Indian Journal of Fundamental and Applied Life Sciences ISSN: 2231– 6345 (Online)
An Open Access, Online International Journal Available at www.cibtech.org/sp.ed/jls/2016/02/jls.htm
2016 Vol. 6 (S2), pp. 33-43/Karimi and Dabbaghi
Research Article

ASSESS AND IDENTIFY THE MOST APPROPRIATE INVESTMENT OPTIONS AND FINANCIAL ASSETS IN IRAN (THE PERIOD OF 2001-2010)

Mohammad Sharif Karimi[1] and Nishtman Dabbaghi[2]
[1]Department of Economics, Faculty of Social Science, Razi University, Iran
[2]Department of Executive Management, Islamic Azad University of Sanandaj, Iran
**Author for Correspondence*

ABSTRACT
If the definition of investment is cancelling the current consumption to access consumption possibility in future, the recognition of opportunities that an investor could scarify a certain value from them to get a certain value which is suitable makes the high importance in investment affair. In the research, it was calculated and compared the return and risk of 4 opportunities in known investment (stock, housing, gold and foreign exchange) during 2001-2010 by using from the taken data from central bank and Iran statistic center. The data from SPSS was analyzed by suitable statistical tests execution. The results show that investment in stock had the most return and also the highest risk for investors in the period. The financial evaluation index conclusions (Sharp & Treynor) explain more desirability of stock index in compare with the other opportunities.

Keywords*: Investment, Return, Risk, Stock, Housing, Gold, Foreign Exchange, Sharp Index, Treynor Index*

INTRODUCTION
Capital is counted the most limited of economic sources in countries and always for this reason, economists and some experts in financial affairs follows ways to desired use from that in order to provide investors. Thereby, what needs to review and consideration is credit of policies that is used for favorite allocation of sources and saving of society in effective and efficient activities to lead to social and economic growth and public confidence in suitable use of their capitals. Importance of investment for social and economic development and growth is significant enough to reach to development as one of the strongest lever. But it should be noted that just as attention to this affair could be caused to economic growth and prosperity by falling in a positive cycle, inattention to it could be caused to economic slump and roll down to a decline process and negative cycle, too. Therefore, it must be said that economic growth and increase of common wealth in long-term is impossible without paying attention to investment and available important factors in the investment environment which effects on it. So, appropriate choosing and selection for investment requires more scrupulousness and consideration to obviate investors' the main disturbance that it is the reasonable profit obtaining/ acquisition or at least maintain the value of money. According to the necessity, in the present study by consideration of 4 main bazaars in investment of Iran country consist of stock, housing, gold and foreign exchange during 2001-2010, a comparison has performed from their return, risk, trey nor and sharp index and has been identified according to the mentioned index the most suitable choice for investment.

Research Problem Expression
Problem Expression of Research
Investment process has caused to inefficient capital intensity and to direct them to economic productive sectors in the one hand and according to the investor's decision basis on the risk and return, capitals will be driven into industries which enjoy adjusted return by the higher risk in the other hand and this will provide the field of optimal resources allocation (Islami Bidgoli, 2006).
Investment postpones the present consumption to reach to possibility of more consumption in the future (Zandi Haghighi, 1987), thus it must be expected value of earned funds from the delayed consumption would be more than value of the same fund at the present to encourage people toward investment, at the

same time, the opportunities that give more profitability to the investors, are declared more ideal for the investment. Among several factors that may cause the investors' tendency toward a special economic section, profitability of investment possess twice importance, because motivation of acquisition is for capital intensity in this part.

Durable changes of Tehran stock exchange index and housing, gold and foreign exchange rate been caused petty/minor investors' obscurity on direction of the risk and return of opportunities to invest and identification the most profitable sector and determination of this subject that which sector will pay more profitability for them in a long-term has been remained unclear.

Capitals vagrancy that transfers between several economic sectors periodically has been caused to unwanted and emotional fluctuations in Iran capital market and lead to not perform allocative efficiency of market perfectly. this motion accompanied to collaborative and coordinated movement of capitals among different parts such as bank deposit, investment in stock exchange, purchase of gold coin, purchase of foreign exchange, investment in building sector, purchase of land, real state and so on. The capitals vagrancy caused to express of warning comments/statements about long-term profitability of unproductive opportunities and was said that fluctuation of foreign exchange and gold markets is not as much as rate of inflation in the country and thus price growth will be limited in the markets. In the other words, fluctuation of foreign exchange and gold markets is not as much as that someone could have more benefits.

Therefore, in the research, an effort is made to compare of their risk and return, while return behavior in the opportunities to invest (shares, housing, gold and foreign exchange) is studies in a long-term period (more than five years) from 2001 to 2010 and sharp and treynor index will be counted for each of them. Indeed, the return will be measured toward total risk and market risk (systematic risk) to be accomplished purpose of the study that is identification of the most appropriate choice to invest among the mentioned four opportunities.

