

# INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT & MANAGEMENT

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  - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
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**CONTRIBUTIONS TO BOOKS**

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

**CONFERENCE PAPERS**

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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### ABSTRACT

Aim of this study a comparison between the two models for the valuation of stocks in Tehran Stock Exchange. These two names P.E and a Markov chain are. Researchers in their study were to calculate the valuation of shares in the P.E and then calculate the value of the enamel Markov chain to achieve a comparative mode. But it should be noted that the most important thing is that the Markov chain is used in Iran or not? A resource is used because in this context does not exist, and if Iran does not share the pain Why Professors and experts have agreed with this issue? Markov chain model of computation can be optimized with favorable results achieved in Iran.

### KEYWORDS

Value Index, Pricing Stocks, P/E equation, Markov Ripple.

### INTRODUCTION

 Share is a stock that in duds sheer holders rights in order to participate in manage meant and com companies benefits and reception some part of its value if it dissolved. So hares is aloof that defines ownership on relative share of assets and companies profits. Indeed shares are stocks without maturity and there is unreliability from future benefit and expected selling price values concept isn't as simple as some image. The values of each asset depend on various factors such as, person that change in indifferent times. The word value includes general concept. That due to the interest of share holders and other stakeholders according to their benefits interpreted in different ways. Companies with high value creation can grow faster, access to capital markets easier, provide better conditions for their employees and have more abilities to manage their resources. Evaluations tools use for evaluate events like merger and acquisition or analysis of companies, Selling part or change in capital structure of the company. These events can in effluence on companies shares value by changing in its cash flow. There are different models to calculating in its cash flow. There are different models to calculating shares value such as P/E model that has many applications because of simply. But in this model the dividend growth rate is constant that is main weakness. In mark of chain model the dividend growth rate is considered as a variable. In fact determining the value of stocks with using markov ripple and comparing it with method P/E in accepted companies in Tehran stock market is the main purpose of author that it can follow his real purpose in research with replying the following question. Which model between those two models is the best in research?

### RESEARCH PURPOSE

Stock assessment is a very complex issued and there is no assessment model that is able to correctly predict the intrinsic value of a share. Even there is no model to give an exact fore cast from price changing in future stock assessment models offer a basic for comparison and evaluation criteria and factors related to the shares value. In addition by using some assessment models can calculate the limit of average rate of return when shares are lower that an actual value using of methods and various models for deter minting shares value can help financial system of communities a lot. Because not using of mark of chain completely in Iran and because of learning other methods of stock assessment researcher collected some valuable contents and want this research to grow and it make the topic clear.

### REVIEW OF LITERATURE

#### P/E MODEL

P/E is briefed (price) p. to corning per share EPS. As if appears from that's name for calculate P/E the last price of a company's shares is derided to benefit of per shares.

Mostly P/E calculated on dates which the company's disclosure data (often 3 months EPS).

Sometimes this P/E is called protracted P/E which is based on calculating the last EPS, but sometimes for calculating P/E is a use estimating EPS; usually this EPS expresses next year's estimating profit. In this case calculated P/E is called estimated van or P/E guard. Sometimes calculating the P/E has third method which is based on average of 2 past season and estimate 2 remaining season of the year. There is no main difference between these three kinds of methods.

The big problem about calculating P/E is companies that are unprofitable then they negative EPS. Some researcher believes in existing the negative P/E, a group of people believe in P/E on zero in this status. Historically in Tehran Stock market usually the average of P/E in range of 3/2 to 13/2 is experienced. In this range the swing of P/E is mainly depend on economic condition of per time. At present in Tehran exchange Market the average of all accepted companies P/E about 8/2.

#### MARKOV'S CHAIN MODEL

In the Gordon and Shapiro model the share's profit increasing with fix speed. Of course this have more theoretical aspect to practical applies. A newest hypothesis which presented by Hurley and Johnson is speed of growing shares as collection of same separated variant distributed and randomly real price. Consider an efficient stock exchange, a markov that the price of share refluxing all of existing information. Suppose that entrepreneurs have same expectation, if  $t$  be the time which assessment is carrying out,  $k$  time index,  $p$  shares price,  $d$  shares profit  $r$  rate of interest. For haring efficient market shares prices function as equation 1:

Equation (1)

$$P_k \frac{E_k [d_{k+1} + P_{k+1}]}{r}$$

E is amount of eventual predicted.

