

## Studying the efficacy of CAPM Model in forecasting stock revenue of the firms accepted in securities exchange

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**Abstract:** Presented models in the capital markets, confirm a positive linear relationship between systematic risks and revenue of capital assets. With respect to one of these models (CAPM), in addition to systematic risk, we also examine the linear relationship between expected revenue and common stock revenue. This research examines the relationship between common stock revenue with expected revenue and systematic risk in the firms accepted in Tehran securities exchange (2007 – 2011) to study Capital market of the country and provide information for better decision-making of investors. Accordingly, the accepted firms in Tehran security exchange were 284 units at the beginning of 2006. Based on Cochran Formula, we choose 72 units of these companies as our sample. We collect the required information for testing hypothesis, and then research variables including the revenue of common stock  $R_i$  (dependent variable) and expected revenue, systematic risk  $\beta_i$  (dependent variables) and also the revenue of market were calculated. At the end, for testing hypothesis we examine the existence of the aforementioned relationships through regression analysis; then by calculating Pierson's correlation coefficient and coefficient of determination we examine the kind and intensity of these relationships. Research findings indicate that there is a correlation between the expected revenue and systematic risk with common stock revenue in accepted firms in Tehran securities exchange, and this correlation is very intense in the main test. Therefore, Capital Asset Pricing Model (CAPM) is effective and their hypotheses are confirmed.

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**Key Words:** CAPM Model, Stock revenue, accepted firms in Tehran securities exchange, Iran

### Introduction

Investment is a necessary and vital factor in the growth and development of economy of any country. There must be a series of resources for the provision of capital in order to provide necessary funds for the investment. The best resource for providing capital is people's savings in society. Therefore, savings in society in term of is oriented in the course of production by a lever to provide the financial needs of production sectors. On one hand, securities exchange directs the stray savings toward production, on the other hand, answers the financial needs of firms and enterprises. In dimension of supply for financial resources, firms should try to provide the necessary funds in a way that underlies the increase of enterprise's value (the main purpose of owners). In dimension of capital supply, the investors try to invest their savings at least in one that yields the highest revenue. But in this case, consider the risk of investment and endure risk in case that yields them more revenue. Therefore, the buyers of stock from securities exchange who plan to invest their savings consider the risk and investment simultaneously. For this reason, recognizing the link between risk rate and revenue for investors' decision making is of special importance.

### Stating problem

One of the important points in investment process is to regard the rate of risk and revenue, which the revenue has been defined as dividend, and stock price growth and risk as the possibility of difference between real revenue and expected revenue. Procedures need to be considered to attract the investors toward securities exchange in order to reach their expected revenue via correct investment and meanwhile, investors can afford to evaluate the risk of each asset based on appropriate criteria and with regard to the revenue and risk of various assets and take giant steps with tribute to their own utilitarian in order to impart from suitable revenue by noticing the rate of taking risk. Reasons for enquiring the issue of study emphasizes on the issues of exchange whose increase and progress is one of the most important cases in economy and as an effective assigner and resource utilization can determine enterprise's stock price on the strength of basic factors such as revenue and risk which are of main concern in determining the present value. In this regard, questions have been posed to researchers as follow:

- Is there any correlation between the expected revenue and real revenue of stocks in Tehran securities exchange market?
- Is there correlation between systematic risk and real revenue of stock in Tehran securities exchange market?

**Importance of the study:**

Researchers take steps in their own investment in securities exchange on the basis of the link between risk and revenue. Recognizing the link between risk and revenue is of more importance in that applying existing models in decision making about investment in securities entails such recognition. For example, one of the applicable done for pricing the stock which is more important and many studies have been carried out it since the decade of 1960; it is the model of pricing investment assets which is called CAPM and this model can be helpful in decision making on securities investment. Regarding this issue, in our country where investors of securities often have no scientific base for their decision making, the CAPM model will be more important.

$$Var_p = (X_1)^2 \cdot Var(r_1) + (X_2)^2 \cdot Var(r_2) + 2X_1X_2Var(r_1)^{1/2} \cdot Var(r_2)^{1/2} \cdot P_{1,2}$$

In this formula, variables are:

Var p: the variable of revenue in total investment, (X1): the ratio of initial investment, (X2) the ratio of second investment,  $X_1+X_2=1$ , Var (r1) the variable of first investment revenue, Var (r2) the variable of second investment revenue, P1, 2: the coefficient of correlation investments 1 and 2 of this formula shows that the smaller P1,2 becomes, the lower the Var p amount is and if the P1,2 is totally negative, (-1) portfolio variable has its least amount.

