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Pirtea , Marilen, Dima, Bogdan and Milos, Laura Raisa
West University from Timisoara (Romania), Faculty of Economics and Business Administration, Finance Department, West University from Timisoara (Romania), Faculty of Economics and Business Administration, Finance Department, Eftimie Murgu University Resita, Faculty of Economics and Administrative Sciences

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THE COMPANIES FINANCIAL ARCHITECTURE AND THE MARKET VALUES: IS THERE AN INTERLINKAGE? THE CASE OF BUCHAREST STOCK EXCHANGE

Prof.Phd. Marilen PIRTEA
Prof.Phd. Bogdan DIMA
Assistant Phd Laura Raisa MILOS

Abstract

Nowadays there is a large debate on whether the financial information proves any relevance for the investors' prediction of the securities market values/stock prices. The paper focuses, besides reviewing some important literature concerning this issue, on an empirical analysis taking into consideration 44 companies listed on Bucharest Stock Exchange based on pool data linear regressions. It is true that the most recent research state that there is an important evidence of a deterioration of the relationship between accounting information and stock prices. Although, the main findings of this paper consist in that there are certain aspects which should be further examined for a more reliable conceptual approach. In addition, it concludes that - even in the case of an emergent capital market as Bucharest Stock Exchange - it can be found mixed evidences to support the importance of financial information in portfolio' management decisions. In a sense or another, the paper state overall that the financial information matter for market determination of financial assets' values.

***Key words**: capital markets, financial information, financial assets' valuation,*
***JEL Classification:** C32, D82, G14, M41*

1. INTRODUCTION

There is a large debate in the international literature around the relevance of financial accounting information for financial assets' valuation. Beaver (2002) states that the studies made about this issue are part of the largest empirical research made in the last years. These studies emphasize upon the connection between the stock prices, as dependent variable, and a set of accounting indicators, as explanatory variables. These indicators are considered relevant, if they are associated in a significant way with the dependent variable, therefore they have the capacity of reflecting the right information to the investors when evaluating the firm, influencing on their investment decisions.

This paper aims at finding new evidence on the relationship between accounting information, as this encompasses the financial performance of the financial assets' issuers, and stocks' valuation. Section 2 reviews a part of the relevant literature concerning this problem. Section 3 provides some empirical evidences from an emergent market, Bucharest Stock Exchange. Section 4 offers some conclusions and suggestions regarding potential further research.

2. THEORETICAL BACKGROUND

At the end of the '60, there were published two papers that can be considered the seminal papers in what concerns the proposed area of research based on the market (the accounting market-based theory). These studies were the ones of Ball and Brown (1968) and Beaver (1968). They use their own methodology, the portfolio theory, as well as the capital asset pricing model (CAPM), to analyze the reaction in the market stock prices after a previous announcement of benefit for the company. During the following two

decades, the line of research focused on the market efficiency hypothesis. Fama (1970) underline the theory of efficient market when talking about the connection between accounting information and stock prices. This theory supposes that the efficiency of the market will make the stock prices a good estimation of their intrinsic value, in other words, a new information provided to the capital market will be transmitted in a a new value of the stock prices. Therefore, the market is a right indicator of accounting values, where "security prices reflect all available information". There are four pre-conditions in order for this hypothesis to accomplish, according to Fama (1970): i) there are no transaction costs; ii) there are no information costs; iii) all the participants on the capital market agree with the influence of the accounting information upon the prices of the securities and their future earnings. Moreover, Fama differences three situations of market efficiency, having in consideration the information that will be reflected in the prices:

a) the strong-form efficient market hypothesis, that states the market is efficient only if all the information relevant to the value of a share, whether or not generally available to existing or potential investors, is quickly and accurately reflected in the market price. In other words, in case the share price is considered to be lower than the real value by some investors that held a privately information about the company, this will lead to an increase demand of those shares on the capital market, and consequently of the price of those shares on the market, until a maximum point where the investors do not have any more incentive to buy, knowing the real value of the shares. This will certainly bring a new equilibrium level in the share price.

b) the semi-strong form of efficient market hypothesis, that supposes that the market is efficient if all relevant publicly available information is quickly reflected in the market price, the market responding to any publication of relevant information through moving the price to a new equilibrium level.

c) the weak-form of efficiency market hypothesis, which assumes that there is no correlation between successive prices, in other words the current share price cannot be estimated using the historical information regarding the share price.

There are some authors that focus on how the market appears to evaluate *accounting disclosures*. For most of the time, they try to analyse the response of the market to data. Moreover, they look at whether the market sees through accounting manipulations, the role of analysts, inflation effects and so-called short termism. First of all, there are some opinions that state that the use of accounting data to find misvalued shares can be problematic. This is due, in their opinion, to the following factors : accounting data are poor indicators of economic value, doubt regarding predictive value of accounting data, and necessary skills of analysts, lags and not at least the semi strong form efficient market, that suggests that analysis of information is unlikely to be highly profitable.