Samuelson shows that:

Equation (2)

$$P_1 = \sum_{i=1}^{\infty} \frac{E_r [d_t + i]}{r^i}$$

$$\lim_{i \rightarrow \infty} \frac{E + [p_t + i]}{r^i}$$

That we suppose:

Rate of interest may change over time.

In this condition of shares profit follows as equation 3:

Equation (3)

$$d_{k+1} = g_{k+1} d_k$$

$$k = t, t+1, \dots$$

g Growth factor can take one of the quantities condition

$$g^1, g^2 \geq 0$$

At the markov fix chain y dynamic breaking out in 2 status which  $\pi_{ij}$  is conditional probability  $g_{k+1} = g^i$ 

$$\text{Whenever } * g_k = g^i \pi_{ij} + \pi_{iz} = 1$$

Probability of  $x_k^i$  which status of j in time of k happens, follows as various equation (4 and 5):

Equation (4)

$$X_{k+1}^1 = \pi_{11} x_k^1 + \pi_{21} x_k^2$$

Equation (5)

$$X_{k+1}^2 = \pi_{12} x_k^1 + \pi_{22} x_k^2$$

## RESEARCH BACKGROUND

The researchers say that the capital asset pricing model is a factor model. That is expected return rate per share to risk of that share that is measured by (B). But different experimental tests ability of this model in repeating the describing of assets return casts doubt.

Brief (2007) concluded that assessment model of profit's unusual growth, more complicated than assessment model of remaining profit. This complicating is for growing and also for interring pretention of unusual profit's growth comparing with remaining profit.

Berger (1996) concluded that, compared with a profit to book value in explaining stock price changes are more important.

Luca L. Ghezzi and Carlo Piccardi (2003) used a new model. A novel divided valuation model is put forward by using a Markov chain. The valuation procedure turns out to be very simple, since it requires the solution of a system of linear equations. The dividend valuation model is in accordance with the empirical evidence whereby dividend-price ratios can change as time proceeds.

G. D'Annunzio "University of Chieti-Pescara. In this paper, a new dividend valuation model is proposed. It assumes that the dividend growth rate follows a semi-Markov chain. A consequence is that prices become duration dependent. The papers generalize previous contributions dealing with pricing firms on the basis of fundamentals.

Jedrzej Bialkowski (2004) In this paper a Markov switching mixture of normal distributions is applied to the monthly returns on the main stock indices for emerging financial markets in central Europe (BUX, PX50 and WIG). Additionally the results are compared to those obtained for Western Europe (DAX, CAC40 and FTSE100).

Michael Monoyios (2000) an efficient algorithm is developed to price European options in the presence of proportional transaction costs, using the optimal portfolio frame-work of Davis.

Dilip B. Madan and Martijn Pistorius (2010) A Markov chain with an expanding non-uniform grid matching risk

Neutral marginal distributions are constructed. Conditional distributions of the chain are in the variance gamma class with prespecified skewness and excess kurtosis. Time change and space scale volatilities are calibrated from option data.

Lawrence Shepp (2002) present a new model for stock price fluctuations based on a concept of information.

Youzhi Xu' Jinlin Li (2006) this article develops a Markov chain model for the management quality of Chinese A share listed companies.

Lars Peter Hansen and John C. Heaton and Nan Li characterize and measure a long-run risk return tradeoff for the valuation of financial cash flows that are exposed to fluctuations in macroeconomic growth. This tradeoff features cash flow components that are realized far into the future but are still reflected in current asset values

## RESEARCH HYPOTHESES

By considering above hypothesis some assumptions is editing and examined by follows:

H1: using the markov chain model due to better evaluation of shares value.

H2: using the P.E model due to better evaluation of shares value.

## RESEARCH METHODOLOGY

For explain the theoretical basic of studied subject, from related financial studying with research topic as told in last section, is used. For analysis and examine research hypothesis solidarity method is selected. In regression analysis for analyzing and studying relation between variables studies, using from a views, SPSS 16 software and Kolmogorov Smirnov of (k- s) test, for studying that data's distributing is normal and from description- devotion scale- average of regression analysis (multivariable of regression for comparing models) using for comparing models. Freed man test used for classifying various groups.