When there exist various opportunities of investment, in this case, the formula of portfolio variable calculation will be:

$$V_p = \sum_{i=1}^n \sum_{j=1}^n X_i \cdot X_j \cdot C_{ij}$$

In which variables are:

N: the number of investment opportunities, Vp: the portfolio variable, Xi: the ratio of performed investment in i investment, Xj: the ratio of performed investment in j, Cij: co-variable of investments. This formula holds features such as:

- 1) Final equations being secondary.
- 2) The importance of correlation coefficient between variables of investment.
- 3) Measuring the risk of each investment based on final effect of investment risk on prior investments.

Markowitz's model of proposals was accompanied by longitudinal calculations. Therefore Sharp tried to simplify the model and later on, in coincidence with Tubin, represented the model of capital market line with the concept of stock without risk in portfolio. In 1960 Sharp Welintenr represented CAMP Model that is based on the theory of market and if one of the theories does not exist, the Model must be changed.

**Studies of Fama:**

Fama presents the framework of two-dimensional model in a way that by expending a sum of capital,

**Studies of Marquez and Sharp**

The reduction theory of stock risk has been proposed in an article entitled portfolio selection in journal of finance in 1952 by Marquez. He showed via scientific way and applying statistical methods that the risk can be reduced by making variety of investment. Then, by using the theoretical base of Markowitz, He presented this theory more applicable. Markowitz theory emphasizes on coefficient of correlation between variables (investments) and believes that low coefficient of correlation is a sign of risk reduction. Markowitz shows that variable in a set of investment comprising from two investments is as the following formula:

its value differs periodically. He knew the value of present and future capital relevant considering the ratio of both in investment and believes that the problem of investment is optimal combination of present expenditure of capital and the possible distribution of expected value of capital future. By mentioning the point that portfolio revenue, revenue harmonious mean, administering and risk of portfolio which is measured by revenue variable in this model, is the mean of co-variable harmony, He believes that the final effect of securities in revenue and risk of portfolio is measured. In his survey on risk calculation and individual stock revenue in portfolios composing of 50, 25, 15 and 6, 5, 4, 3, 2, common stock of exchange enterprises of New York, from July 1963 to June 1968, Fama calculates the rate of each stock share in revenue and variable of portfolio as follow:

$$\bar{R}_p = \sum_{i=1}^n X_{ip} \cdot \bar{R}_i$$

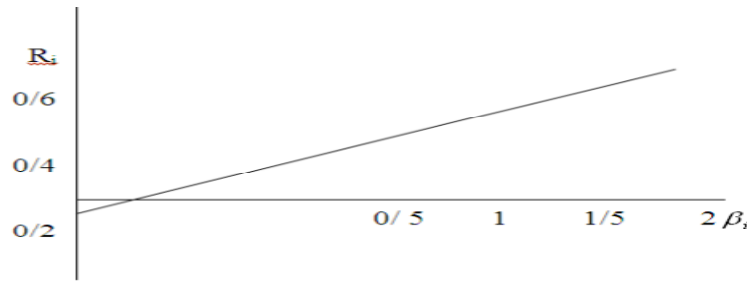
$$\sigma^2(R_p) = \sum_{i=1}^n X_{ip} \left( \sum_{j=1}^n X_{jp} \cdot S_{ij} \right)$$

In general, Fama concluded that the larger the stock portfolios regarding the number of composing stocks, the lower the effect of its constitutive stock in portfolio variable and as a result the risk of such portfolio reduces, whereas the variable of single stock revenue 0/1234 and the revenue variable of portfolio composed of 50 stock, is .0016.

Therefore, it can be concluded that dividing investment rates and specifying them to the set composed of many securities like some common stocks, causes the investment risk to be reduced. Of course, diversification eliminates some variable effects of a stock in total variable but the effects of its co-variable remains likewise.

