

THE EMPIRICAL STUDY OF PERFORMANCE FOR BUSY FUND MANAGER: EVIDENCE FROM TAIWAN EQUITY FUND

Chiung-Wen Kang, Ph.D Candidate

College of Finance and Banking,
National Kaohsiung First University of Science and Technology
No.1, University Rd, Yanchao Dist., Kaohsiung City,
Taiwan (R.O.C.)
Phone: 886-9212-51295
Mail: yang886536@gmail.com

Ming-Chun Wang, Ph.D

Associate professor Department of Money and Banking,
National Kaohsiung First University of Science and Technology
No.1, University Rd, Yanchao Dist., Kaohsiung City,
Taiwan (R.O.C.)

Yi-Ling Chen, Ph.D

Associate professor
Department of Asia-Pacific Industrial and Business Management,
National University of Kaohsiung
700, Kaohsiung University Rd, Nanzih District,
Kaohsiung City, Taiwan (R.O.C.)

Chin-Chuan Ou

Graduate student Department of Money and Banking,
National Kaohsiung First University of Science and Technology
No.1, University Rd, Yanchao Dist., Kaohsiung City,
Taiwan (R.O.C.)

ABSTRACT:

This paper explores the trading activity of busy fund manager in the mutual fund industry for 10 years (2002 Q1 to 2012 Q2) of domestic stocks in Taiwan. It investigates the past busy behavior of the fund's manager affected the future performance. On the other side, it also reflects the past performance led the fund manager future busy behavior. The empirical result shows that the busy behavior of the busy fund manager indeed has a negative influence to the performance which is one of the contributions. It also shows significant relationship between the fund performance of manager and the profile of mutual funds.

The prior studies were mostly focus on manager and board member busy behavior of the firm which may causes management inefficiency and ineffectively. The issue of relationship between mutual fund performance and busy manager behavior is still inadequate. This article is not only exploring the behavior of the busy fund manager but also discuss the phenomenon of financial industry of mutual fund in Taiwan. It offers a new thinking of financial system and will submit the suggestion to financial industry and academic. The meanings of management are discussed in the paper.

Keywords: Mutual funds, Busy fund manager, busy behavior, Fund performance

1. Introduction:

Due to the investing and financial concept are gradually established, also with the active promotion of the professional asset management, the asset scale and the number of mutual fund continuously grows at an

astounding rate.

According to the taxonomic standard of monthly fund performance set by the R.O.C Securities Investment Trust & Consulting Association, it basically divides into balance fund, equity fund, portfolio, bond fund, and other funds, wherein Equity fund takes the listed and OTC stock as the mutual fund of major investment target. The target is to pursue medium-and long-term capital profit. In the analytical data of present industry, the number of Taiwan domestic fund steadily increases from 334 ticks to 618 ticks over the past 10 years and the stock fund also increases from 219 ticks to 364 ticks. However, the result of the increased number of the fund is that the shortfall of the skilled mutual fund managers gradually expands.

When the mutual fund manager is entrusted to manage multi-tick fund, it is to provide good performance to more funds. And predictably, people who can be entrusted with heavy responsibility and to manage multi-tick fund are mostly the experienced managers with good performance. Due to that the investment style and policy direction of fund managers has great impact on the fund, this gives star managers to have more opportunities to manage multi-tick fund and attract more investors to invest by the use of superior performance in the past. Sometimes, the nature of these managed multi-tick funds is similar that it would not be tired in the management. However, when relativity of whether good or bad among funds is high, the risk grows up as well. Management of the funds with similar nature might rise the chance of performance going up and down. However, although the management of funds with different nature may prevent from being exposed to too high risk, managers suffer from the hardship. Besides, no matter it is investment analysis, investment policy, investment execution or review, the writing style of different type of investment reports is different.

Based on above research background, we discussed the effect of domestic stock fund manager who is entrusted to manage multi-tick fund under busy life of concurrence of jobs on fun performance. This study aimed to inspect the “busy hypothesis”, where we thought that how fund managers are busy may disperse efforts he/she made and the spirits, thereby influencing quality of fund managers managing funds and leading to unfavorable results to fund performance. Therefore, we call them a fund manager who manages multi-tick fund as a Busy Manager and the fund manager who manages single-tick fund as the Non busy Manager for detailed discussion too.