## STATISTICS SAMPLE



Statistics community is the research of accepted companies in Tehran exchange market. Selective samples after bellow restrictions are selected among statistics community this restrictions is:

1. Sample companies financial year be equal with each other and leading to march of each year.
2. During the studying period sample companies have unchanged financial year.
3. During the period of studying companies have no pause dealing.
4. No companies except investment and financial mediated and insurance.
5. Necessary information of companies is available.
6. During the period of studying companies have no loss.

Based on this and after above restrictions 64 companies during (8 years) 2004- 2008 has above conditions and by consider this sampling is done and all companies for studying is selected.

**RESULTS**

**FIRST HYPOTHESIS TEST**

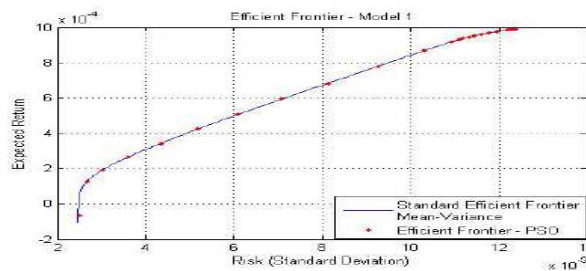
Hypothesis: using markov chain model due to better assessment of shares value.

This medal just show this limitation that to tail measures of intersection capital is equal one. Second formula is something between first and third.

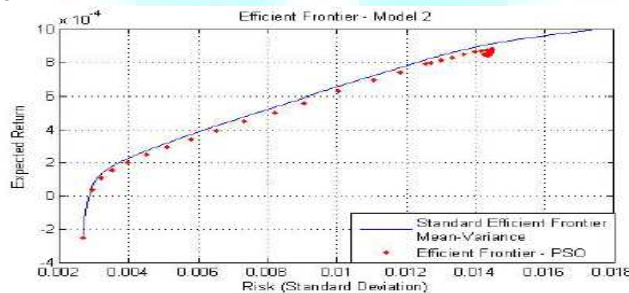
The limitations of above and below limit are added to investing capital in assets and at the end in third for maul that show the most complicated case the limitation of assets number will add too

$\text{Minimize } \lambda \left[ \sum_{i=1}^N \sum_{j=1}^N x_i x_j \sigma_{ij} \right] - (1 - \lambda) \left[ \sum_{i=1}^N x_i \mu_i \right]$ <p>Subject to <math>\sum_{i=1}^N x_i = 1</math>  <math>x_i \geq 0 \quad (i = 1, \dots, n)</math></p>	First model
$\text{Minimize } \lambda \left[ \sum_{i=1}^N \sum_{j=1}^N x_i x_j \sigma_{ij} \right] - (1 - \lambda) \left[ \sum_{i=1}^N x_i \mu_i \right]$ <p>Subject to <math>\sum_{i=1}^N x_i = 1</math>  <math>e_i \leq x_i \leq \delta_i \quad (i = 1, \dots, n)</math>  <math>x_i \geq 0 \quad (i = 1, \dots, n)</math></p>	Second model
$\text{Minimize } \lambda \left[ \sum_{i=1}^N \sum_{j=1}^N z_i x_i z_j x_j \sigma_{ij} \right] - (1 - \lambda) \left[ \sum_{i=1}^N z_i x_i \mu_i \right]$ <p>Subject to <math>\sum_{i=1}^N x_i = 1</math>  <math>\sum_{i=1}^N z_i = K</math>  <math>e_i z_i \leq x_i \leq \delta_i z_i \quad (i = 1, \dots, n)</math>  <math>z_i \in [0, 1] \quad (i = 1, \dots, n)</math>  <math>x_i \geq 0 \quad (i = 1, \dots, n)</math></p>	Third model

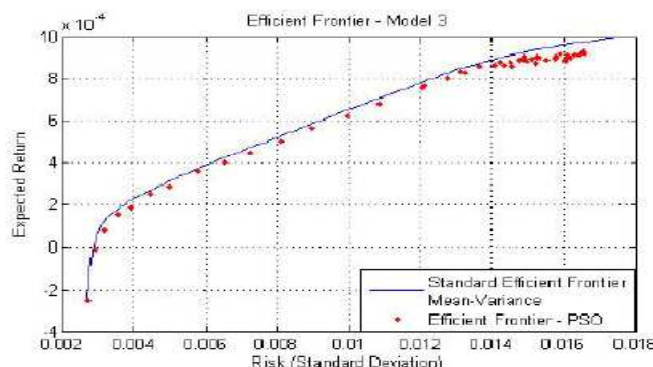
1. The value of earned shores in first model



2. The value of earned shores in second model.



3. The value of shares third model.



Hon son's test result for hypothesis about markov chain is in 1 table.