Research History and Literatures

An article in the name of "the return and risk comparison of replacing opportunities to invest in Iran" has been surveyed along with performance of a study on historical information (monthly), the return and risk of four opportunities to invest (investment in shares, gold, foreign exchange and bank deposit) from 1998 to 2005 by Islami Bidgoli and Bigdelou (2006) and which of them has been compared together on the basis of debit-credit criteria of the return and risk. Results of the research shows that in the period has been studied, investment in shares among replacing opportunities has allocated more return to the investors. While proportional risk of shares (instead of return) is appropriate for the investors in comparison with risky opportunities of investment (gold and foreign exchange), too (Islami Bidgoli and Bigdelou, 2006).

Karimi and Ma'navi (2009) in a research in the name of "the role of stock exchange in economic development of Kurdistan province" had compared return rate of asset types in 2007 with rate of inflation in the whole country and Kurdistan province, in addition to consideration of the stock exchange role in economic development of Kurdistan province in Iran that the results indicate positive real return of residence property in the whole country and Kurdistan province and negative return of other properties such as foreign exchange, automobile, shares, gold. Consideration of investment return on asset types during period of 2005-2007 shows that in the mentioned period, Bahar-e Azadi coin, housing, has been holder of positive real return and foreign exchange, automobile and shares haves been holder of negative real return (Karimi and Ma'navi, 2009).

Schilit (1993) estimated by relative evaluation some of investment opportunities of the return and risk levels in the opportunities. Chosen opportunities in the study included 12 choices to invest that had been stretched throughout of a continuum from the highest to lowest at risk in a long-term period. Consequence of the study presented that the risky investment and then IPO (Initial Public Offering) index for public supply of shares (as the agent of shares for the companies which have public ownership recently) have given the most (1st) and 2nd return to the investors. From the viewpoint of being risky of investment, the risky investment was in the 1st place of the highest risk of opportunities. Obtaining the lowest return by

investment on gold was an interesting point in the study; so that its return had been lower than return rate with no risk (Schilit, 1993).

In other research, Mehra (2001) compared average of shares return and relative no-risk property return. In the study, the average of return and changing of shares risk has been calculated during several years and different periods and in a long-term period.

Furthermore, in the research in addition to economy survey in US, the results were reviewed in Britain, Japan, Germany France, too that all of them presented to reach more return of shares than no-risk property return in the long-term period (Mehra, 2001).

Research Hypothesizes

In order to reach to the research purposes, the main theory has considered as follows:

The Main Hypothesis

There is a significant difference between return over investment on shares, housing, gold and foreign exchange during the considered period.

The Secondary Hypothesis

There is an opposite relation between return over investment on shares and return over investment on other choices of investment.

The Research Methodology

The Used Index in the Research

The studied variable was for shares return evaluation, price index and cash return (total) of Tehran stock exchange (TEDPIX), and the used variable to evaluate of return over investment on housing has been average cost of 1 m^2 as the infrastructure of resident units on the basis of 30 chosen cities of Iran country, that has been considered their average in each year as a housing index at/on that year. The price changes of coin market (full Bahar-e-Azadi, old design) has been used to the changes of gold price and the price changes of US dollar at Tehran foreign exchange non-institutional market (nominal price) has been used to calculate of the price changes of foreign exchange rate at the studied period. Also in the research, return rate of as part payment profit in the long-term deposits to invest of public banks has been applied as no-risk return rate. As it was said, the used indexes to calculate of the return, risk and etc. have been gotten from central bank and Iran statistic center. SPSS software has been used for all statistical calculations and theories test.

Comparison of the Return in Opportunities to Invest

As it is observed at chart 1, average of shares index return is %40 during the studied period, while average of return in housing, gold and foreign exchange has been %22.95, %19.76 and %2.63 in order at the same period. But it must be noticed that yearly average of shares index has been almost 1.74 times more than housing, 2.02 times more than gold and 15.21 times more than foreign exchange. According to the chart, average of index return in shares, housing and gold is higher than average of inflation rate in the considered period but the return of foreign exchange is lower than rate of inflation.

