earnings and leverage.

H_{10}: There is negative relationship between value relevance of equity and leverage.

H_{11}: Relationship of earnings and stock price gets stronger after the adoption of accounting standards.

H_{12}: Relationship of equity and stock price gets stronger after the adoption of accounting standards.

H_{13}: Relationship of earnings and stock price weaken during the financial crisis.

H_{14}: Relationship of equity and stock price weaken during the financial crisis.

3.4. Research Methodology and Models

Authors used panel regression methods for data analysis. There are several techniques available for panel data estimation; however, fixed effects estimators are always better [35,36]. Following models are to be estimated:

$$MVPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \varepsilon_{it} \quad \text{Eq. 01}$$

$$MVPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \beta_3 LARGSIZE_t + \beta_4 EPS_{it}*LARGSIZE_t + \beta_5 BVPS_{it}*LARGESIZE_t + \varepsilon_{it} \quad \text{Eq. 02}$$

$$MVPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \beta_3 PROFIT_{it} + \beta_4 EPS_{it}*PROFIT_{it} + \beta_5 BVPS_{it}*PROFIT_{it} + \varepsilon_{it} \quad \text{Eq. 03}$$

$$MVPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \beta_3 DIVPAY_{it} + \beta_4 EPS_{it}*DIVDAY_{it} + \beta_5 BVPS_{it}*DIVPAY_{it} + \varepsilon_{it} \quad \text{Eq. 04}$$

$$MVPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \beta_3 HIGHLEVERAGE_i + \beta_4 ABNORMALLEVERAGE_i + EPS_{it}*HIGHLEVERAGE_i + EPS_{it}*ABNORMALLEVERAGE_i + BVPS_{it}*HIGHLEVERAGE_i + BVPS_{it}* ABNORMALLEVERAGE_i + \varepsilon_{it} \quad \text{Eq. 05}$$

$$MVPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \beta_3 ACCSTD_t + \beta_4 EPS_{it}*ACCSTD_t + \beta_5 BVPS_{it}*ACCSTD_t + \varepsilon_{it} \quad \text{Eq. 06}$$

$$MVPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \beta_3 FINCRIS_t + \beta_4 EPS_{it}*FINCRIS_t + \beta_5 BVPS_{it}*FINCRIS_t + \varepsilon_{it} \quad \text{Eq. 07}$$

Where MVPS is market value per share, EPS is earnings per Share, BVPS is book value per share, LARGSIZE is a dummy variable to measure the effect of large size of firm, PROFIT is dummy for profitable firms, DIVPAY is the dummy variable capturing the effect of dividend paying firms, HIGHLEVERAGE is the dummy variable that takes value one when company is high levered, ABNORMALLEVERAGE is the dummy variable that takes value one when company is abnormally levered, ACCSTD is the dummy variable to capture the effect of adoption of accounting standard, FINCRIS is the dummy variable to capture the effect of Asian financial crisis (2007,2008,2009),ε is the error term.

EPS*LARGSIZE is the interaction term of earnings per share and the dummy variable of large size firms, BVPS*LARGSIZE is the interaction term of book value per share and the dummy variable of large size firms, EPS*PROFIT is the interaction term of earnings per share and dummy variable of profitable firms, BVPS*PROFIT is the interaction term of book value per share and dummy variable of profitable firms, EPS*DIVPAY is the interaction term of earnings per share and dummy variable of dividend paying firms, BVPS*DIVPAY is the interaction term of book value per share and dummy variable of dividend paying firms, EPS*HIGHLEVERAGE is the interaction term of earnings per share and dummy variable of high levered firms, EPS*ABNORMALLEVERAGE is the interaction term of earnings per share and dummy variable of abnormally levered firms, BVPS*HIGHLEVERAGE is the interaction term of book value per share and dummy variable of high levered firms, BVPS*ABNORMALLEVERAGE is the interaction term of book value per share and dummy variable of abnormally levered firms, EPS*ACCSTD is the interaction term of earnings per share and dummy variable of accounting standards, BVPS*ACCSTD is the interaction term of book value per share and dummy variable of accounting standards, EPS*FINCRIS is the interaction term of earnings per share and dummy variable of Asian financial crisis, BVPS*FINCRIS is the interaction term of book value per share and dummy variable of Asian financial crisis.