Hon son's test is used to confirm the assumption of different regimes. Amount of testing statistics F, P- value null hypothesis (absence of non-linear or not existing of threshold) rejecting in confidence level of 0/01. Therefore based on Hon son's test considered period's data have 2 regimes.

TABLE 1: RESULT OF HON SON'S TEST TO HYPOTHESIS ABOUT MARKOV CHAIN

amount of threshold	-0/0033
amount of statistics test	19/75
P- value	0/001

In more we estimating markov's displacement model.

TABLE 2: MARKOV'S DISPLACEMENT MODEL FITTING (significant in 0/07 level)

variable	scales	Criterion devotion	t. statistics
$\mu$	0/000414	0/0000187	-3/49*
$\phi_{11}$	0/497	0/122	3/91*
$\phi_{21}$	0/554	0/0617	8/98*
$\sigma_{1t}$	0/00807	0/00093	8/613*
$\sigma_{2t}$	0/00160	0/0000871	18/400*
$P_{11}$	0/712	0/08790	8/169*
$P_{22}$	0/945	0/0748	54/06*

The table 2 shows that all of considered statistics in level of 0/01 are significant so markov's displacement model with fix average and various variance is good estimate for considered data. By amount of fitted for  $\bar{O}_{1t}$  confirmed that deviations criterion of first regime's disorders sentences is greater than  $\bar{O}_{2t}$  deviations criterion of second regime's disorders sentences. Also the value obtained for transition probability shows that if efficiency of market in past period be  $S_t = 0$ , with probably of %71 will in next period are in previous status again, but the gain result from possibility of supplement is as, if the market in past period be with high variance, with probably %29 to turbulence or status  $S_t = 1$  moving. Also, if in the past period market has low variance approximately with probability of %5 are transmitted to high variance. Based on given formula amounts of day's average in market in high turbulence status 6 days and amount of day's average when efficiency in low turbulence are 20 days. If efficiency diagram design for this period we can tell in the periods which market was high turbulence, average of required days to moving efficiency to regime with lower turbulence as intuitive, almost is that the estimated value in mark off's displacement model.

TABLE 3: MARKOV DISPLACEMENT MODELS RECOGNIZING TEST

recognizing test	Statistic	p-value
(4)LB	0/712	0/163
(17)AIC	4/88	
(17)SBC	31/560	
Log-likelihood	1503/45	

Yang statistics, box is also confirmed that the above estimation is suitable for data efficiency and assumption of wrong sentences ran doming is verified. On the other rand mark off's displacement model clearing for stock dealers some interesting points when the market stands in higher variance. determining the amount of variance as independent functional from pas period variance and shocks whenever market stand in each regime and also predicting amount of days which market in each regime, as known a application tools for stock dealers.

In markov's model these points are considerable:

By increasing the number of property, Matrix covariance's volume of accountant is too large.

No low or nigh border for per shares of property in total of shares is but in act maybe there are a lot of reason for restriction of property's are in total shares.

General criterion of risk is variance or its second stem, deviations criterion. This criterion, for a property which has normal distribution and dealing in an efficient market is acceptable criterion if these two quality doesn't exist, variance is not good for showing the shares value.

**SECOND HYPOTHESIS TEST**

Hypothesis: using the P/E model due to better assessment of shares value. In this step for doing the hypothesis test of research, based on Dowdell model, classifying company- by using both of P/E and P/B ratio done in years. In this research he proved that share holders price has a special process and can gain new data from last data and so investors that have a lot insight and awareness can fore cast future prices.