Both accounting data and share prices have as purpose to reflect value (capital) and change in value (profit). One important issue arises when questioning about the existence of relationship between these two and timing (lags due to need for finishing reporting period). The studies performed by Ball and Brown (1968), as well as Firth (1981) have in consideration four types of accounting release in UK (interims, preliminary announcement, annual report and AGM, assessed return relative to CAPM). They reach the conclusion that there is a positive reaction of prices to the direction of earnings surprise. Beaver et al (1979) assessed whether the size of error is correlated with size of share price move, finding strong positive results in this respect, forecast errors being correlated to beta. Foster (1979) helps explain small reaction to annual

earnings, and as well high reaction to interims and reduction in reaction to annual report, once they are introduced.

Beginning with the ’90, there have also been published a series of papers that analyze the relevance of financial information for the evaluation of the stock prices. The majority of them conclude that the financial information has lost in its importance in the formation of the stock prices. The most significant reasons given in these papers for this situation are: the asymmetric information, the lag of time necessary for the financial information in order to be reflected in the stock price and not at least, the accounting conservatism. Dechow (1994) find that earnings have stronger association with stock returns than cash flows do. Overall results are consistent with semi strong form efficiency. The impact depends on the level of uncertainty surrounding announcement, reliability of data (market discounts if uncertain) and impact on future cash flows (hence focus on earnings).

Balachandran and Tanner (2001) examine the share price reaction to announcement of bonus share issues of Australian companies. They found that price reaction to bonus issue announcements from the day of the announcements to the day after the announcements (day 0 to day 1) is statistically significant for industrial non-financial companies and mining companies than financial companies. Abad et al. (1998) investigated the value-relevance of consolidated versus unconsolidated accounting information in Spain. The results show that consolidated information presents a higher degree of correlation with the market value of the firm than unconsolidated information presented by the parent company. Moreover, the results show that the explanatory power is higher under the economic unit theory than under the parent company theory.

Harris, Lang and Möller (1997) examined the perceived value-relevance of consolidated and unconsolidated accounting numbers using German data. They formulated hypotheses based on the expected quality and economic and legal importance of German consolidated and unconsolidated accounting data. Both the price and return regression were estimated. Most of their results support the hypothesis that consolidated financial statements are more value-relevant than unconsolidated financial statements and that the explanatory power depends on the quality of the GAAP for consolidated statements. Inoue (1998) evaluated the value-relevance of consolidated and unconsolidated accounting information in Japan. He utilized the valuation model based on Ohlson (1995) which models value as a function of the book value of equity and earnings. Their results provide evidence that consolidated information is more value-relevant than unconsolidated information after 1995.

Francis and Shipper (1999) state that the lost of relevance of the accounting information and its consequences upon the investors, has challenged accountants, auditors, and people in charge with the accounting information to make some changes in the current models of accounting standards in order to improve them. Although, they are doubting about the fact that the financial reports have lost their relevance for the capital markets. Without any doubt, the technological revolution, the economical growth have led to the necessity that the accounting information be more general, and to have into consideration a larger number of recipients. Not all the studies were channeled in the direction of proving the necessity of elaborating more complex accounting information, but also in the direction of proving the importance of accounting information in taking investment decisions. More recently, Chang et al. (2008) “The phenomenon of the mean-reversion discussed from the literature explore whether the stock price followed random walk. If the stock prices violate the trend of random walk, one possibility is the stock prices followed mean-reversion process. If the stock prices followed mean reversion in the long-run, the price movements should be predictable

from the movements in firm fundamental values. In this sense, determining whether stock prices are mean-reversion is a very important issue for investors. Consequently, to analysis equity fundamentals, what is important is to verify whether the stock price moves with its firm's fundamental. But these mechanisms depend on the capital market's mechanisms, institutions, regulatory framework liquidity, capitalization, types of allowed transactions and so on. By consequence, the relationship between stock prices and their fundamentals critically depends on the market development stage. In our opinion, such argumentation logic is especially important for emerging capital markets with their structural and institutional transformation processes which induce an intrinsic functional short-run volatility.

A more recent approach underlines the fact that the process by which the contemporaneous stock price reflects value relevant information (both accounting and non-accounting) remains unchanged over time. In our opinion, this is a critical hypothesis, since it is equivalent with the absence of any *learning process* in the investors' decisions. Process that would be able to guide the adjustments in the construction and management of financial assets' portfolios. If such a process is presumed, then it is possible to take into account more sophisticated inter-linkages between the evolution of stocks and the financial performance of their issuers. A direct testable consequence for such inter-linkages could be the manifestation of non-linear connections between prices' dynamics and the content of the financial statements. In this sense, there are recent empirical evidence showing convexity in the relationship between prices and accounting information. Empirical tests, although exploratory, provide further evidence of a nonlinear relation between stock price and accounting measures of earnings and book value (see, for instance, Riffe and Thompson, 1998).

