Effect of Information Delay on Joint Investment Fund's Performance

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ABSTRACT

The aim of this study is to evaluate the effect of information delay on the performance of joint investment funds. In order to achieve the aim of this study sample consisted of twenty funds in the Tehran Stock Exchange from 2010 to 2014 the systematic elimination method has been adopted. In this study, the linear regression test has been used in order to evaluate the research hypothesis. Data analysis and research hypothesis testing has been done using EVIEWS software. Findings of the research prove the effect of information delay on the performance of joint investment funds.

1. Introduction

A quick look at the financial sector of Iran's economy imply that state's economy has not acknowledged the necessities and advantages of a favorable financial markets in order to fulfill extensive and varied economic requirements of the society. Under these circumstances, capital market requires modern facilities and tools that while securing the equity and a balanced risk (moderate risk), provides the minimum rate of return for shareholders. Regarding the philosophy and mission of the joint investment funds – collecting the micro savings at a broad level – development and expansion of these funds play a significant role in collecting the stagnant money (savings) from exchange markets and increasing the productive activities liquidity on one hand and economic prosperity and inflation reduction. Nevertheless, establishment of these joint funds without establishing a performance evaluation framework and the proper indicator that measures the performance will not be practical. Performance evaluation for joint investment funds and their ranking is of a great importance because stock traders will make significant decisions on selling, buying or holding the stocks of an enterprise at the appropriate time. It's obvious that potential investors pursue to buy or share stocks from funds with a performance superior to other funds and also the exchange market. Practically speaking, decision-maker's decisions are often uncertain and are not represent able by exact numerical values. Thus, exploiting novel interdisciplinary approaches are necessary and inevitable in order to resolve the complexity of these decision-making problems. The investment fund industry has witnessed agreat growth during past two decades and has become a major investment destination of the micro investors in many countries all around the world. Since most of investors thrive to provide sufficient capital re-

quired to pay children's education in the future and retirement payment in the future, fund's performance and quality of decisions play a significant role in the totality of economy [1].

On the other hand, data and information are vital for the life of the funds. Investors accept the risk of bringing their hardly earned money to the exchange markets and rely on the information released by these associations for decision-making. Investors require reliable, real-time and understandable information released in simple and analyzable structures and formats for decision-making. Investors need to consider this information as correct, complete, reliable and real-time for the survival of their capital markets. Access to this information may serve as a good encouragement for some members of the organizations, while the quick spread of internal information of the organizations could have effects on their performance but a few have considered this in the related literature [12].

In this study, according to the work of Cici et al. [8] investment funds are considered as a statistical population for evaluating the impact of information delay on investment fund's performance. The reason is that mutual effects of internal information dissemination have considerable effect on the industry and on one hand, emergence of effective financial markets that impose related costs of the new information on the price; on-time dissemination of the internal information is necessary for exploiting business and commercial opportunities. On the other hand, managers and executives working for these funds are informed more quickly from ideas and works of their colleagues. The second reason is that it's easy and simple to measure the speed of information dissemination in an investment fund since managers are able to observe their own deals and transactions taken place in response to new commercial information. Measuring delay of information flow is more difficult in other organizations since accurate and precise internal information is not available. In summary, the main research question is: "Does delayed transfer of information in investment funds lead to superior performance of its members or not?" [2].

1.   Theoretical principles and research background

Investment funds are financial intermediaries that sell stock to public and invest the gathered money on a varied portfolio of securities and bonds. Each investing unit sold by investment funds represents an adequate portion of the securities portfolio which is managed by the investment fund on behalf of the shareholders. Real-time dissemination of information in the organization is of great importance and in a typical company, may have a positive effect on increase of the supply chain management efficiency, shortening the product life cycle and improving the managers' decision-making in response to ever changing market conditions. Nevertheless, quick flow and dissemination of internal information could have an undesirable impact. Investment fund managers may come up with successful investment ideas through quick and real-time access to information in comparison to their colleagues and measurement of information dissemination and flow in joint investment funds is much easier than a company since generally, accurate and precise are not available [3]. Cabra et al. [6] argue that speed of information dissemination affects investment fund deals and investments. Chuprinin et al. argue that considering active efforts of investment funds in order to resolve information gathering obstacle and increase information dissemination speed, their influence on fund's performance is undeniable [7].