First group declining companies with low ratio P/E and P/B - group No 2 Involving rotation1al companies with high P/E and low P/E - groupNo3. Unveiling competitive companies with average P/E and P/E- group No 4. Involving developed Companies with low P/E and high P/E- Group No 5. Involved growing companies with high P/E and high P/B .So Company's classifying ass follow this table4:

TABLE4: COMPANY'S CLASSIFYING

	P/E	P/E	P/E
	5/5P/E<<0 Low	5/5<P/E<7 medium	7P/E>0 P/E< High
P/B	2/3P/B< Low	Declining companies	Other companies
P/B	<5/3P/B2/3< medium	Other companies	Competitive companies
P/B	5/3P/B> High	Grown companies	Other companies
			Growing companies

Remaining companies in last 4 group which have medium P/E or medium P/B but both of them were not medium have been out for difficulty of classifying them and for increase the coordination between other groups. Then solidarity test of Spearman for study the solidarity between ratio of P/E and P/B and studied

variables in total 8 years period and in grouping base on P/E ratio like groups with high, low and medium P/E and also, P/B groups as high, low and medium P/B, also in quintet groups is done.

TABLE 5: THE RESULT OF RELATION BETWEEN SIGNIFICANT P/E WITH VARIABLES IN VARIOUS GROUPING

P/B Grouping base on				P/E Grouping base on				Total grouping			
Level of confident	Coefficient solidarity	variable		Level of confident	Coefficient solidarity	Variable		Level of confident	Coefficient solidarity	Variable	P/E
%95	-0/234	RI	High	%95	1330/	RI	High	%99	-0/173	ΔRI	
%99	-0/238	ΔRI		%99	0.205	ROE					
%99	-0/282	ROE									
%95	-0/189	ΔRI%	Low				Low				
%99	-0/387	ROE									
%99	-0/374	RI	Medium	%95	1990/	ΔRI	Medium				
%99	-0/231	ΔRI									
%99	-0/595	ROE									

TABLE 6: THE RESULT OF RELATION BETWEEN SIGNIFICANT P.B WITH VARIABLES IN VARIOUS GROUPING

P/B Grouping base on				P/E Grouping base on				Total grouping			
Level of confident	Coefficient solidarity	variable		Level of confident	Coefficient solidarity	variable		Level of confident	Coefficient solidarity	variable	P/B
%99	-0/254	RI	High	%99	0/491	RI	High	%99	0/415	ΔRI	
%99	0/518	ROE	High	%99	0/735	ROE	Low				
%99	0/258	ROE	Low	%99	0/538	RI		%95	0/102	% ΔRI	
%99	0/400	ROE	medium	%99	0/900	ROE	Medium	%99	0/715	ROE	
				%99	0/545	RI					
				%99	0/333	% ΔRI					
				%99	0/995	ROE					

In research was observed of that remaining profit changes between 3 P/E groups was different and stability of P/E and P/B in grouping base on various compounds of these ratios is different. P/B is more stable than P/E and by passing time ROE more stable than rate of remaining shares value's growth. The result shows that in each grouping according to P/E and P/B, ratio of P/B keeps it's relation with ROE and coefficient of relation with grouping is also get better and this shows that P.B is more stable than P/E. to tally the result of solidarity test in quintet groups which grouping of them base on both P/E and P/B is done, the status of ratios in relation with studied variables better shows, especially in comparison with status which using only one of these ratios. Lack of significant relation P/E ratio with variables in group 5 which included hundred company- year, and has no limit in examine from view of numbers, explain that when the company is growing, using P.E ratio for predicting the shares value's change and growing, cannot be sufficient factor for analysts and investments. On the other hand status of P/E ratio when both of P/E and P/B in company is low (first group) which is called declining companies, shows that in this group by coming down of P/E ratio shares value and its change and efficient of shares value's owners salary will increase. Then using of this ratio and also P/B ratio can help the investment in predict of shares value and its changes. Lack of significant relation P/E ratio with percent of shares value's changes (%ΔRt) and plus solidarity of P/B ratio with this variable- when both of P/B and P/E is in medium level, shows that for predicting the shares value in companies which are competitive, we can use P/B ratio for predict.

TABLE 7 - TEST RESULT

%ΔRI		ΔRI		
P		P		
0/5	=0/00Z	0/37	=0/22Z	Mann Whitney mark
0/458	=-0/104Z	0/45	=-0/10Z	Mann Whitney
0/984	=294W	0/439	=0/252W	Middle compare
0/837	=0/995t	0/006	=-2/63t	single sample T test

In first group according to the result of mark test the number of observation lower then middle are more than observation higher than middle. Also single sample T test shows that the average of remaining profit variation in 8 years after (2003) have no sing efficient variation with average of (2003) and mark of statistic test shows that the variation is reduced in 8 Years.