**Studies of Block, Johnson and Schulz:**  
 This study was done in 1972 and they centralize their analysis on the curve of securities exchange. If portfolio is efficient market, a linear relation between Beta and expected revenue amount is created which Block, Johns and Schulz were about to test it. They limited their samples with all stocks that were transacted in New York exchange from 1965 to 1926. They began their study to survey periods of 1926 and 1930 and used Beta for all existing stocks in Yew York exchange that were shared equally and then they divided stocks being studied, for ten portfolio (stock basket) based on their Betas. In a case that ten percent of stock having highest Beta was considered in portfolio No. 1 and ten percent of stock being after the fist ten percent was considered as portfolio No. 2 and the sequence was repeated up to the end so that 10

portfolio would be constructed. In the next stage, they calculated the revenue amount of each portfolio for 12 month in 1931 and at the end of this year, they recalculated Beta for all existing stocks in exchange from periods 1927 to 1931 and composed 10 portfolio in explained order and did this process for all years from 1931 to 1965 and hence a series of monthly revenue were calculated for ten portfolio. For calculating Beta of each portfolio, the amount of market's portfolio revenue were considered independent variable and the revenue amounts obtained for portfolio during different periods were considered dependent variable and the slope of equations obtained shows the Beta of each portfolio. Although they kept their surveys for various periods from 1926 to 1965 but the whole estimates related to periods from 1931 to 1965 presented in the following diagram.



The linkage diagram between revenue amount and Beta

The presented curve is related to securities exchange curve of New York for periods of 1931 to 1965. If investors can lend and borrow loan having profit amount without risk, the equation of securities exchange curve would be as follow:

$$E(R_i) = E(R_z) + b_i [E(R_m) - E(R_z)]$$

In the above equation, E(Ri) is the amount of expected revenue of market portfolio, the slope of securities exchange curve obtained by Block, Johnson and Schulzequals with .01081 which shows that due to the market risk, 1/081 percent is for each month and or 12/972 percent for each year.

Where the curve of securities exchange crosses vertical axis, it is assumed that the equivalent of revenue amount of riskless debenture with the expected revenue amount, are portfolios having zero Beta. In studies of Blocks, Johnson and Shulez, the curve of securities exchange has crossed vertical axis in an interval of 0/00519. This difference shows the revenue amount equivalent 0/519 for each month and or 6/228 for each year. This number is considerably greater than the mean of riskless revenue amount and is in the course of expected period, hence they concluded that their results is in accordance with a picture of CAPM Model in which there is possibility of lending with riskless interest amount but borrowing with

mentioned amount is not possible. Generally, the above mentioned results support CAPM Model strongly. There is no evidence showing the securities exchange curve to be nonlinear or is few.

**Studies of Block, Johnson and Skinner (BIS):**

Exact studies have been done on common stock of accepted enterprises in securities exchange of New York for a period of 40 years. First, the stock revenue and portfolio revenue of accepted enterprises' market in New York securities exchange was calculated. Then they calculated systematic risk by applying the following formula.

$$\beta = \frac{COV(R_i, R_m)}{\sigma^2(R_m)}$$

The study showed that there was no connection between risk and securities revenue, in other words, firms that hadn't had higher stock revenue, faced with higher risk.

**Studies of King**

King based his studies on the differences among various industries. He divided 63 groups of enterprises' stocks in six industrial groups and

studied their revenue in a period of 33-years (1960-1927). At first, King began to determine market effects on common interest revenue and then continued his researches for this period so as to know whether there is something as an agent of affective industry to the other revenue or not. By applying the clustered method of analysis, he concluded that the stock revenue in fact is affected by industry; King concluded that 30 percent of each stock's variable depends on the market factor and can relate 10% of revenue variable to industry factor.