 Feldman believes that change in the speed of information flow and dissemination leads to remarkable changes in fund's performance. Yet, no research has been exerted regarding the impact of information

dissemination delay on the performance of joint investment funds [10].

1.1. Research Background Abroad

Cici et al. in their study titled as "Speed of information dissemination speed in familial investment funds" showed that the quicker the information transfer in investment funds, the better the performance of fund members [8].

Jordan & Riley in a research titled as "Management Variations and Skills in investment funds" reached to the conclusion that failure in non-standard variations directly or indirectly lead to incorrect evaluation and measurement of fund's management skill [10]. Freirra et al. [11] examined information delay and performance improvement and concluded that based on investment types, the effect of information on fund performance may be different. Eisele investigated whether quick transfer of information in a familial investment fund may improve fund performance or not. He found out that quick transfer of available information improves the efficiency of fund managers compared to other counterparts and increase of information accuracy may lead to more effective decision-making and performance [9].

1.2. Research Background in Iran

Asaadi and Shadmehr in their study "impact real-time dissemination of information on stock liquidity" found out that timely dissemination of unaudited interim financial statements has significant impact on bid/offer stock price but, has no significant impact on mean depth stock quotes and turnover rate of stocks [1]. Ghasemiyan et al investigated the efficiency of performance evaluation indicators used for ranking of joint investment funds and concluded there's a significant correlation among the rankings no significant difference is shown between these two types of rankings and Jensen and Kalmar indices show the most efficient performance for ranking joint investment funds [4]. Hosseini et al in their study "investigation of relationship between cash flows in joint investment funds and Tehran Stock Exchange Index showed there's a significant relationship between total cash flows of joint investment funds and Tehran Stock Exchange Index. After Granger causality test, the findings showed there's a mutual causality between total changes of joint investment fund units and Tehran Stock Exchange Index and also between total changes of joint investment fund values and Stock Index [2]. Qalibaf Asl investigated the relationship between trading activities and risk, return and portfolio diversity in joint investment funds and found out that trading activity ratio in funds with male, with little experience, younger and lower level educated managers is better than trading activity ratio of funds with female, experienced, older and higher educated ones[5].

2. Research hypotheses

According to theoretical principles and meeting research objective, the following hypotheses have been considered:

The null hypothesis: delay, impacts the performance of joint investment funds.

The first sub-hypothesis: based on Sharp index, information delay affects the performance of joint investment funds.

The second sub-hypothesis: Based on Trainer index, information delay affects the performance of joint investment funds.

The third sub-hypothesis: Based in Jensen index, information delay affects the performance of joint investment funds.

3. Research Methodology

This study is an applied research with quasi-experimental design and using post-event approach. Also, panel data has been used for hypotheses tests. The required data has been collected using library method and research data has been gathered from selected companies and referring to financial statements and notes to financial statements using Rah Avard Novin and Tadbir Pardaz Softwares.

3.1. Statistical Population and Sampling

The statistical population in this study is composed of joint investment funds accepted in Tehran Stock Exchange in time period between 2010 and 2014. Sampling steps are described in Table 1.

Table1: Sampling steps

Steps	Sample size
Number of joint investment funds accepted in Tehran Stock Exchange until the end of 2014	37
Number of joint investment funds delisted from stock exchange during this period	6
Number of joint investment funds entered the stock exchange during research time	7
Number of joint investment funds whose financial data has not been available during research time	4
Number of samples joint investment funds	20

According to Table 1, twenty joint investment funds have been selected as research sample and 100 data-years has been calculated for hypothesis testing for each and every research variable.