TABLE 8 - TEST RESULT

% ΔRI		ΔRI		
P		P		
0/661	=-0/416Z	0/244	=0/693Z	Mann Whitney mark
0/383	=-0/295Z	0/272	=0/605Z	Mann Whitney
0/565	=133W	0/848	=148W	Middle compare
0/668	=-0/438t	0/624	=0/317t	single sample T test

The second group says that in rotation companies with high ratio P/B and low P/B. Expecting that have increase in shore value. But despite of the result of mark test and average of rank shows that the variation of share value is addictive after (2004) toward (2004).

TABLE 9 - TEST RESULT

% ΔRI		ΔRI		
P		P		
0/02	=2/30Z	0/999	=0/000Z	Mann Whitney mark
0/007	=2/678Z	0/800	=0/252Z	Mann Whitney
0/533	=31W	0/729	=46W	Middle compare
0/11	=-1/65t	0/279	=1/105t	single sample T test

According the examinations of competitive companies with average ratios P/B and P/B, this results determined that the number of obtained values form average. This say the variation of share value and its growth was not remarkable in the years after 2004.

TABLE 10- TEST RESULT

%ΔRI		ΔRI		
P		P		
0/500	=0/0Z	0/185	=0/894Z	Mann Whitney mark
0/209	= 10Z	0/14	=1/07Z	Mann Whitney
0/902	=133W	0/713	=12W	Middle compare
0/766	=-0/803t	0/256	=0/716t	single sample T test

The results of tests show that in developed companies with low ratio P/B and high P/B the number of obtained values above average have a little difference with number of obtained values lower than average.

TABLE 11- TEST RESULT

%ΔRI		ΔRI		
P		P		
0/764	=0/721Z	1/00	=0/000Z	Mann Whitney mark
0/429	=-0/177Z	1/00	=0/000Z	Mann Whitney
0/821	=266W	0/867	=294W	Middle compare
0/152	=1/03t	0/568	=0/173t	single sample T test

About group of growing companies with high ratio P/B and high P/B the result of mark tests and rank average show that the rank of the values higher than middle in base year have no much difference toward the obtained lower than middle .

In first section tests for choosing analysis companies in static sample, by using solidarity and regression tests signify ancient relation of accepted companies share value in Tehran stock exchange with market efficiency examined. That showed from 168 first analysis companies shave efficiency or markets efficiency has significant relation that this has

Usable results for researchers and inlayers of capital market. In second section tests that researched by salad artist of assessments ratio relation P/B and P/B with variables like shares(RI), share varies (ΔRI) share growth variable (%ΔRI) and salaries efficiency of shave holders (ROE) too and in a group according to each divided P/E and P/B ratios and in-group of bath of them we earned that his relation after making group more clear and even is more powerful and fixing of assessment ratios P/E and P/B in protecting relation and its intensity with variables examined that result said that P/B ratio has more firmness toward P/E ratio . reversed solidarity of P/E ratio with reminder profit varies(ΔRI) and direct solidarity of P/B ratio with shares varies (RI), shares growth, (%ΔRI) and its powerful solidarity with efficiency of shore holders salaries (ROE) that is last researches said about it and here observed that show the importee of using of both parties P/B and P/E in financial analysis.

P/E everything or the last word is not told about shares value but in comparison the companies of the industry, the whole of market or P/E` historical process of a company is profitable.

Remember that:

- A. P/E is a ratio and getting from dividing the P (price) or day's price shares of E (EPS) or profit of per share.
- B. we have 3 kinds of EPS called protracted, future and medium.
- C. historically average of P/E` stands in efficient of 3/2- 13/2.
- D. in theory per share's P/E tells us the investments willing now many Rails pay for per Rail profit.
- E. better analysis from P/E is, that is the reflex of markets optimistic from future growth of a company.
- F. P.E in comparison with market's price is better index for share value.
- G. without considering the rate of industry growth, it is meaningless talking about high or low in P/E.
- H. change in base of accounting including several allowed method for profit (EPS), getting difficult in analysis P/E.
- I. doesn't only by relying P/E coefficient deal the shares.