4. Data Analysis and Empirical Findings

To test the hypotheses 1 and 2, equation 1 is estimated. Results shown in Table-2 indicate that data supports both hypotheses. Probability of zero shows that both parameters are significant at 1%. Standard errors are also small, proving coefficients as good estimators.However earnings havestronger relationship as indicated by the coefficient of 0.841 in comparison to the coefficient of book value (0.295). Overall goodness-of-fit is also good as indicated by adjusted R-squared of 0.70. Overall model's reliability is also ensured by prob. value of F-statistic. On the basis of these results, both hypotheses are supported.

To test the hypotheses 3 and 4, equation 2 is estimated. Results shown in below panel indicate that data rejectsthe main proposition that firm size moderates the relationship of earnings and equity with share price. However earnings have stronger relationship for large companies as indicated by the coefficient of 2.613. Overall goodness-of-fit is also sufficient as indicated by adjusted R-squared of 0.38. Overall model's reliability is also ensured by prob. value of F-statistic. On the basis of these results, hypothesis 3 is supported and 4 is rejected.

To test the hypotheses 5 and 6, equation 3 is estimated. Results shown in below panel indicate that data rejects the main proposition that profit moderates the relationship of earnings and equity with share price. However earnings have stronger relationship for profit giving companies as indicated by the coefficient of 1.483. Overall goodness-of-fit is also sufficient as indicated by adjusted R-squared of 0.706. Overall model's reliability is also ensured by prob. value of F-statistic. On the basis of these results, hypothesis 5 is supported and 6is rejected.

To test the hypotheses 7 and 8, equation 4 is estimated. Results shown in below panel indicate that data rejects the main proposition that dividend moderates the relationship of earnings and equity with share price. However earnings have stronger relationship for dividend giving companies as indicated by the coefficient of 0.729. Overall goodness-of-fit is also sufficient as indicated by adjusted R-squared of 0.703. Overall model's reliability is also ensured by prob. value of F-statistic. On the basis of these results, hypothesis 7 is supported and 8are rejected.

To test the hypotheses 9 and 10, equation 5 is estimated which include the effect of leverage. Results shown in below panel indicate that data supports our main proposition that leverage do affect the relevance of accounting variables, but, for only those companies who are abnormally levered (having more than 200% debt to equity). Probability of zero shows that both parameters are significant at 1%. Standard errors are also small, proving coefficients as good estimators. But the relationship gets negative between variables of interest and share price.

To test the hypotheses 11 and 12, equation 6 is estimated. Results shown in below panel indicate that data supports both hypotheses. Probability of zero shows that both parameters are significant at 1%. Standard errors are also small, proving coefficients as good estimators. However, earnings have stronger relationship as indicated by the coefficient of 1.564 in comparison to the coefficient of book value (-0.010). Overall goodness-of-fit is also good as indicated by adjusted R-squared of 0.701. Overall model's reliability is also ensured by prob. value of F-statistic. On the basis of these results, both hypotheses are supported.

To test the hypotheses 13 and 14, equation 7 is estimated. Results shown in below panel indicate that data supports all four hypotheses. Probability of zero shows that both parameters are significant at 1%. Standard errors are also small, proving coefficients as good estimators. However earnings have stronger relationship as indicated by the coefficient of 1.608 in comparison to the coefficient of book value (0.087). Overall goodness-of-fit is also good as indicated by adjusted R-squared of 0.715. Overall model's reliability is also ensured by prob. value of F-statistic. On the basis of these results, both hypotheses are supported.

5. CONCLUSION

Using accounting information for stock market decision making is not new. Relevance of earnings and equity is also a familiar notion in the capital market research. However discussing the relationship of earnings and equity with share price in perspective of certain company specific and systematic factors is new in Pakistan. Previous research studies conducted in Pakistan's stock market perspective have small sample size, and focused on some specific sectors.To generalize the Ohlson [2] model, we regressedshare price on earnings and book value by using different dummies for characteristics mentioned earlier.

Past studies have established enough evidence regarding the importance of earnings and book value. These two items show the overall impact of income statement and balance sheet respectively. Ohlson[2] ignored dividends in stock valuation model, and stressed on earnings and equity with the view that these two figures have sufficient explanatory power for the share price. However Ali and Hawang[37] warned about the effect of country specific factors, similarly many other studies suggested the firm specific factors that can cause different results for different companies at different countries.