Table 1: Central Parameters of the Return per annum for each of Opportunities to Invest during the Studied Period (Numbers by Percent)

	Arithmetic Mean	Geometric Mean	Middle	Minimum	Maximum
Shares Index	40	39.81	30.65	-12.7	138.6
Housing	22.95	22.54	21.65	-18.2	59.5
Gold	19.76	19.13	19.45	0.5	41.8
Foreign Exchange (Dollar)	2.63	2.53	3.25	-2.2	6.2
Inflation	14.72	14.40	13.8	10.4	25.4

(Source: research information)

Comparison in Process of the Return Rate of Opportunities with Inflation Rate:

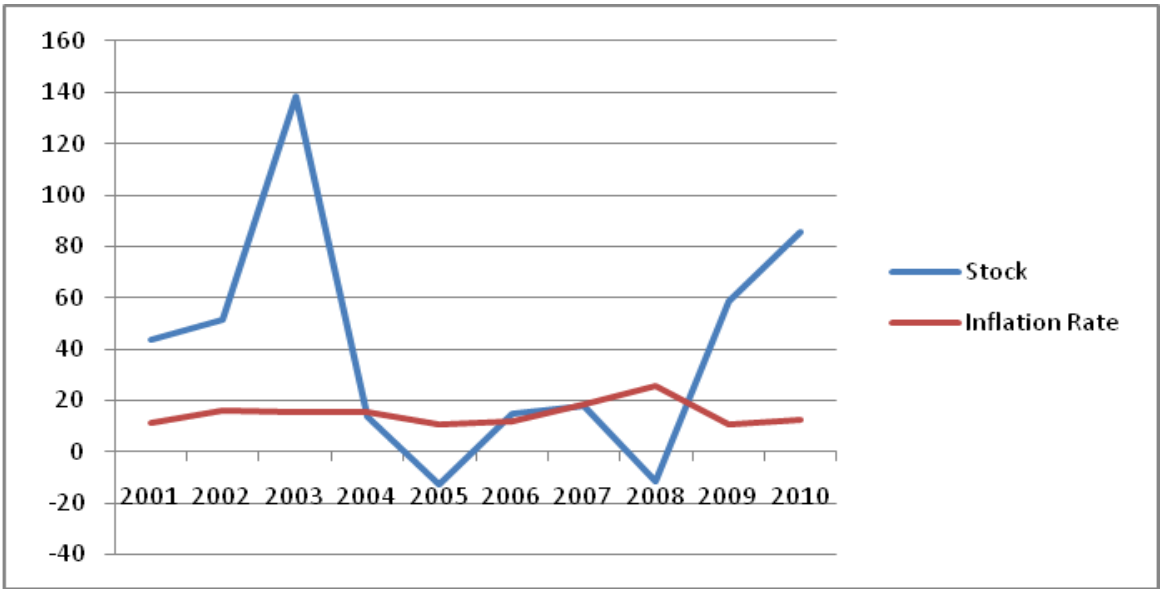

Figure 1: Comparison of Shares Index Investment (Return) with Inflation Rate during the Studied Period

Graph 1 shows a comparison between process of the return rate of invest to shares index with inflation rate. It is observed that the growth of shares index has been higher than inflation rate at most of years. But as the graph shows, index of shares in 2005 and 2008 is holder of negative return and its graph has placed lower than inflation rate graph. The growth of shares index has been lower than inflation rate in 2004 and 2007, too.

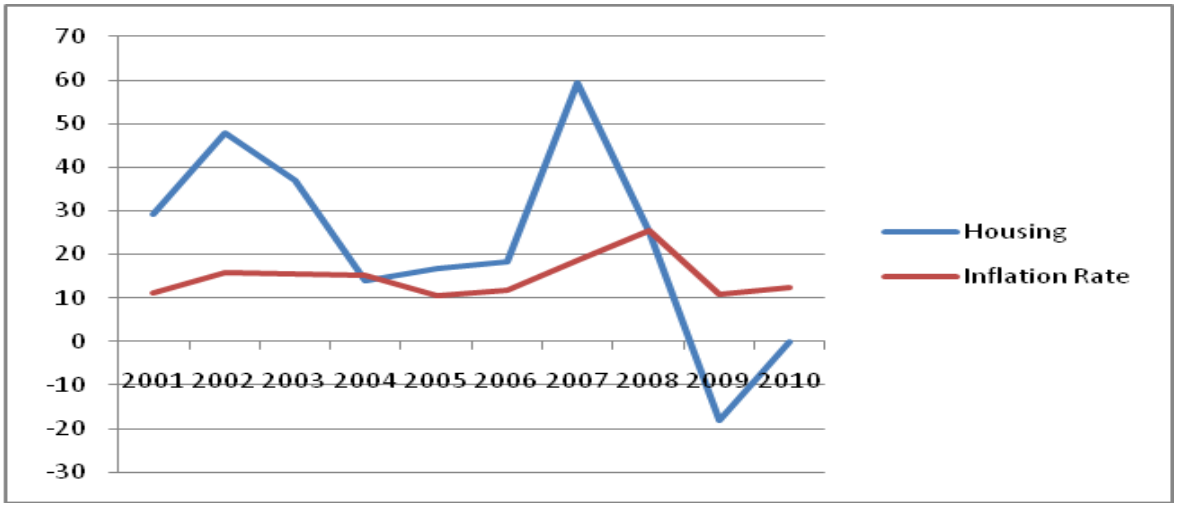

Figure 2: Comparison of Housing Investment with Inflation Rate during the Studied Period

Graph 2 shows a comparison between growth process of the return of invest to housing with inflation rate. It is observed that the housing growth has been higher than inflation rate at most of years. But as the graph shows, the return of housing in 2009 and 2010 is holder of negative return and its graph has placed lower than inflation rate graph. In 2004 and 2008, the return of housing has been lower than inflation rate despite of its positive return.