#### **Studies of Feral:**

Like King, Feral considered factors of industry. He studied 356 for a period of 7 years (1970 – 1977) and first eliminated market factor and then studied a portion of stocks' revenue related to nonsystematic risk via cluster analysis and concluded that 30% of stock revenue is in connection with market factor and investment must be made in various stocks of different firms in industries to eliminate the nonsystematic risk

#### **Studies of Rule:**

Rule believed that different indicators should be used for calculating Beta since in this case; the rate of correlation would be different as well. Therefore the calculation of Beta depends on the kind of selected index. To find appropriate index for calculating Beta, Rul applied CRSP1 parallel index and NESE2 parallel index as replacements for portfolio of market and the results of study showed that selecting kind of index can have more effect on the amount of Beta and Alfa. The research which had been done by Dr. Ali Jahankhani on "systematic risk" and published in early spring of 1373 in financial researches.

1 center for research in security prices

2 New York Stocks Exchange

In an interval from January 1957 to December 1976, for a period of 20 years, the research examined stability of systematic risk in a sample containing 200 cases from existing enterprises in research center of securities exchange. The research showed that there is linear relationship between risk and revenue and also, the results of this research emphasized on "diversifying more portfolios that lead to the stability of Beta coefficient". The thesis which has been written by Babak – Teymurpour, entitled surveying the relationship between risk and revenue in Tehran securities exchange (1992-1996) in 1998 under the guidance of Ahmadreza Jalali Nayini in faculty of management of Tehran University. The aim of capital markets is to transfer funds between lenders and borrowers efficiently. To be efficient, the capital specification must provide investments having higher social revenue and assign capital to investments which stand in negative status. In specifying effective resources, the market should be able to determine the stocks price of an enterprise based on essential factors like

revenue and risk involved in determining present value. In this case, existing funds for the firms utilizing resources in proper way will be accessible easily. For market efficiency, investors must be able to estimate the risk of any asset based on appropriate criteria and proceed to select their substantial portfolio with regard to revenue and risk of various assets of their own utilitarian. Hence, existence of appropriate criteria for risk measurement is necessary. In an efficient market in which the past information and any general information in prices are reflected, it is expected that the price of securities be approximately close to its real value and reflect the revenue and risk of securities. Meanwhile, determining real risk of stocks is one of the essential elements in management of securities. This research being conducted on monthly census of Tehran exchange seeks to discover relationship between risk and stock revenue in Tehran exchange market in order to obtain appropriate criteria for pricing stocks efficiently. Theoretical basis of research is the model of pricing capital asset (CAPM) and theory of profitable pricing (APT) and the experimental model of market is used for estimation. Also investigating the non-linearity of risk relationship and revenue is in the context of study.

#### **Risk:**

Possibility of value deviance of a variable toward expected value or in other words, the risk is the possibility of varying real revenue from expected revenue. In a general division, risk can be divided into two groups of systematic risk (unavoidable) and nonsystematic (avoidable), which means;

Nonsystematic risk + systematic risk = total risk

#### **Systematic risk:**

Systematic risk is one that is made as a result of total factors of market affecting price of all securities in a financial market. It's called market risk since this risk is in connection with general situation of market and derived from market vacillation and is not controllable for certain enterprise or industry.

#### **Nonsystematic risk:**

Asset risk originating from situation and change in certain circumstances of any stock or securities which is omissible and prone to reduce and is known as reducing risk as well.

#### **Portfolio:**

The same as stock file consisting compounds of complex assets, nonsystematic risk can be omitted by diversification in investments.

#### **Expected revenue:**

Equalwith expected revenue of market for investment without risk and risk itself.

**Capital Asset Pricing Model (CAPM):**

CAPM is an accepted model in assets' industry and its aim is to show relation between risk and revenue of an investment, or model of risk valuation of capital assets.

Beta coefficient ( $\beta$ ):

Beta coefficient ( $\beta$ ) measures systematic risk and it can be said that it consist of friction criteria of market price of stock toward the amount of portfolio revenue.

**Objectives of study:**

Experts of financial affairs and academic theorists have tried to specify the relation between risk and revenue amount of securities. One of these challenges is a research conducted by Sharp. By introducing CAPM, He assumed that there is linear and simple connection between systematic risk and security revenue. This theory has been tested and approved in some countries. Since the investor pays special attention to risk and revenue in decision making process and steps toward investment considering these two factors, therefore it can be said that the main purpose of this research is to assist security exchange investors of Tehran so as to invest in assets of more revenue and less risk and in this way increase their properties. Then, the second aim of studying the issue in which investors can determine their expected revenue for securities and also predict their next investment revenue based on existing information in exchange.