3.2.Research Model and Variables

In this study, sub-hypotheses have been tested in order to response to the main hypothesis of the research and the regression model of the first sub-hypothesis=s has been described as follows:

$$RVAR_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 ASSET_{it} + \beta_3 AGE_{it} + \beta_4 NG_{it} + \varepsilon_{it} \tag{1}$$

The regression model of the second sub-hypothesis (2) is as follows:

$$RVOL_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 ASSET_{it} + \beta_3 AGE_{it} + \beta_4 NG_{it} + \varepsilon_{it} \tag{2}$$

And the regression model of the third sub-hypothesis (3) is provided as follows:

$$Jen_{it} = \beta_0 + \beta_1 D_{it} + \beta_2 ASSET_{it} + \beta_3 AGE_{it} + \beta_4 NG_{it} + \varepsilon_{it} \tag{3}$$

Where:

$RVAR_{it}$: represents the performance of joint investment funds based on Sharp index

$RVOL_{it}$: represents the performance of joint investment funds based on Trainer index

Jen_{it} : represents the performance of joint investment funds based on Jensen index

D_{it} : Information delay

$ASSET_{it}$: Fund asset

AGE_{it} : fund life time

NG_{it} : Stock turnover ratio

ε_{it} : Model Estimation Error

4.2.1. Dependent variables

1) Performance Indices: represents the performance of joint investment funds based on Sharp index and explains the Excess Stock Return portfolio against each total risk unit. The more the value of PVAR index, the better the performance of the index and Equation (4) is obtained:

$$RVAR = \frac{\overline{TR}_p - \bar{R}_f}{SD_p} = \frac{Excess\ Return}{Risk} \tag{4}$$

Where:

$\overline{TR}_p$: Average of Total Portfolio return during a certain period

$\bar{R}_f$: Average Portfolio return without risk during a certain period

SD_p : Standard deviation of Portfolio returns during a certain period

Trainer index, explains in fact that for a given risk unit, how much excess return is gained for the investor. This index is obtained from model (5).

$$RVOL = \frac{\overline{TR}_p - \bar{R}_f}{\bar{B}_p} = \frac{Excess\ Return}{Risk} \tag{5}$$

Where:

$\bar{B}_p$: Portfolio systematic risk

Jensen alpha index, represented by α and is related to Trainer index with subtle adjustments, yield identical rankings for measurement of portfolio performance. If Jensen's α is divided by beta coeffi-

cients then equals the Trainer index minus market specific portfolio risk for a given period. Jensen performance index is based on the capital assets pricing model. Jensen's alpha is obtained from model (6):

$$\alpha_p = \bar{R}_p - \left[\bar{R}_f - (\bar{R}_m + \bar{R}_f)\beta_p\right] \tag{6}$$

Where:

$\bar{R}_p$: Represents average Portfolio return

$\bar{R}_m$: Average stock market return

$\bar{R}_f$: Average return without risk during a period

4.2.2. Independent variables

1)Stock price delay: according to Hou & Moskovitz, two regressions have been applied. In the first one, monthly return for each fund is fitted for stock market return of the same month and four delayed returns of the market and the second regression fits the monthly return for each fund for stock market of the same month. These regressions are described as (7) and (8):

$$r_{it} = \alpha_i + \beta_i R_{m,t} + \sum_{n=1\ to\ 4} \delta_{i,n} R_{m,t-n} + \varepsilon_{it} \tag{7}$$

$$r_{it} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{it} \tag{8}$$

Where:

r_{it} : fund stock return

$R_{m,t}$: Market return

Stock price reaction time to market information can be measured using above mentioned equation regression coefficients. According to theoretical principles, if there's a delay in the stock price reaction, then a number of $\delta_{i,n}$ in the first model will equal zero. As a result, model (9) is used for delayed stock price as follows:

$$D = 1 - \left(R^2_{finite}/R^2_{infinite}\right) \tag{9}$$

$0 < D < 1$

If stock price's reaction to market information is not quick enough, stock price delay will be greater (value closer to 1) because a major part of stock return is defined by delayed market returns. But if stock price shows a quick reaction to market information then stock price delay is smaller (closer to zero) because a small part of the stock return is defined by delayed market returns.