3. EMPIRICAL EVIDENCES FROM AN EMERGENT CAPITAL MARKET: *THE BUCHAREST STOCK EXCHANGE*

The Romanian capital market had registered since its reopening in 1995, different development stages: the initial stage (1995-1996) of building the capital market; the second one starting from 1997 and ending in 2000, when the BSE experienced a generalized regression; the third stage starting from 2001 until 2004, when the falling stopped and the BSE started to develop with a sustainable pace. After 2004 the evolution of the BSE was relatively favorable with high peaks for 2004 – 2005, starting to become more mature and more correlated with the other capital markets.

The current global overview of the Romanian capital market indexes reflects:

- An "auto-sustainable" downward trend for the market prices starting with August 2007;
- An increasing trend in the market intrinsic volatility as an expression of the unbalanced bid/ask ratio due to the increase of uncertainty in the transactional environment;
- More detailed information could be provided by the general statistic properties of the indexes as they are captured by their histograms (Graphic 1).

The analysis of these properties reveals:

- A non-normal distribution as a consequence of a non-informational efficient (at least in a "strong" sense) market evolution;
- An important level of volatility (measured for instance by the variance coefficient - the ratio between the standard deviation and the mean) higher for BET-FI and lower for BET-C;

- A relative reduced capacity to absorb the exogenous shocks (as these are captured by the "spikes" in distribution).

Since the issue of a „close to normal" distribution is a pre-critical condition for the „market efficiency" analysis, there are required more analytical empirical distribution tests (Table 1). For instance, for the BET index, it could be noticed the fact that these tests reject the null of a "normal" distribution. Or, since a larger "gap" between the empirical distribution and the "normal" one could be seen as a measure of the market' informational dysfunctions, it could be concluded that for the considered time span the Romanian capital market does not behave as an "efficient" one at least not in a "strong" sense. Still, there are some evidences for a sort of informational efficiency in a "week" sense.

For evaluating this statement, it is necessary to test if the *random walk* model is an accurate description of the market prices' evolution. In other words, is necessary to proceed with checking:

$$P_t = \alpha + P_{t-1} + \varepsilon_t \quad (1)$$

where P_t ,α, ε_t are the level of market index, an arbitrary drift parameter and, respectively, a "white noise shock".

It could be noticed from the Table 2 the fact that the *random walk* variables are statistically significant. Based on this, it could be preliminary concluded that the considered market displays some informational efficiency at least in a *weak* sense. Overall, there could be described the image of the Romanian capital market as a typical emergent one, with some differences between the market indexes as it concerns the timing of the reactions to different kinds of shocks, but with a strong base connection between them and it could be enlightened the fact that the effects of the international financial crisis have started to appear since the second part of 2007.

In this evolving framework, there could be advanced an analysis able to provide some empirical evidence in supporting or rejecting the thesis that the financial characteristics of the issuers are relevant for the stock' prices formation.

In order to account at least for some sectorial differences, the total set of 44 companies is conventionally delimited in two sectors: "1" and "2"; and separate investigations are reported. All the data are provided by Bucharest Stock Exchange website (www.bvb.ro) and the analysis time span covers the 2003-2007 periods. The shares are from first and second tier of the regular market.

Sector "1" includes 21 companies and is defined as "chemical industry, pharmaceutical products, equipments, telecommunications, transports, manufacture of agriculture products, tourism, and services".

Sector "2" with 23 companies is defined as "extraction and manufacture or refined of petroleum, including support services, manufacture of industrial machinery including manufacture of air and spacecraft and related machinery, private and industrial constructions, raw materials extraction and manufacture".

Certainly, it could be argued against the "too conventional" and non-homogenous separation of the sectors composed by companies with different sizes and activity sub-sectors. However, the delimitation was done in order to ensure at least a very general similitude areas and a sufficient data volume.

Three measures of prices / market values are employed:

1) A "short-run" perspective on prices' movements which are computed as annually averages for daily variations:

$$\Delta p_t = \frac{\sum_{i=2+k}^{N} \ln\left(\frac{close_i}{close_{i-1}}\right)}{\frac{N}{\sigma^2{}_t}} * 100 \qquad (2)$$

where N are the numbers of trading days in an year t and σ^2 is the standard deviation of the returns in current trading year;

2) A "long-run" definition based on the ratio between the last close of the current trading year and the last close of the previous one:

$$\Delta p_t = \frac{last\ close_t}{last\ close_{t-1}} * 100 \qquad (3)$$

3) A **VaR** measure of shares.