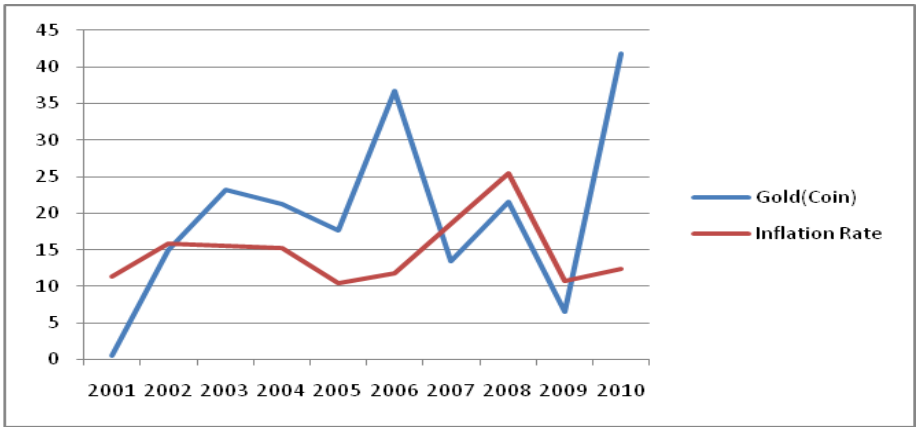

Figure 3: Comparison of Gold Investment with Inflation Rate during the Studied Period

Graph 3 shows a comparison between process of the return of invest to gold with inflation rate. It is observed that the growth of gold return has had many changes. As the graph shows, rate of gold return in 2001, 2002, 2007, 2008 and 2009 is lower than inflation rate at the same year and its graph has placed lower than inflation rate graph, too.

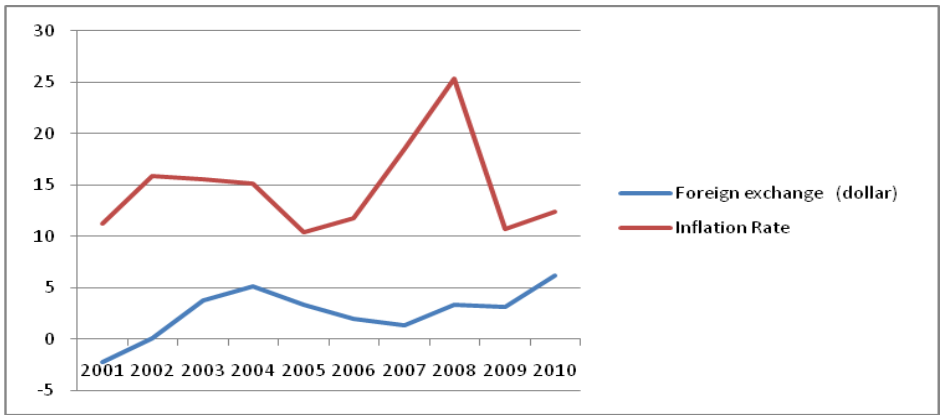

Figure 4: Comparison of Foreign Exchange Investment with Inflation Rate during the Studied Period

Graph 4 shows a comparison between process of the return of invest to foreign exchange with inflation rate. It is observed that the foreign exchange return has been lower than inflation rate in all of years.

Comparison of the Investment Return over the Studied Variables with Inflation Rate

Table 2: The Process of Changes in the Investment Return of the Opportunities to Invest and Rate of Inflation during the Studied Period

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Shares	43.7	51.2	138.6	13.6	-12.7	14.7	17.6	-11.3	58.8	85.8
Housing	29.1	47.9	37.1	14.1	16.9	18.2	59.5	25.1	-18.2	-0.2
Gold (Coin)	0.5	15	23.2	21.3	17.6	36.7	13.5	21.5	6.5	41.8
Foreign Exchange (Dollar)	-2.2	0.1	3.8	5.1	3.4	2	1.4	3.4	3.1	6.2
Inflation Rate	11.3	15.9	15.6	15.2	10.4	11.8	18.5	25.4	10.7	12.4

(Source: research information)

Inferential Statistics and Hypothesis Testing

The Main Hypothesis

There is a significant difference between return over investment on shares, housing, gold and foreign exchange during the considered period.