Fund return: this terminology is used to define increase or reduction rate of each investment unit during a period or net value of assets. Regarding investment funds, actually, NAV is calculated as the total value of fund investments divided by the number of stocks at the end of each working day according to stock price, bonds and cash profits variations. In this research, the average of annual fund returns during research period has been used to calculate fund returns as shown in Model (10):

$$Annual\ fund\ return = \frac{NAV_1 - NAV_0}{NAV_0} \qquad (10)$$

4.2.3. Control variables

1) Fund assets ($ASSET_{it}$): logarithm of fund assets

2) Fund lifespan (AGE_{it}): difference of current date and establishment date

3) Stock turnover ratio (NG_{it}): volume of stocks traded per day divided by total volume of the issued stocks within a year.

3.3. Data Analysis

Data analysis and research hypotheses test has been exerted using E_{VIEWS} software. According to data types and existing statistical analysis methods, multiple regression methods based on hybrid data has been applied.

4. Research findings
4.1.Descriptive statistics

In Table 2, the average of joint investment fund's performance based on Sharp index is 0.247 and minimum and maximum values of the joint investment fund's performance variable are respectively -0.47 and 1.18. Skewness coefficient for joint investment fund based on Sharp index is a positive value close to zero that shows the distribution is normal and tends slightly skew to the right.

Table 2: Some of the descriptive statistics concepts have been provided for the research variables:

	Joint investment Fund's performance based on Sharp index	Joint investment Fund's performance based on Trainer index	Joint investment Fund's performance based on Jensen index	Information delay	Fund Asset	Fund Lifespan	Stock turnover ratio
Average	0.247000	106.5462	2.797530	0.716600	14.1077	17.0000	1943.57
Median	0.265000	69.24000	2.711500	0.785000	14.3150	12.0000	2.51500
Maximum	1.180000	576.6400	11.03000	1.000000	17.4100	49.0000	185965
Minimum	-.470000	-516.0000	-5.170000	0.140000	10.1600	0.00000	0.11000
Standard Deviation	0.364233	210.4795	3.176387	0.241490	1.95374	12.2927	185965
Skewness	0.159622	-0.049807	0.037142	-0.737647	-0.38888	0.97077	9.83674
Kurtosis	2.564971	3.689546	3.019848	2.344569	2,29376	2.93417	97.8429
Jarque-Bera	1.213192	2.022488	0.024633	10.85867	4.59872	15.7307	39092.6
Significance Level	0.545204	0.363766	0.987759	0.004386	0.10032	0.00038	0.00000
Observations	100	100	100	100	100	100	100

For normality test of the dependent variable, Jarque-Bera Test has been used. The significance level

for performance variables of joint investment funds based on Sharp, Trainer and Jensen indices are greater than 0.5 and as a result, the null hypothesis is proven and accepted meaning that performance variables of joint investment funds have normal distribution based on Sharp, Trainer and Jensen indices.

4.2. Variables Stationary Test

In Table 3, The significance level for performance variables at unit root for all joint investment funds except for Jensen's index, information delay and stock turnover ratio are smaller than 0.5 and thus, are stationary.

Table 3: Stationary of variables has been tested using Fisher's ADF test and results are provided

Variables		Fisher's ADF statistic	Significance Level	First-order difference	
				Significance Level	
Joint investment Fund's performance based on Sharp index		60.7437	0.0188		
Joint investment Fund's performance based on Sharp index		64.5103	0.0083		
Joint investment Fund's performance based on Sharp index		34.8282	0.7019	0.0453	
Information delay		31.0925	0.8426	0.0094	
Fund's Asset		61.5455	0.0159		
Fund's Lifespan		9.74027	0.0077		
Stock turnover ratio		52.0923	0.0953	0.0449	
Augmented Dickey-Fuller Test (ADF)					
Regression analysis	Error Value	RESID $_{i,t}$	Fisher's ADF statistic	Significance Level	Significance Level
			60.6171	0.0193	0.0193

Performance variables of joint investment funds based on Jensen index, information delay and stock turnover ratio become stationary by differencing. This augmented variable is first order. In order to preserve this valuable information, it's recommended to use original variable values and to prevent spurious regression. These are a set of augmented variables where linear combination of them is stationary. Significance level is smaller than 0.5 and are in zero order and stationary. Thus, regression estimation is flawless and estimated model can be obtained using the original variables.