Estimating the **VaR** of a portfolio involves determining a probability distribution for the change in the value of the portfolio over the time period (known as the holding period). The value of financial instruments' portfolio, at time t depends on the k risk factors (market variables). Thus, the estimation **VaR** is done via estimation of underlying risk factors' distribution.

For analysis purposes, we have chosen the nonparametric method with each individual stock's simulations over a time span of 10 days with a 10% confidence level. The short considered period was selected in order to reflect the high levels of market intrinsic volatility.

Also for financial ratios were selected as descriptors of the companies' financial status:

1. The economic profitability (**EP**) reflects the performance of "long-term resources" (total shareholder's equity and long-term liabilities) in terms of operating income, earnings before interest but after taxes (**EBI**):

$$economic\ profitability = \frac{EBI}{Total\ shareholder'equity + Long-term\ liabilities} \qquad (4)$$

2. The financial profitability (**FP**) reflects the efficiency in the use of shareholders' resources and it could be expressed as the ratio between the profit after interests and taxes and the total shareholder' equity:

$$financial\ profitability = \frac{Net\ profit}{Total\ shareholder'equity} \qquad (5)$$

3. Net profit margins (**NPM**) is the expression of the "net" results after taking into account the cost of sales, the administration costs, the selling and distribution costs and all other types indicating the potential source for dividend payments and auto-financing capacity formation:

$$Net\ profit\ margins = \frac{Net\ profit}{Turnover} \qquad (6)$$

4. Liquidity ratios provide information about a firm's ability to meet its short-term financial obligations. They are of particular interest to those extending short-term credit to the firm. Two frequently-used liquidity ratios are the *current ratio* (or "working capital ratio") (**WCR**) and the *quick ratio* (**QR**). Since the second one is more restrictive and provides a too narrow image, we are focusing only on the first one:

$$current\,ratio = \frac{current\ assets}{current\ liabilities} \qquad (7)$$

5. The financial leverage represents the degree to which an investor or business is using borrowed money. Companies that are highly leveraged may be at risk of bankruptcy if the are unable to make payments on their debt; the theory reflects the fact that financial leverage affects the risk of the business, therefore adding debt to the financial structure of a firm increases the standard deviation of the stock returns and increases the company's beta. Expected stock returns are a function of the corporate risk. Investors and creditors will price securities with higher amounts of financial risk so that investors and creditors can expect higher returns.

$$Financial\ Leverage\ \frac{Total\_debt}{Total\_equity} \qquad (8)$$

It could be argued that the investors are interested also in synthetically financial information. Thus, we have also build up two aggregate indicators which combine the financial ratios:

$$IR_t = \sum_{i=1}^{3} \alpha_i r_{it} \qquad (9)$$

$$IG_t = \alpha IR_t + \beta WCR_t \qquad (10)$$

IR is an indicator of the profitability for the current time period *t*, *IG* is an global indicator of the financial status based on an linear combination between *IR* and the *working capital ratio* with the weights α, β and α_i are the weights of profitability ratios in the synthetic indicator.

It could be observed that the simplest way to attribute values to the weights is to adopt an equiponderate definition of the indicators ($\alpha_1=\alpha_2=\alpha_3=0.33$; $\alpha=\beta=0.5$) which confers the same relative importance to each structural component. Of course, this could appear as a severe simplification since there are not enough *ex ante* arguments for a uniform contribution to the synthetic information. Still, for the sake of the simplicity, we will further presume such a situation.

An increase in the profitability ratios is susceptible to increase the sources to cover a higher level of dividend inflows and, thus, to increase the rewards for shareholders. As a consequence, they will be more interested in buying and holding the company' shares and so the market values of these shares should increase (or, at least, remain stable a longer time period). The association between the profitability ratios and the prices should be a *direct* one. Similar, an increase in the liquidity ratio reflects an amelioration of the financial stability and equivalently a diminution of the current failure risks. If this stands, then the prices dynamics should also be directly correlated with the level of **WCR**.

In order to evaluate the connections between the prices dynamic and the chosen financial ratios / synthetic indicators, we have run several *pool data* regression inside each sectorial group.

The basic class of models that can be estimated using a pool object may be written as:

$$Y_{it=}\alpha + X'_{it}\beta_{it} + \delta_i + \gamma_t + \varepsilon_{it} \qquad (11)$$

where *Y* is the dependent variable, and X_{it} is a k - vector of regression, and ε_{it} are the error terms for $i=1,2,....M$ cross-sectional units observed for dated periods $t=1,2,...T$. The parameter α represents the overall constant in the model, while the δ_i, γ_t represent

cross-section or period specific effects (random or fixed). Identification obviously requires that the β coefficients have restrictions placed upon them. They may be divided into sets of common (across cross-section and periods), cross-section specific, and period specific regressor's parameters.