**Research hypotheses:****Main hypothesis:**

There is correlation between expected revenue and real revenue of stocks obtained by applying CAPM model in Tehran security market.

**Secondary hypothesis:**

There is correlation between systematic risk and stocks revenue obtained from applying CAPM in securities market.

Research method:

Deductive-inductive method was applied in this research. The theoretical framework and background of research is conducted inductively as in forms of library, articles and internet, and collecting information for rejecting or approving the hypothesis test is conducted as deductive. Also, this research will be of analytic and applied one.

**Method of data collection**

Obtaining the information for this research to calculate and test it has been performed by using existing data in financial statement reports of security exchange.

**Data analysis:**

Calculating the revenue of common stocks

By applying relations presented in third chapter, stock revenue has been calculated annually for under-researched firms and then their average  $R_i$  has been obtained for 5 years.

$$R_i = \frac{\sum_{i=1}^n R_{it}}{n}$$

$R_i$ = The revenue amount mean of stocks in five years.

Calculating the portfolio revenue of market

The revenue of market portfolio has been obtained annually through the following connection:

$$R_m = \sum_{i=1}^n \frac{W_i}{N} \times R_i$$

In which:

$R_m$ = market portfolio revenue

$R_i$ = the revenue amount of firm stocks

$N$ = number of shares in the course of all sample enterprises

And  $n$ = the number of sample enterprises

Related calculations have been done and presented.

The following chart shows the market portfolio revenue for researched period:

The chart of market's portfolio revenue ( $R_m$ )

row	year	$R_m$
1	1999	0/5686
2	2000	0/4008
3	2001	0/3533
4	2002	0/3533
5	2003	2/1207

**Calculation of systematic risk**

The systematic risk calculation ( $\beta_i$ ) has been calculated by holding revenue of stocks  $R_i$  and the revenue of market portfolio  $R_m$  and by using the connection presented in third chapter, from the ration of covariable between stocks' revenue and portfolio revenue of market divided by revenue variable of market portfolio for each enterprise for 5 years.

$$\beta = \frac{Cov (R_i, R_m)}{Var (R_m)}$$

If the revenue of market revenue  $R_m$  is replaced by X and the revenue of stocks  $R$  replaced by Y in the above relation, the relation will be as follow (Rae, Reza and Talanghi, Ahmad, 2004, page 375):

$$\beta = \frac{\sum XY - \frac{\sum X \sum Y}{n}}{\sum X^2 - \frac{(\sum X)^2}{n}}$$

**Calculation of expected revenue**

The expected revenue has been calculated annually (Ret) by using relationship presented in third chapter, for under research enterprises and then their mean (Re) has been obtained for 5 years.

$$R_E = \frac{\sum_{i=1}^n R_{Et}}{n}$$

Re= the mean of expected revenue amount of stocks in five years.

**Testing research theory:**

For testing these theories and examining the relationship between systematic risk and expected revenue with common stocks revenue, Regression analysis is used first, and then for examining the intensity and rate of correlation, the Pierson's coefficient of correlation and determinant coefficient are calculated. For testing hypothesis and doing calculations, SPSS software has been used. Normality of data is examined beforehand.

**Examining data normality:**

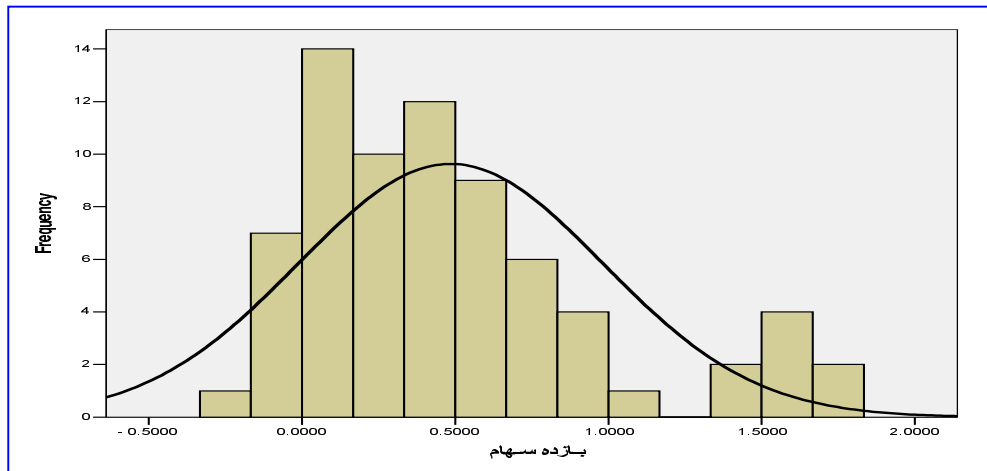
With regard to the importance of normality and lack of remote points, ways of discovering remote points and examining normality of data were done. Results of Kolmogorov and Smirnov which were used for testing data normality, is significant of normality for the first data.