4.3. Limer and Hussman Tests

When stationary status of the intended data has been proven, F tests are applied in order to determine panel data and Hussman test in order to use constant or random effects. Results are provided in Table 4.

Table 4: F Limer and Hussman Test

		F Limer Test	Significance Level	Result	Hussman Test	Significance Level	Result
Null Hypothesis	First Sub-Hypothesis	2.34.3748	0.0048	Panel	12.215391	0.0158	Constant effects
	Second Sub-Hypothesis	1.769726	0.0425	Panel	2.520343	0.6410	Random effects
	Third Sub-Hypothesis	1.785799	0.0401	Panel	4.805488	0.3078	Random effects

In Table 4, F value probability in Limer test is smaller than 0.05 and as a result, null hypothesis is rejected and panel data must be used for model estimating. Then, Hussman test is used in order to determine the constant and random effects and Chi-square test shows the value is smaller than 0.05 and as a result, null hypothesis is rejected and constant (fixed) effects are used to test the first sub-hypothesis. The Hussman test probability is greater than 0.05 for the second and the third sub-hypotheses and as a result, null hypothesis is accepted and random effects have been used for the second and the third sub-hypotheses.

5. Research Hypotheses Analysis

In order to response to this hypothesis, the first, second and third sub-hypotheses have been evaluated:

5.1. Analysis of the First sub-hypothesis

Summary of results of the first sub-hypothesis is provided in Table 5. In Table 5, probability of t-statistic for information delay and fund lifespan variables coefficients on joint investment fund's performance based on Sharp index is smaller than 0.05 thus; estimated coefficients of the above variables are statistically significant.

Table 5: The summary of results of the first sub-hypothesis

Variables		Coefficients	Standard Error	t-statistic	Significance Level	Result
y – intercept	β_0	2.529082	1.345775	1.879276	0.0640	Insignificant
Information delay	DIT	-0.524622	0.183981	-2.851497	0.0056	Negative
Fund asset	ASSET	-0.033787	0.110108	-0.306858	0.7598	Insignificant
Fund lifespan	AGE	-0.083955	0.034056	-2.465175	0.0160	Negative
Stock turnover ratio	NG	-06E-1.15	06E02.00	-0.577768	0.5651	Insignificant
Coefficient of determination	0.381885		F-statistic		0.010971	
Adjusted coefficient of determination	0.194824		Significance Level			
Durbin-Watson			2.498949			

Coefficient of information delay variable on the performance of the joint investment fund based on Sharp index is -0.524522 and according to t-statistic and P-Value, this coefficient is statistically significant at error level of 0.05. The findings show that effect of information delay variable on the performance of the joint investment fund based on Sharp index is negative and significant and probability of t-statistic for fund's asset and stock turnover ratio variables on information delay on performance of joint investment fund based on Sharp index is greater than 0.05.

Thus, estimated variable coefficients are not statistically significant. Thus, with confidence level of 95 percent, these variables are not significant. The adjusted coefficient of determination shows the explanatory power of the independent variables that explains the variations of the dependent variable with 19 percent.

The probability of F-statistic explains that the intended model is statistically significant generally and since hypothesis regarding effect of information delay and fund lifespan on the performance of joint investment fund based on Sharp index in this model is statistically significant, null hypothesis in rejected and it can be said that information delay affects the performance of joint investment fund based on Sharp index.

5.2. Analysis of the second sub-hypothesis

The summary of result of the second sub-hypothesis is provided in Table 6.