Table 3: Variance Analysis in Consideration of Difference in Return of Investment on the Basis of Opportunities Type to Invest

Changes	Sum of Squares	df	Mean Squares	F	Sig
Between-Group	7033.481	3	2344.494	3.299	.031
Within-Group	25584.270	36	710.674	-	-
Total	32617.751	39	-	-	-

(Source: research information)

According to the above chart and results of the test, it is observed F= 3.299 and Sig= 0.031 < 0.05, there is a significant difference between return over investment on housing, shares, gold and foreign exchange during the considered period. As a result, it is said that amount of the return over investment has been different on the basis of opportunities type to invest.

Graph 5 shows average range of each of the studied opportunities to invest, if the length of bar in the graph is fewer for index, the index has a less variance and dispersion and fluctuation and if the length of related bar in the graph is places in a higher level, the index has a more average.

It is observed that middle point of the graph which represents amount of average, settles upper than the other graphs for the index and the length of related bar is greater, it means that dispersion and fluctuation of related return to shares index has been upper than the other opportunities, and the foreign exchange graph is placed lower than the other (the lowest average) and has the shortest length (the lowest dispersion and fluctuation rather than 3 other opportunities).

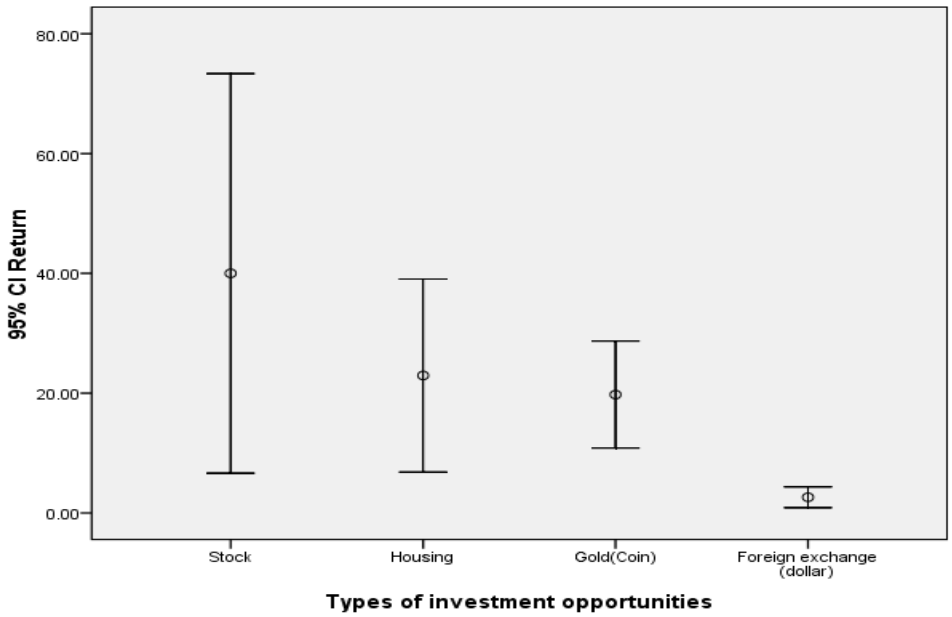

Figure 5: Average Range of the Opportunities to Invest

Because average of return over investment on housing, shares, gold and foreign exchange is not equal together, we can compare them together two by two. To compare of two by two of return is used from test method of Tukey two by two as follows:

Table 4: The Results of Tukey Test

Opportunities to Invest		Mean Difference	P-Value	Difference Existence
Shares	Housing	17.05000	.489	It isn't meaningful.
	Gold	20.24000	.340	It isn't meaningful.
	Foreign Exchange	37.37000*	.017	It is meaningful.
Housing	Shares	-17.05000	.489	It isn't meaningful.
	Gold	3.19000	.993	It isn't meaningful.
	Foreign Exchange	20.32000	.336	It isn't meaningful.
Gold	Shares	-20.24000	.340	It isn't meaningful.
	Housing	-3.19000	.993	It isn't meaningful.
	Gold	17.13000	.485	It isn't meaningful.
Foreign Exchange	Shares	-37.37000*	.017	It is meaningful.
	Housing	-20.32000	.336	It isn't meaningful.
	Gold	-17.13000	.485	It isn't meaningful.

According to the above chart, it is observed that only there is meaningful difference between return of shares and foreign exchange and there is no meaningful difference between two by two of other returns. In the other words, almost they have been in one level. But the shares are more appropriate.