In fact, the following theory has been tested:

H0: data are normal

H1: data are not normal

The amount of Asymp significant level equaled with 0/171 which is greater than  $\alpha=0/05$  (in certain level 0/95) and therefore zero theory is not rejected and data are normal. Considering that examining normality of dependent variable in Regression is important hence only normality has been applying for that.



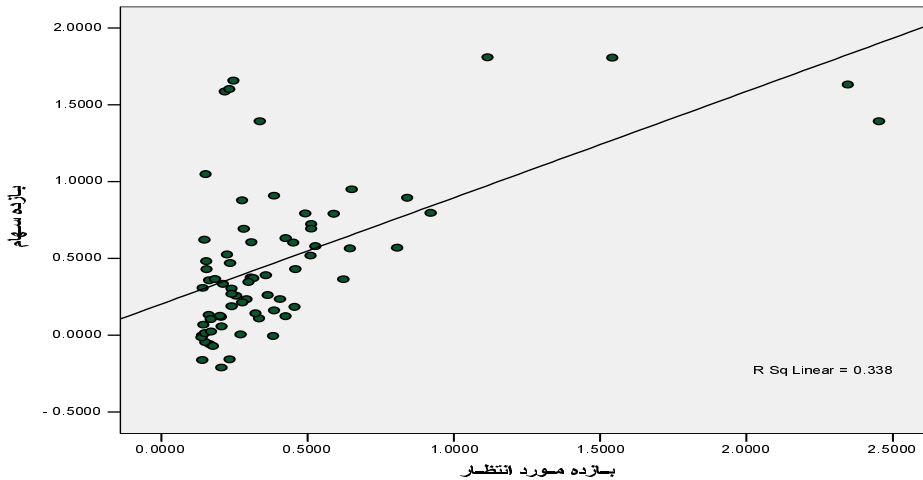
**Testing main hypothesis:**

1- Asymp, Significant Level

The main theory of research is presented as follow:  
 H0: there is no correlation between expected revenue and real revenue of stocks resulted from applying CAPM Model in Tehran securities market.  
 H1: there is correlation between expected revenue and stocks' revenue resulted from applying CAPM

Model in Tehran security market.

Since the aim of study is the rate of relationship between two quantitative variables, Pierson's correlation tests and Regression's simple linear are used. First the simplest and most efficient method is the use of transmittal diagram. Because using this diagram shows the whole idea about the kind of relationship between two variables.



**Regression:**

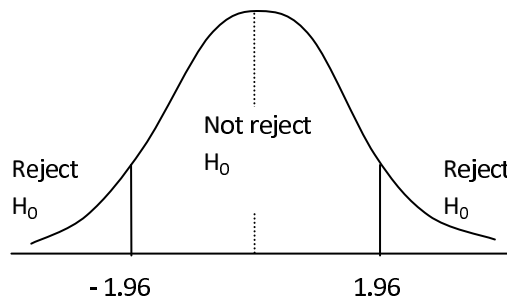
The zero and opposite theory was tested as follow:  
 H0: there's no significant relation  
 H1: there's significant relation  
 Considering that the R2 amount equals 0/338 and the significant level amount of F equals with 0/000 because it's smaller than  $\alpha = 0/05$ , the zero theory is rejected and shows that there's significant relation in view of linear.  $\alpha = 0/05$   
 The following assumptions can be done by using small t statistics.