For testing, a simplified version without cross-section or period specific effects (random or fixed) or overall constant was considered:

$$Y_{it=} X'_{it} \beta + \varepsilon_{it} \qquad (12)$$

This specification implies that:

- There is no common exogenous factor to determine the prices' evolution in each sector to be implicitly reflected by a constant term;
- The β parameters are common to all companies included in a sector and are constant over time. Thus, the estimations are reflecting a common situation at the level of each group and do not allow the discriminations between the individual companies which compose the group.

The *Generalized Least Squares* (GLS) estimation is straightforward. First, we performed preliminary estimation to obtain cross-section specific residual vectors, and then we used these residuals to form estimates of the cross-specific variances. The estimates of the variances were then used in a weighted least squares procedure to form the feasible GLS estimates.

After each regression, the stationarity and the possible existence of some autoregressive patterns at the level of empirical residuals were tested. These tests, not reported here, suggest that, despite some possible autocorrelations in the residuals, overall the quality of the regression models could be seen as satisfactory.

Analyzing the statistics for the specific financial ratios and prices dynamics, it could be observed that:

- There are some important inter-sectorial differences reflected by the levels and distributions of profitability ratios;
- Still, there are some important similarities in terms of non-normal distribution of all the involved variables (the *Skewness* and *Kurtosis* as well as the synthetic Jarque-Bera distribution parameters suggest the manifestation of some important *fat-tails* effects);
- In both sectors, the a-parametric *variation coefficient* (the ratio between standard deviation and average) is greater than 1 for prices' dynamics estimations, suggesting that there could be an important amplitude of volatility in this dynamics;
- The levels of the sum of squared deviations indicate that there could be some points of "structural breakdowns" in the variables' evolution which does not conserve a uniform mechanism.

The regressions' results are reported in Table 3 and Table 4. According to these results:

- For sector "1" the most relevant explanatory variable appears to be the *financial leverage,* followed by *net profit margins* and *economic profitability* if the prices dynamic is computed as daily averages of close prices changes. In the same time, the *working capital ratio* seems to play in this case a less important role. The same explanatory importance hierarchy is preserved if the prices variation is computed by taking into account the last close price from the current year comparing with the last close from the previous year. This situation is changed if the **VaR** measure is involved. Now the *working capital ratio,* seems to have the most important expanatory power. It is then followed in importance by the *financial leverage,* the *financial profitability* being associated with **VaR** only with a low degree of significance;

- Due to the low explicative importance of the liquidity ratio in sector "1" the synthetic *profitability equiponderate indicator* plays a more important role in explaining the prices' variations measured as daily averages / year to year comparative with *financial status global indicator*. This is reversed in the case of **VaR** estimation for prices' dynamics as a consequence of the increased importance of *working capital ratio* in this case;
- For sector "2" only the *net profit margins* and, at a certain degree, the *working capital ratio* appear to be associated with daily averages of close prices' movements. The *financial* and *economic profitability* ratios, as well as the *financial leverage* display lower explanatory importance (with the "wrong" sign for the coefficient of the last variable). The same situation appears if prices' dynamics is computed as current last yearly close / previous last yearly close with no explicative importance of the liquidity ratio. It appears that the potential dividend distributions are the major concern of the investors in this sector with less attention paid to the future companies' perspectives (with a low importance of economic and financial performance and liquidity' risks). Again this conclusion is reversed in the case of **VaR**: the *financial leverage* displays the highest degree of association with the **VaR** measure while *net profit margins* have a reduced importance. The *financial profitability* does not plays in this case any role in explaining the market values of the companies;
- The first two measures of prices' variations could be less explained by the synthetic indicators in the sector "2" since these variations are mainly affected by the net *profit margins* with less importance than the other ratios. For the **VaR** case, the lower relevance of the profitability ratios affects the explanatory capacity of the *profitability equiponderate indicator* whereas *financial status global indicator* displays a greater importance under the impact of the key role of the liquidity ratio.

These results reflect some contradictory sectorial characteristics and an unclear impact of the involved ratios on stock prices evolutions. More exactly:

- The data display non-uniform and non-normal temporal distributions which are not preserved over the analyzed period. The presence of *fat tails* effects reflects the market institutional, structural and functional imperfections;
- The *net profit margins* appear to be the main explanatory variable with a positive and statistic significant coefficient in the majority of cases. As a consequence, it could be considered that the dividend policy of a company is a major decisional determinant of trading;
- In an important number of situations, the *economic profitability* acts like the second explicative variable after the net profit. Still, there is a certain volatility of the connections between this ratio and prices' movements which diminish in certain situations the relevance of this ratio or leads to an "incorrect" association;
- For the largest number of cases, the *financial profitability* seems to be less important being seldom significantly correlated with prices;
- The explanatory importance of the liquidity ratio increases only if prices' evolutions are adjusted to risks: the investors on Bucharest Stock Exchange seem to take less into account the company's possibility to honor its current obligations;
- There do not appear to be major differences in the sensitivity to financial ratio changes in the short - and long - run methods to measure the stock prices' movements. *Contrary,* the **VaR** seems to be quite a distinctive endogenous variable in terms of reactions to the financial status' changes;