Table 6: The summary of results of the second sub-hypothesis

Variables		Coefficients	Standard Error	t-statistic	Significance Level	Result
y – intercept	β_0	-949.4976	821.8608	-1.155302	0.2516	Insignificant
Information delay	DIT	-95.30008	112.3568	-0.848192	0.3990	Insignificant
Fund asset	ASSET	99.80825	67.24234	1.484307	0.1419	Insignificant
Fund lifespan	AGE	-16.6862	20.79814	-0.802323	0.4249	Insignificant
Stock turnover ratio	NG	-05E-2.73	0.001219	-0.022387	0.9822	
Coefficient of determination	0.309665		F-statistic		1.482241	
Adjusted coefficient of determination	0.100748		Significance Level		0.103495	
Durbin-Watson			2.424439			

In Table 6, probability of t-statistic for coefficients of information delay, fund asset, fund lifespan and stock turnover ratio variables on the performance of joint investment fund based on Trainer index is greater than o.o5 thus; estimated variable coefficients are not statistically significant. So, this hypothesis is not significant with 95 percent confidence level. Null hypothesis in accepted and it can be concluded that information delay does not affect the performance of joint investment fund based on Trainer index.

5.3. Analysis of the third sub-hypothesis

The summary of result of the third sub-hypothesis is provided in table 7.

Table 7: The summary of results of the third sub-hypothesis

Variables		Coefficients	Standard Error	t-statistic	Significance Level	Result
y – intercept	β_0	-15.13894	11.70049	-1.293873	0.1996	Insignificant
Information delay	DIT	-5.318839	1.599576	-3.325156	0.0014	Negative
Fund asset	ASSET	1.917503	0.957301	2.003031	0.0487	Positive
Fund lifespan	AGE	-0.312426	0.296094	-1.055156	0.2947	Insignificant
Stock turnover ratio	NG	06E-3.93	05E-1.74	0.226204	0.8217	Insignificant
Coefficient of determination	0.385639		F-statistic		2.074161	
Adjusted coefficient of determination	0.199714		Significance Level		0.009553	
Durbin-Watson			1.916440			

In Table 7, probability of t-statistic for coefficients of information delay and fund asset variables on the performance of joint investment fund based on Jensen index is smaller than 0.o5 thus; estimated variable coefficients are statistically significant. Coefficient variable of information delay on the performance of joint investment fund based on Jensen index is -5.3188 and according to t-statistic and p-Value, this variable represents significance with 0.05 error level. The findings show that information delay variable has negative effect on the performance of joint investment fund and is significant. Probability of t-statistic for fund lifespan and stock turnover ratio variables on information delay on the performance of joint investment fund based on Jensen index is greater than 0.05. Thus, the estimated variable coefficients are not statistically significant. The adjusted coefficient of determination shows the explanatory power of the independent variables that explains the variations of the dependent variable with 20 percent. The probability of F-statistic explains that the intended model is statistically significant generally and since hypothesis, regarding the effect of information delay and fund assets on the performance of joint investment fund based on Jensen index in this model is statistically significant. Thus, null hypothesis in rejected and it can be said that information delay affects the performance of joint investment fund based on Jensen index.

6. Discussion and Conclusion

In this study, the main objective is to investigate the effects of information delay on the performance of joint investment funds. The obtained results of the research indicate that information delay has positive effect on the performance of joint investment funds based on Sharp and Jensen indices. Chuprinin et al investigated the effect of quick dissemination of information on the performance of joint investment funds. Their results have been obtained from a big sample of joint investment fund in the United States of America. The results imply that despite the efforts of investment funds to resolve information gathering obstacles and to increase information dissemination speed,