We employed panel data estimation techniques and included six attributes (four firm specific and two systematic) to examine the relationship of earnings and book value with share price. We found positive significant relationship of earnings and equity with share price throughout the study period. Magnitude of relationship was high in case of earnings (coefficient = 0.841). After running a regressionfor full study period, we conducted sub analyses by taking qualitative factors into consideration.For firm size, results show that size doesn't have a significant affect over the valuation model, but for large size firms EPS is more relevant (coefficient of interaction dummy = 2.613). Second firm specific factor to be investigated was profitability. Econometrics analysis revealed that relevance of accounting information is not significantly different for profitable firms and firms reporting loss. But again earnings for profitable firms have stronger relation with share price than firms reporting loss (coefficient of interaction dummy = 1.483).

Dividends too, don't seem to have any impact on the overall explanatory power of valuation model. But earnings have stronger relationship with share price for dividend paying

companies.Leverage do affect significantly to the relevance of earnings and equity. Abnormally levered firms have different intensity of relationship between stock price and reported information (coefficient = 14.187).For abnormally levered firms both earnings and equity have negative relationship with the stock price.

To investigate the impact of uncontrollable factors, accounting standards and financial crisis were taken. Adoption of International Accounting Standards (IASs) has a significant affect over the valuation model. Relationship of earnings and book value is improved in post adaption period. For the case of financial crisis, analysis disguise that it hit the relevance adversely. Relationship of the earnings and equity is decreased during the crises years (2007-09) as shown by the coefficients of regression equation.

Generally speaking, investors in context of Karachi stock exchange give priority to the earnings figure than any other accounting variable, as shown by the statistical results, for each model coefficient of earnings is higher than book value of equity. No significant changes by company specific factors show the rigid behavior of share price. However role of uncontrollable events show that investors are uncertainty avoider and don't consider the threat of such factors.For a country like Pakistan, stock market is less based on the reported information, dividends, and other incentives; rather they act aggressively on the announcements, news, and rumors.

For further research purpose, authors can take the effects of earnings announcements, investor's perceptions, and beliefs. Discussing role of accounting information in perspective of investor psychology would be another dimension

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Table-1: Sampling

Sector	*Companies listed throughout the study period*	*Companies for which data is not available*	*Companies included in sample*
Textile Sector	145	27	118
Other Textile	15	4	11
Chemical Sector	31	10	21
Engineering Sector	35	16	19
Sugar Sector	33	2	31
Paper and Board Sector	9	3	6
Cement Sector	17	2	15
Fuel and Energy Sector	22	1	21
Transport and Communication sector	5	3	2
Tobacco Sector	3	1	2
Jute Sector	4	0	4
Vanaspati& Allied Industries Sector	4	4	0
Miscellaneous Sector	48	19	29
TOTAL	371		279

Table-2: Empirical Results

Variables	*Eq. 1*	*Eq. 2*	*Eq. 3*	*Eq. 4*	*Eq. 5*	*Eq. 6*	*Eq. 7*
EPS	0.841*	1.035*	-0.032	0.345**	3.94*	-0.426*	0.282*
	(0.0821)	(0.156)	(0.155)	(0.138)	(0.206)	(0.168)	(0.109)
BVPS	0.295*	0.188*	0.232*	0.277*	0.516*	0.357*	0.234*
	(0.028)	(0.043)	(0.057)	(0.032)	(0.055)	(0.062)	(0.033)
LARGSIZ		5.789					
		(4.324)					
EPS*LARGSIZ		2.613*					
		(0.204)					
BVPS*LARGSIZ		0.023					
		(0.047)					
PROFIT			3.32				
			(4.161)				
EPS*PROFIT			1.483*				
			(0.204)				
BVPS*PROFIT			0.021				
			(0.056)				
DIVPAY				7.32***			
				(4.376)			
EPS*DIVPAY				0.729*			
				(0.179)			

BVPS*DIVPAY				0.011 (0.029)			
HIGHLEVERAGE					4.15 (6.624)		
ABNORMALLEVERAGE					14.187** (5.862)		
EPS*HIGHLEVERAGE					-2.204* (0.34)		
EPS*ABNORMALLEVERAGE					-1.94* (0.244)		
BVPS*HIGHLEVERAGE					-0.233* (0.082)		
BVPS*ABNORMALLEVERAGE					-0.27* (0.057)		
ACCSTD						14.253* (2.97)	
EPS*ACCSTD						1.564* (0.179)	
BVPS*ACCSTD						-0.01* (0.038)	
FINCRIS							9.878* (3.125)
EPS*ACCSTD							1.608* (0.149)
BVPS*ACCSTD							0.087* (0.023)
Adjusted R-squared	0.701*	0.38*	0.706*	0.703*	0.374*	0.701*	0.715*

*Where, * shows significant at 1%, ** means significance at 5%, and *** denote 10% level of significance*

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