The Secondary Hypothesis:

There is an opposite relation between return over investment on shares and return over investment on other choices of investment

We have used from Pearson correlation coefficient. According to the written results in chart 5, it could be said that relation of shares return rate with housing return rate and also inflation rate is reverse; it means that changes in rate of shares index growth is synchronous with changing in opposite direction at the variables.

The amount of shares index and inflation rate is holder of the most amount of relation in opposite direction (%-0.23). The obtained numbers from chart 5 indicate a positive and direct relation between return of shares with gold and foreign exchange that the amount of relation between index of shares and foreign exchange is more than shares and gold. The amount of relation is %14 and %13 in order. But the mentioned relations are weak.

So, regarding the secondary hypothesis, the results which indicate reverse direction of shares return, only is by return of housing and inflation rate and the relation of shares return is direct with return of gold and foreign exchange.

Table 5: The Results of Statistical Test of the Secondary Hypothesis

		Rate of Shares Index Return	Rate of Housing Return	Rate of Gold Return	Rate of Foreign Exchange Return	Inflation Rate
Rate of Shares Index Return	Pearson correlation coefficient	1	-.042	.128	.137	-.227
	Sig.(2-tailed)		.909	.725	.706	.529
	Number	10	10	10	10	10
Rate of Housing Return	Pearson correlation coefficient	-.042	1	-.181	-.497	.468
	Sig.(2-tailed)	.909		.616	.144	.173
	Number	10	10	10	10	10
Rate of Gold Return	Pearson correlation coefficient	.128	-.181	1	.666*	.041
	Sig.(2-tailed)	.725	.616		.036	.912
	Number	10	10	10	10	10
Rate of Foreign Exchange Return	Pearson correlation coefficient	.137	-.497	.666*	1	.076
	Sig.(2-tailed)	.706	.144	.036		.835
	Number	10	10	10	10	10
Inflation Rate	Pearson correlation coefficient	-.227	.468	.041	.076	1
	Sig.(2-tailed)	.529	.173	.912	.835	
	Number	10	10	10	10	10

*****: Signification at % 95 confidence level

Consideration of related questions to the risk and indexes of financial appraisal how has been risk situation of investment in financial and real assets (shares, housing, gold and foreign exchange) during the studied period?

As it was said previously, the changes of return or standard deviation of mode has been considered to calculate of total risk. According to the chart 6, the index of shares is holder of %46.6 standard deviation in the factor which has the highest place among the other opportunities. Housing and gold were placed in the 2nd and 3rd place by %22.5 and %12.5 standard deviation, in order. But fluctuation is holder of %2.4 standard deviation which has at least fluctuation and is placed in the 4th place from the viewpoint of dispersion and fluctuation.

Table 6: Comparison of Risk in Opportunities to Invest during the Studied Period

Types of Investment Opportunities	Changes Range	Standard Deviation (Total Risk) %	Beta Coefficient (Systematic Risk) %
Shares Index	151.3	46.6	1.44
Housing	77.7	22.5	1.16
Gold	41.3	12.5	1.20
Foreign Exchange	8.4	2.4	1.00

As the chart 6 shows, Beta coefficient for each of three assets include shares, housing and gold is more than 1 ($\beta>1$) and it means that the motioned assets have more price fluctuation from entire of market. Beta coefficient is 1 for foreign exchange and includes of equality in the mentioned assets fluctuation with

market fluctuation during the studied period. In the other words, growth rate of market and foreign exchange has gone up or down by the same amount.

How are the criteria of financial appraisal (sharp and treynor index) of the motioned assets in Iran?

In comparison of opportunities to invest by using of sharp index, shares index has more appropriate than the other opportunities. The housing, gold, foreign exchange have been in 2nd place with %0.26 sharp criterion, 3rd place on a scale of %0.22 sharp and 4th place with % -6.01 sharp index in order. So, in comparison of opportunities to invest by using of sharp index, shares index has more appropriate than the other opportunities that the obtained results from treynor index confirms the same subject and creates similar ranks.

Table 7: Comparison of Financial Appraisal Criteria of the Opportunities to Invest during the Studied Period

	Treynor Index	Sharp Index	
Types of Investment Opportunities	**Considering Profit Rate of Five-Year Bank Deposits as the No-Risk Assets**	**Considering Profit Rate of Five-Year Bank Deposits as the No-Risk Assets**	**Considering Profit Rate of One-Year Bank Deposits as the No-Risk Assets**
Shares Index	0.16	0.49	0.55
Housing	0.05	0.26	0.38
Gold	0.02	0.22	0.43
Foreign Exchange (Dollar)	- 0.14	- 6.01	- 4.9

Comparison of Sharp Index of Investment on Shares with the Other Opportunities:

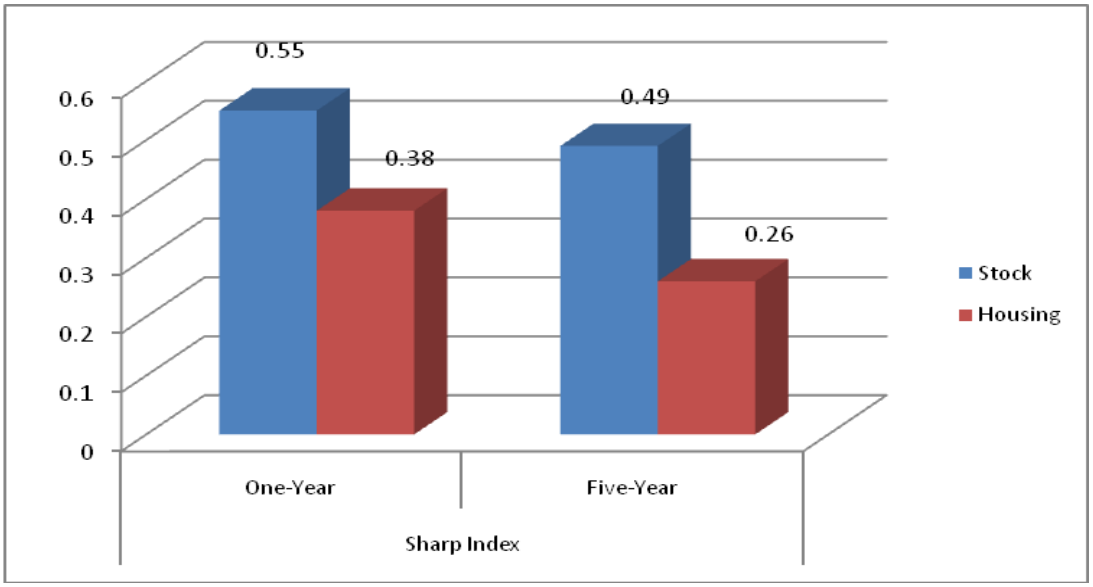

Figure 6: Comparison of Sharp Index of Shares Index and Residence

The above graph shows that Sharp index in shares index is higher and more appropriate in one-year and five-year Sharp index than Sharp index of housing.

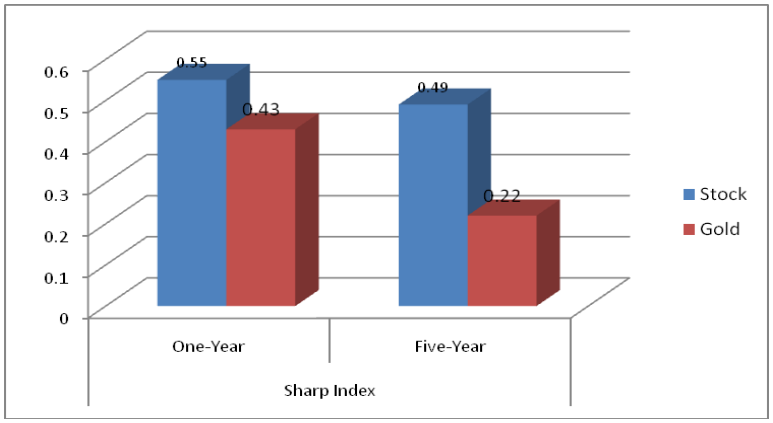

Figure 7: Comparison of Sharp Index of Shares Index and Gold

The above graph shows that Sharp index in shares index is higher and more appropriate in one-year and five-year Sharp index than Sharp index of gold.

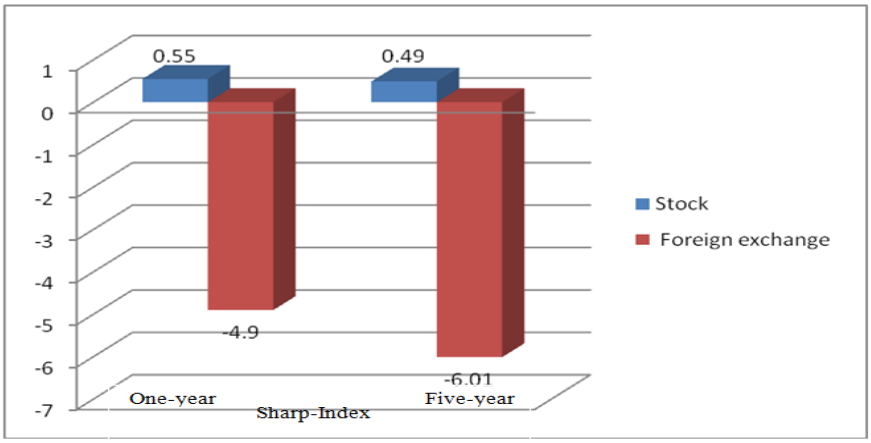

Figure 8: Comparison of Sharp Index of Shares Index and Foreign Exchange

The above graph shows that Sharp index in shares is higher and more appropriate in one-year and five-year Sharp index than Sharp criterion of foreign exchange.