their influence on fund's performance is undeniable and research results also confirms this finding. Also, findings form the first sub-hypothesis indicates that information delay affects the performance of joint investment funds based on Sharp index. Feldman investigated the effect of information on investing in joint fund and the obtained results show that changes in the speed of information dissemination leads to a considerable change on the saving fund's performance. This result strengthens the causality relationship between information dissemination speed and fund performance that is somehow consistent with research findings. Both researches highlight the role of information dissemination speed on the performance of joint investment funds. Thus, fund managers are recommended to consider non-financial variables such as information delay in their decision-making models. According to results of the second sub-hypothesis, information delay does not affect the performance of joint investment funds based on Trainer index. Ferreira et al. argued that increasing the information dissemination speed provides managers with different styles and skills with valuable supplementary information. They have less opportunity for their investing efforts. The effect of information on the performance of funds is different based on investment styles that are not consistent with the research findings. Contradictory results may be due to difference related to measurement of variables, testing period, evaluation techniques and if variables have been considered as indigenous or exogenous. This indicates that based on Trainer index, information delay has failed to improve the performance of joint investment funds. Thus, analyst institutions are recommended to consider performance indices in their rankings in order to improve the market transparency and help investors to make more efficient decisions. According to results of the third sub-hypothesis, based on Jensen index, information delay affects the performance of joint investment funds. Paul et al. investigated direct measurement of information transfer speed in an investment fund. They examined dissemination of information in these funds and their effect on trading efforts and concluded that information dissemination speed affects trading efforts and investment efforts in these funds that is partially consistent with research findings. Both researches highlight the importance of information regarding the performance of joint investment funds. Verification of this hypothesis may lead to conclusions and even, estimations for decision-making in capital market of Iran considering information delay. Perhaps, the main reason that market reacts to market information delay is the unreliable conditions of capital market. Thus, political suggestion and general proposed framework is summaries as considering influential factors and variables on the performance of fund such as information delay and speed by fund managers. If managers are informed of variables such as innovations and novel development methods, this may have considerable impact on fund's performance. Speed of information dissemination affects the performance of these organizations and due to the presence of highly efficient financial markets they will be able to acquire information and also improves the opportunity to exploit business opportunities. On the other hand, regarding higher speed of information dissemination, managers are provided with successful investment ideas compared to their colleagues and counterparts. Additionally, measuring the speed of information dissemination within an organization is more difficult than investment funds since accurate internal data are not generally available [4]. Finally, literature in this domain is very rich and only deals with some paper of it. So, more research and critic is suggested in this context and suggested subjects are the study of relationship between other factors and variables affecting the performance of investment funds (type of ownership, profitability and …), the relationship between qualitative and quantitative factors affecting the performance of investment funds, role and effect of fund manager's certificates and fund lifespan on their respected performance and investigating the influence and effect of information speed on fund's return.

References

[1] Assadi, A., Shadmehr ,M, *Timely dissemination of information effect on stock liquidity in Tehran stock Exchange*, International Conference on Management and Industrial Engineering, Institute of Directors thinker capital.2014.

[2] Hosseini, A.H, Bagher Abad, H and Parsley, E, *The relationship between cash flows of mutual funds and index of Tehran Stock Exchange, Financial Research*,2013, 15(2), P.201-214.

[3] Saeedi, A and Saidi, H, *The relationship between capital flows and investment funds market re turns: Evidence from Tehran Stock Exchange*, 2012,13(32), P.35-56.

[4] Ghasemian, M, Amir Hosseini, Z, Jamali, A, *Evaluation of performance evaluation criteria in the ranking of mutual funds*, few studies in management,2014, 5(2), P.143-158.

[5] Qalibaf, *Effects of trading suspension on the circulation of shares, volatility and price discovery in the Tehran Stock Exchange*, Stock Exchange Quarterly, 2012,4(14), P.99-114.

[6] Cabrera, Á., and Cabrera, E.F, *Knowledge-sharing Dilemmas*. Organization Studies,2002,**23**(4) P.687-710.

[7] Chuprinin, O, Massa, M and Schumacher, D, *Outsourcing in the International Mutual Fund In dustry: An Equilibrium View*. Journal of Finance,2015, forthcoming.

[8] Cici, Gjergji and Jaspersen, *Stefan and Kempf, Alexander*, Speed of Information Diffusion within Fund Families ,2015, Available at SSRN: http://ssrn.com/ abstract=2565753.

[9] Eisele, A., Nefedova, T and Parise, G, *Are Star Funds really shining?,*Cross-trading and Performance Shifting in Mutual Fund Families, 2014,Working Paper.

[10] Feldman,A. *Can Third Avenue Get Back on Track?* Barron's, URL: http://online. barrons.com/articles/ can-third-avenue-get-back-on-track-1431136270.2015.

[11] Ferreira, M. A., Matos, P and Pires, P, *Asset Management within Commercial Banking Groups: International Evidence*. Working Paper.2015.

[12] Kewei,H and Moskowitz, T, *Market frictions, price delay and the cross-section of expected returns*. Review of Financial Studies,2002, 18 (3), P.981-1020.