- The synthetic indicators seem to be relevant in explaining the trading decisions with direct impact on stocks' prices. Still, if the weights' selection is taken into consideration, it could be argued that this is more the effect of the individual ratios included in their structure and less the consequence of a true aggregation process;

These findings are puzzling. It appears that financial information matters in stocks' valuation, but its relative importance varies in a significant degree over the market sectors and among different modalities of measuring the market values. Only the *net profit margins* which can be seen as associated with dividend policies, tends to preserve its explanatory importance over different sectors and market values' estimators. It could be argued that this output should be interpreted as the convergent result of a complex set of determinants such as the institutional and functional transformation processes attributable to an emergent capital market, the informational asymmetry, the financial fragility of some issuers, the market vulnerability to exogenous shocks, the *bounded rationality* framework for portfolio management' decisions or market increased volatility under the impact of international financial crisis in the last part of the analysed time span.

4. CONCLUSIONS AND FURTHER RESEARCH

This study reviews the literature on financial information relevance in the securities' valuation and investigates the empirical evidences from an emergent capital market - the Bucharest Stock Exchange. The paper reveals that after an initial effervescence in the study of this relevance, a growing literature has suggested that financial statements have lost their value relevance for different reasons, such as the shifts in the economic activity structures and processes as well as the increasing importance of the so-called "driven by non-information-based trades" (as these are emphases in *Noisy Rational Expectations Equilibrium* model). However, recently it was argued that other aspects should be considered. Among them, the manifestation of non-linear connections between prices' dynamics and the content of financial statements and the *bounded rationality* models should be considered.

The emergent capital markets display some important characteristics such as a deep structural and functional transformation processes, increased volatility and fragility to external shocks that requires more detailed analyses in the field of financial information relevance. The empirical study on Bucharest Stock Exchange provides mixed evidences to support the thesis of the connections between the financial fundamentals and prices' dynamics. The most important is linked to the preeminent role played in market values' formation by the *net profit margins* which could be seen as directly associated with the dividend policies. Of course, such a result is affected by the limits of the study. Among them: (1) the conventional definition of the sectors; (2) the reduced set of analyzed companies / the short time period observations; (3) the limits of the **VaR** methodology; (4) the linear relationships considered despite the fact that the study argues against them; (5) the econometrics' problems of pool data estimations etc.

Thus, further research directions should minimally deal with: (1) the construction of an integrated theoretical framework with the inclusion of different features such as the non-linear / co-integration relationships between the financial information and financial assets' valuation, *bounded rationality* models etc; (2) a discriminant *ex ante* analysis of the relative relevance of different components of companies' financial architecture; (3) the evaluation of the financial information' impact on different risk measures alternatives to **VaR**; (4) the incorporation of "risk /

uncertainty" distinction; (5) the identification of emergent capital markets' characteristics that are able to modulate the impact of financial current and new information; and others.

In spite all these *caveats* it cannot be concluded that financial information is irrelevant for capital markets' evolutions. More generally, despite the fact that nor the theoretical foundations nor the empirical evidences are conclusive, we argue that a "return to the fundamental soundness of economic and financial issuers' performances" is necessary in the analysis of markets' evolutions and that a refocus on the long-term viability of the companies should be a key concern in *passive* investments strategies.

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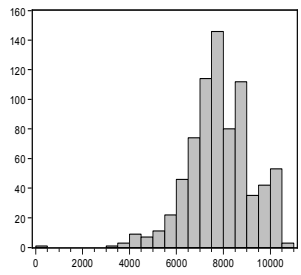
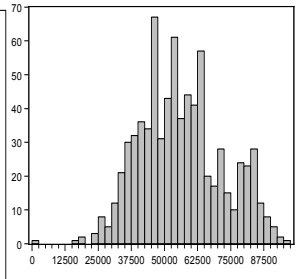
ANNEXES

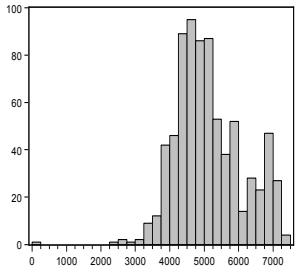
Graphic. no. 1: General statistics for market indexes