$$\begin{cases} H_0 : \beta_1 = 0 \\ H_1 : \beta_1 \neq 0 \end{cases}$$

$$t_{B_0} = \frac{b_0}{S_{b_0}} \quad \text{و} \quad t_{B_1} = \frac{b_1}{S_{b_1}} = 3/00 t_{B_0} = 5/98 \quad \text{و} \quad t_{B_1}$$

$$\begin{cases} H_0 : \beta_0 = 0 \\ H_1 : \beta_0 \neq 0 \end{cases}$$

Quantities have been obtained that stands in rejection zone of zero theory. Therefore, the width from offset and linear slope is significant. Then, the model is written as follow:  
 Stocks' revenue = 0/202 + 0/693 \* (expected revenue)



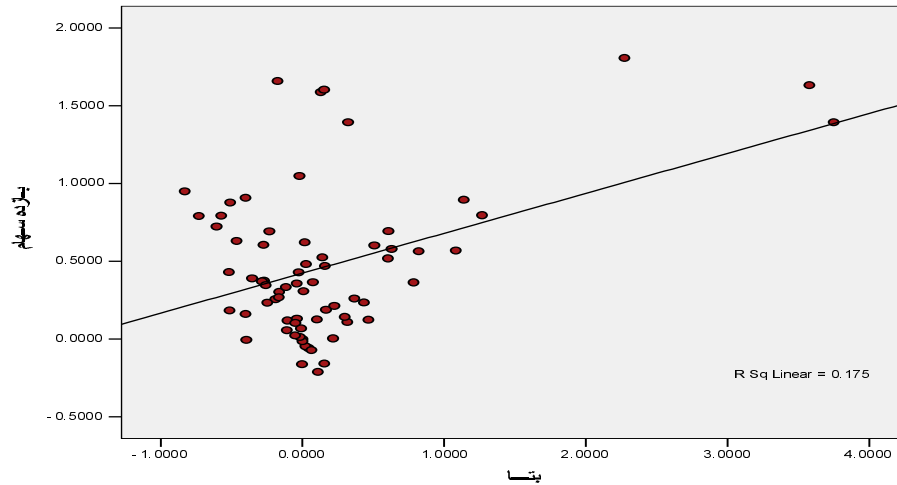
**Test of secondary theory:**

The secondary hypothesis of research is also presented hereunder.

H0: there is no correlation between systematic risk and real revenue of stocks resulted from applying CAPM Model in Tehran securities market.

H1: there is correlation between systematic risk and real revenue of stocks resulted from applying CAPM Model in Tehran security market. Because the aim in this test is also examining the

relation between the two quantitative variables, therefore, transmittal diagram is used. Because using this diagram shows whole idea about the kind of link between the two variables.



**Regression:**

The Zero and opposite hypothesis are tested as follow:

H0: there is no significant relation

H1: there is significant relation

Considering that the quantity of R2 equals with 0/19 and the significant level of F quantity equals 0/000, because it is smaller than

$\alpha = 0/05$

The zero hypotheses are rejected and show that there is significant relation in view of linear.

The following hypothesis can be done by using small t statistics.

$$\begin{cases} H_0 : \beta_1 = 0 \\ H_1 : \beta_1 \neq 0 \end{cases}$$

$$t_{B_0} = \frac{b_0}{S_{b_0}} \text{ و } t_{B_1} = \frac{b_1}{S_{b_1}}$$

$$= 7/97 t_{B_0} = 4/07 \text{ و } t_{B_1}$$

$$\begin{cases} H_0 : \beta_0 = 0 \\ H_1 : \beta_0 \neq 0 \end{cases}$$

Quantities were obtained that are placed in rejection zone of hypothesis, therefore the width is significant from the start and line slope. Then the model is written as follow:

Revenue of stocks = 0/435 + 0/280 \* (Beta)

Test of hypothesis by using Pierson's correlation:

"There is significant relation between systematic risk and revenue of stocks." By using Pierson's correlation test (H0 for the two quantitative variables), the zero hypothesis and opposite hypothesis below are tested.

H0: There is no linear link between systematic risk and real revenue of stocks.