As observe in table 12, statically there is no significant difference between explanatory powers of these models in determining shares value but we can say that with considering all of criterions, almost the model of P/E assessment is stronger model than markov in determining shares value at Tehran Stock exchange.

In this research by considering table 13, as P- value in all of tests has been less than 5%, all of independent and dependent variables during research was in stable level.

TABLE 12: COMPARISON OF MODELS EXPLANATORY POWER

Schwarz criterion (SBIC)	Akaike criterion (AIC)	Regression statistics (F)	Mean square error (MSE)	Adjustment coefficient	determining
31/468	30/395	38/62	863211	90/75%	P/E
31/472	30/398	38/48	864718	90/71%	Markov chain

TABLE 13: STABLE OF RESEARCH VARIABLES WITH TESTING THE ROOT OF CONSOLIDATED UNIT

Augmented Dickey-Fuller	Philips pronto	Im pesaran and shin (IPS)	
1021/34	819/340	-141/871	Statistics testing
0/0000	0/0000	0/0000	P-value

**CONCLUSION AND DISCUSSION**

One of the important information contained in company's financial statement, is accounting profit, most of financial analysis in rate of shares price and assessment of economic enter prices action using it. In markov chain model speed of growing the shares profit consider as variable which in this condition is closer to reality.

result of research shows that almost in all cases, there is no significant difference between explanatory power of these models in determining shares value and investments in Tehran Stock exchange market can for assessment of shares uses from these 2 models, but in most cases P/E assessment model by considering less standard error of regression can say, partly is better model in determining the company's value.

**RESEARCH SUGGESTIONS**

Attention to be confirmed second hypothesis( using the P/E model due to better evaluation of shares value) is suggested to actually and potentially investors use from P/E model for price assignment and share value, timely purchase and to sell.

Proposals for future investigation:

According to experiences in this research, we present some suggests to interested students to this case and hope to get better values to get goals in this knowledge with researching. And see great use of its results in action and in society.

1-According to this research did between accepted companies in Exchange it suggest to do between OTC companies too

2-Doing this research between not accepted companies n exchange.

- 3-According to that in this research comparison of shares values did by Markov chain model. It suggest to comparison assets value of the company lay this model  
4-According to that in this research comparison of shares value did by Markov chain model, it suggest to comparison debt value of the company by this model  
5-Comparison with other stock valuation models such as economic value added model and sharing profit discount model

## REFERENCES

1. Annunzio, G. D. (2003), "Stock valuation along a markov chain" University of Chieti-Pescara. Via dei Vestini, Chieti, Italy. vol. 31, p. 66013.
2. Berger, P.G., Ofek, E., & Swary, I. (1996), "Investor Valuation of the Abandonment Option", *Journal of Financial Economics*, Vol. 42, No. 2, pp. 257-287.
3. Bialkowski, Jedrzej. (2004), "Modeling returns on stock indices for western and central European stock exchanges - a markov Switching approach". *South Eastern Europe journal of economics*, vol. 2, pp. 81-100.
4. Brief, R.P. (2007), "Accounting Valuation Models: A Short Primer", *Abacus*, Vol. 43, No. 4, pp. 429-437.
5. Dilip, B. & Pistorius, Madan and Martijn. (2010), "The valuation of structured products using Markov chain models". University of Maryland. March, 2.
6. Hansen, Lars Peter. and Heaton, John C. and Li. Nan. (2004), "Consumption Strikes Back? Measuring Long-Run Risk". First draft: May Current draft: June 2005.
7. Luca, L.Ghazzi and Carlo Piccardi. (2003), "Applied Mathematics and Computation", vol. 141, pp. 385-393.
8. Monoyios, Michael. (2000), "Option Pricing with Transaction Costs Using a Markov Chain Approximation". Department of Economics and Finance Brunel University Uxbridge, Middx UB8 3PH, UK. June
9. Shepp, Lawrence. (2002) "A model for stock price fluctuations based on information", *IEEE transactions on information theory*, vol. 48, no. 6, June.
10. Youzhi, Xu & Jinlin, Li. (2006), "A Markov Chain Model for Forecasting the Management Quality of Chinese a Share Listed Companies". Vol. 35, Issue. 10, pp. 1909 – 1919.



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