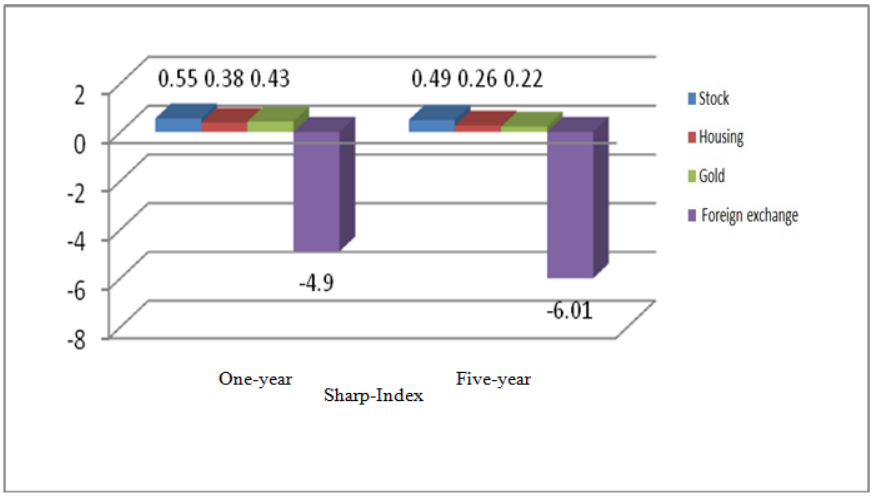

Figure 9: Comparison of Sharp Index of Shares, Housing, Gold and Foreign Exchange

The above graph (9) shows Comparing Sharp index in each four opportunities to invest at the same time. It is obvious that the shares graph is upper than all graphs in both one-year and five-year Sharp index, therefore has located in the 1st place. Gold in one-year Sharp and housing in five-year Sharp are in the 2nd place. The housing in one-year Sharp and gold in five-year Sharp are in the 3rd place. But it is observed that foreign exchange in both one-year and five-year Sharp index has placed the 4th place.

RESULTS AND DISCUSSION

According to the main problem of the research is detection of the most appropriate choice to invest in Iran country between financial and real assets (shares, housing, gold and foreign exchange) from 2001 to 2010, as it was determined, the return of shares index has been more than the other opportunities to invest during the studied period although its risk is upper than the other opportunities. In comparison of the opportunities to invest by using Sharp index, shares is the most ideal than the other opportunities, and the obtained results from Treynor index confirms the same subject. In the other words, it could be said that the most appropriate to invest between the mentioned assets has been investment on shares investment during the studied period. Summary of obtained findings and results of the research has been presented at chart 8:

Table 8: Summery of Research Results and Findings

Types	Average	Standard	Beta	Sharp Index	Treynor Index
Investment Opportunities	**Investment Return**	**Deviation (Risk) %**	**Coefficient (Systematic Risk)**	**Considering Profit Rate of Five-Year Bank Deposits as the No-Risk Assets**	**Considering Profit Rate of Five-Year Bank Deposits as the No-Risk Assets**
Shares Index	40	46.6	1.44	0.49	0.16
Housing	22.95	22.5	1.16	0.26	0.05
Gold	19.76	12.5	1.20	0.22	0.02
Foreign Exchange	2.63	2.4	1.00	- 6.01	- 0.14

And at the end it is recommended to the future researchers that model of portfolio suitable selection determine according to the degree of risk and return of each choice to invest. In the other words, they must assign the optimal Portfolio which according to it if the investors knew the amount of investment in each of the mentioned choices during the studied period, they would have more return.

REFERENCES

Islami Bidgoli GR and Bigdelou M (2006). The return and risk comparison of replacing opportunities to invest in Iran, *Quarterly of Accounting and Audit Surveys* **13**(2) 254-275.
Karimi MS and Ma'navi M (2009). The role of stock exchange in economic development of Kurdistan province, research project, Kurdistan University.
Mehra R (2001). *Equity Risk, Premium Forum: Current Estimates and Prospects for Change 2* (AIMR On Line Publication) **6**(1) 211-220.
Schilit WK (1993). A Comparative Analysis of Performance of Venture Capital Funds, Stocks and Bonds, and Others Investment Opportunities, *International Review of Strategic Management* **4**(6) 302-319.
Zandi Haghighi M (1987). *Economy, Economic Analysis Methods/ Techniques*, (Tehran, Tehran University Publishing House).