H1: There is linear link between systematic risk and the real revenue of stocks.

$$\Rightarrow \begin{cases} H_0 : \rho_{x,y} = 0 \\ H_1 : \rho_{x,y} \neq 0 \end{cases}$$

The determinant coefficient obtained in secondary

test, 0/192 being its quantity, the coefficient of



correlation obtained is  $r_p = 0/44$  (The square of determinant coefficient) which shows that there is correlation but perhaps there isn't so. Therefore, hypothesis H0 is rejected and H1 hypothesis is accepted. Meaning, there is correlation between systematic risk and real revenue of stocks.

### Conclusion

Since the possibility of rejecting the structured models' coefficients is zero, hence the model with its whole theories in both tests significantly approved 98% and the link between the dependent variable and descriptive variable of model is accepted, meaning, between stock revenues ( $R_t$ ) with expected revenue (Re) and systematic risk (B) exists a linear relationship.

With regard to the equation obtained from regression in both tests, it can be said that in case of one percent increase in dependent variables (expected revenue and systematic risk) dependent variable (the revenue of common stock) increase 69% and 28% and in case of its one percent reduction, the common stock revenue will decline up to the same percent. On the other side, based on calculated statistics, the accuracy of model construction too is accepted.

Coefficient of correlation levels obtained in both tests that is  $r_p=0/58$  (relationship between expected revenue and common stock revenue) and in subordinate test is  $r_p=0/44$  (relationship between systematic risk and common stock revenue) shows that there is strong direct connection between dependent and independent variables and in original test, meaning, investor who think to obtain expected revenue and there is no strong connection in inferior test and if the systematic risk increase, the common stock revenue will increase and in case the systematic risk comes down, the common stock revenue will reduce. This case shows that stocks having more expected revenue and systematic risk, has higher revenue, and in turn, stock holders who receive more systematic risk, obtain higher revenue as well.

It should be mentioned that the obtained determinant coefficient (.19) in inferior test signifies that 19 percent changes of dependent variables (common stock revenue) in accepted enterprises in security exchange created by changes in independent variables (systematic risk) and 81 percent of remainders created by changes in nonsystematic risk. Meaning, a large part of risk received by investors in enterprises, created due to inner factors of these enterprises and less percent relates to outer factors. The inner factors written on page 16 of this study is said to point to governmental support from inside industries which causes the outer effects on enterprises to be as lower as possible. In this case, the main risk threatening enterprises will be nonsystematic risk and derives from factors except outer factors.

Therefore, for reducing this nonsystematic risk, investors must diversify their investments according to William Sharps' definition about this risk, so as to obtain more revenue in this way.

Generally, with regard to above mention test data and since there is correlation between expected revenue with common stock revenue and also

systematic risk with common stock revenue, the H0 assumption is rejected and H1 assumption is accepted, therefore, pricing model of capital asset (CAPM) is affective and its theories are confirmed. Meaning, the CAPM model confirms data resulted from mentioned tests and shows that CAPM is explainable and applicable in Iran and it can be said that in Tehran securities exchange there is correlation and linear connection between expected revenue and systematic risk with common stock revenue and this connection has been shown via Regression linear equation and proved by applying Pierson's coefficient of correlation that there is coefficient of correlation and amount of correlation coefficient shows the directness and same orientation of these connections, and the percent of stocks revenue changes (dependent variable) in the presence of changes in expected revenue and systematic risk (independent variables) by way of determinant coefficient that findings show that 34% revenue changes of common stocks explained by change in expected revenue and 19% common stocks changes explained by changes in systematic risk and the rest relates to other factors of CAPM model such as nonsystematic risk.

With regard to CAPM model in which there is a connection between expected revenue and systematic risk with common stocks revenue specially direct and strong condition, any investor can take step toward investment, meaning, stocks with higher expected revenue and systematic risk, have higher revenue, and stocks with lower expected revenue and lower systematic risk, yields lower revenue to the investor.

### Research suggestions

It is recommended that the securities exchange calculates the CAOM model variables in exchange annually and avails to investors and even ranks enterprises with respect to calculated variables to provide possibility of investment for an investor. In the inferior test of this research, nonsystematic risk has the highest percent; investors must try to create incentives of omitting nonsystematic that relate to inner factors of enterprises.

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