Series: BET	
Sample 1 759	
Observations 759	
Mean	7853.156
Median	7805.210
Maximum	10813.59
Minimum	0.000000
Std. Dev.	1345.188
Skewness	-0.486108
Kurtosis	4.519468
Jarque-Bera	102.9073
Probability	0.000000



Series: BET-FI	
Sample 1 759	
Observations 759	
Mean	56258.81
Median	54451.00
Maximum	95197.85
Minimum	0.000000
Std. Dev.	15661.98
Skewness	0.227409
Kurtosis	2.618517
Jarque-Bera	11.14430
Probability	0.003802



Series: BET-C	
Sample 1 759	
Observations 759	
Mean	5137.817
Median	4991.380
Maximum	7432.630
Minimum	0.000000
Std. Dev.	978.0855
Skewness	0.226684
Kurtosis	3.410533
Jarque-Bera	11.83028
Probability	0.002698

Table 1: Empirical distribution tests for BET index

Empirical Distribution Test for BET *Hypothesis: Normal*				
Sample: 1 759				
Included observations: 759				
Method	**Value**	**Adj. Value**	**Probability**	
Lilliefors (D)	0.046908	NA	0.0004	
Cramer-von Mises (W2)	0.347612	0.347841	0.0001	
Watson (U2)	0.330806	0.331023	0.0001	
Anderson-Darling (A2)	2.634030	2.636643	0.0000	
Method: Maximum Likelihood – degree of freedom corrected (Exact Solution)				
Parameter	**Value**	**Std. Error**	**z-Statistic**	**Prob.**
MU	7853.156	48.82721	160.8356	0.0000
SIGMA	1345.188	34.54882	38.93584	0.0000
Log likelihood	-6544.529	Mean dependent var.		7853.156
No. of Coefficients	2	S.D. dependent var.		1345.188

Table 2: The *random walk (with drift)* index tests- the BET index

Included observations: 4955				
Valid observations: 1496				
	Coefficient	**Std. Error**	**z-Statistic**	**Prob.**
C(2)	9.135677	0.018435	495.5734	0.0000
C(3)	4.820628	2.522866	1.910774	0.0560
	Final State	**Root MSE**	**z-Statistic**	**Prob.**
SV1	24625.57	5666.634	4.345715	0.0000
Log likelihood	-8963.136	**Akaike info criterion**		11.98548
Parameters	2	**Schwarz criterion**		11.99258
Diffuse priors	1	**Hannan-Quinn criter.**		11.98812

Table 3: The connections between the financial ratios and prices dynamics- sector "1"

Dependent variable: ***Average variation o f daily closing prices / Standard deviation (%)***				
Method: Pooled EGLS (Cross-section weights)				
Included observations: 4 after adjustments				
Cross-sections included: 21				
Total pool (balanced) observations: 84				
Linear estimation after one-step weighting matrix				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Probability**
Net profit margins	0.397562	0.051174	7.768860	0.0000
The financial profitability	0.006046	0.002813	2.149074	0.0345
The economic profitability	0.288249	0.056411	5.109829	0.0000
Working capital ratio	0.001183	0.000561	2.108623	0.0380
Financial leverage	10.62660	1.011740	10.50330	0.0000

Dependent variable: ***Price variation- last close (December/December) (%)***				
Method: Pooled EGLS (Cross-section weights)				
Included observations: 4 after adjustments				
Cross-sections included: 21				
Total pool (balanced) observations: 84				
Linear estimation after one-step weighting matrix				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Probability**
Net profit margins	2.413434	0.485999	4.965926	0.0000
The financial profitability	0.068911	0.018668	3.691422	0.0004
The economic profitability	2.030884	0.434360	4.675582	0.0000
Working capital ratio	0.003569	0.003751	0.951617	0.3441
Financial leverage	52.86467	9.539594	5.541606	0.0000
Dependent variable: ***VaR- historical data, 10 days ,confidence interval 10%***				
Method: Pooled EGLS (Cross-section weights)				
Included observations: 4 after adjustments				
Cross-sections included: 21				
Total pool (balanced) observations: 84				
Linear estimation after one-step weighting matrix				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Probability**
Net profit margins	0.015898	0.003579	4.441893	0.0000
The financial profitability	2.75E-05	2.68E-05	1.024770	0.3084
The economic profitability	0.006784	0.001604	4.230020	0.0001
Working capital ratio	5.36E-05	1.22E-05	4.399182	0.0000
Financial leverage	0.147110	0.035818	4.107106	0.0001

Dependent variable: ***Average variation o f daily closing prices / Standard deviation (%)***
Method: Pooled EGLS (Cross-section weights)
Included observations: 4 after adjustments
Cross-sections included: 21
Total pool (balanced) observations: 84
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Probability
Profitability equiponderate Indicator $\alpha_1 = \alpha_2 = \alpha_3 = 0.33$	0.023131	0.008628	2.681004	0.0089
Financial status global indicator $\alpha = \beta = 0.5$	0.002545	0.001171	2.174021	0.0326

Dependent variable: ***Price variation- last close (December/December) (%)***				
Method: Pooled EGLS (Cross-section weights)				
Included observations: 4 after adjustments				
Cross-sections included: 21				
Total pool (balanced) observations: 84				
Linear estimation after one-step weighting matrix				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Probability**
Profitability equiponderate Indicator $\alpha_1 = \alpha_2 = \alpha_3 = 0.33$	0.234395	0.057398	4.083656	0.0001
Financial status global indicator $\alpha = \beta = 0.5$	0.008595	0.008194	1.049002	0.2972

Dependent variable: ***VaR- historical data, 10 days ,confidence interval 10%***				
Method: Pooled EGLS (Cross-section weights)				
Included observations: 4 after adjustments				
Cross-sections included: 21				
Total pool (balanced) observations: 84				
Linear estimation after one-step weighting matrix				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Probability**
Profitability equiponderate Indicator $\alpha_1 = \alpha_2 = \alpha_3 = 0.33$	0.000238	8.91E-05	2.667664	0.0092
Financial status global indicator $\alpha = \beta = 0.5$	0.000100	2.53E-05	3.972042	0.0002

Table 4: The connections between the financial ratios and prices dynamics- sector "2"

Dependent variable: ***Average variation o f daily closing prices / Standard deviation (%)***

Method: Pooled EGLS (Cross-section weights)

Included observations: 4 after adjustments

Cross-sections included: 23

Total pool (balanced) observations: 92

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Probability
Net profit margins	0.330961	0.077572	4.266477	0.0000
The financial profitability	0.001250	0.002593	0.482169	0.6308
The economic profitability	-0.000803	0.006691	-0.119950	0.9048
Working capital ratio	0.001061	0.000557	1.903496	0.0601
Financial leverage	0.170838	0.170089	1.004404	0.3173

Dependent variable: ***Price variation- last close (December/December) (%)***
Method: Pooled EGLS (Cross-section weights)
Included observations: 4 after adjustments
Cross-sections included: 23
Total pool (balanced) observations: 92
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Probability
Net profit margins	2.995056	0.607989	4.926169	0.0000
The financial profitability	0.042128	0.039495	1.066660	0.2889
The economic profitability	0.032117	0.098073	0.327486	0.7441
Working capital ratio	0.003090	0.003788	0.815734	0.4168
Financial leverage	0.880530	1.289932	0.682617	0.4962

Dependent variable: ***VaR- historical data, 10 days ,confidence interval 10%***
Method: Pooled EGLS (Cross-section weights)
Included observations: 4 after adjustments
Cross-sections included: 23
Total pool (balanced) observations: 92
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Probability
Net profit margins	0.653848	0.258692	2.527513	0.0132
The financial profitability	0.001613	0.002858	0.564448	0.5738
The economic profitability	0.058570	0.028697	2.040994	0.0441
Working capital ratio	0.005199	0.001183	4.394181	0.0000
Financial leverage	3.205429	0.824231	3.888996	0.0002

Dependent variable: ***Average variation o f daily closing prices / Standard deviation (%)***
Method: Pooled EGLS (Cross-section weights)
Included observations: 4 after adjustments
Cross-sections included: 23
Total pool (balanced) observations: 92
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Probability
Profitability equiponderate Indicator	0.002959	0.006477	0.456869	0.6489
$\alpha_1 = \alpha_2 = \alpha_3 = 0.33$				
Financial status global indicator	0.002183	0.001143	1.909909	0.0593
$\alpha = \beta = 0.5$				

Dependent variable: ***Price variation- last close (December/December) (%)***
Method: Pooled EGLS (Cross-section weights)
Included observations: 4 after adjustments
Cross-sections included: 23
Total pool (balanced) observations: 92
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Probability
Profitability equiponderate Indicator	0.097709	0.098849	0.988466	0.3255

$\alpha_1 = \alpha_2 = \alpha_3 = 0.33$					
Financial status indicator $\alpha = \beta = 0.5$	***global***	0.006777	0.007957	0.851706	0.3966

Dependent variable: ***VaR- historical data, 10 days ,confidence interval 10%***

Method: Pooled EGLS (Cross-section weights)

Included observations: 4 after adjustments

Cross-sections included: 23

Total pool (balanced) observations: 92

Linear estimation after one-step weighting matrix

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Probability**
Profitability equiponderate Indicator	0.013505	0.013095	1.031356	0.3051
$\alpha_1 = \alpha_2 = \alpha_3 = 0.33$				
Financial status global indicator $\alpha = \beta = 0.5$	0.012349	0.002565	4.814014	0.0000