Referring to what mentioned by Jan and Huang (2003) and Otten and Bams (2004), due to the difference behind target to invest, there must be some difference reflected behind return of investment (ROI) and risk. Therefore, we compared the performance among same types of funds. This study took open domestic stock funds as the sample for case study. During the sample period from 2002 to 2012, there was an average of 40% of the fund managers that manage multi-tick fund at the same time and its managerial value went beyond 50% of the total asset of domestic stock funds.

2. Research materials and methods:

2.1 Material selection and source:

This research used the materials of the domestic stock funds from 2002 Q1 to 2012 Q2, 42 quarters in total, as the subject which aiming to discuss the relation between the busy behavior and performance of a manager. The source of this research materials was originated from Taiwan Economic Journal, TEJ and the website, Fund DJ¹, in which the data a manager operates the performance, fund age, net asset, turnover ratio, expense ratio, and multi-factor data was taken from the Taiwan Economic Journal, TEJ while the data of a manager’s term of office, gender, and educational background was taken from the website, Fund DJ.

¹ This website is guided by Professor Hsien-Pi, Chiu and Professor Tsun-Hsiu, Li of Department of Finance, National Taiwan University, <http://www.funddj.com/>

The fund sample shall have complete materials and has excluded the survivor error during the sampling period. It also has to exclude the sample type of index fund, life cycle, and portfolio, as a manager has a tiny impact on this type of fund, which also excludes those sample types including funds of group management, multiple-managers management, or non-manager management. Besides, the sample also cross-compares the TEJ fund code and ISIN code to prevent the double count.

Since 2002, Taiwan stock fund has only published the stock-holding details of the quarterly data and has only published the first five companies of stock-holding ratio in the monthly stock-holding details. Referring to the empirical results of Li Chun-An and Lai Hong-Cheng (2009), they showed that the frequency of the stock-holding details was exposed by fund, which has an obvious effect on the stock-exchanging operational behavior of a manager. Therefore, this research took the quarterly data of Taiwan stock fund as the sample to measure the performance of every quarterly fund. We used the four-factor model of Carhart(1997) to estimate the alpha of every quarter returns and used the materials of manager's gender, educational background, term of office, and the age, net asset, expense ratio, turnover ratio, etc. of fund to do the multivariate analysis. With the above steps, we chose 6776 pieces of quarterly data.

Due to that there was no manager ship that shows up more than two times as per quarter in such quarterly samples, hence, we took the manager who manages multi-ticks fund as the main axle and extended to the establishment of busy dummy variables to regard the manager ship which shows up one time in one quarterly data as the Non busy Manager ship, while we took the manager ship which shows up more than two times as Busy Manager ship.

2.2 Explanation of busy dummy variables:

Due to the difference in the term of office of fund managers, in order to select the manager to represent that quarter, we differentiated the quarterly data into four samples via different identifying methods. For example, we took the manager who the beginning of each month or has more on-duty days in that month as the monthly representative manager and took the manager who the beginning of each quarter or has more on-duty months in that quarter as the quarterly manager, then, we differentiated four samples via above steps.

The manager ship created the busy dummy variables. We used 1 as the busy manager ship and 0 as non busy manager ship. As shown on Table 1, the dummy variable of busy manager ship is also divided into the first type (Busy Mgrship1), the second type (Busy Mgrship2), the third type (Busy Mgrship3), and the fourth type (Busy Mgrship4) according to four types of categories.

2.3 Analysis and research method:

The typical economic model includes CAPM and APT. The following shows the three-factor pricing model (regression analysis (2)) and four-factor pricing model (regression analysis (3)) provided by CAPM (regression analysis (1)) and Fama and French (1993), Carhart(1997) which based on the APT concept.

$$(R_{it} - R_{ft}) = \alpha + \beta (R_{mt} - R_{ft}) + \varepsilon_{it} \quad (1)$$

$$(R_{it} - R_{ft}) = \alpha + \beta_{1i} (R_{mt} - R_{ft}) + \beta_{2i} SMB_t + \beta_{3i} HML_t + \varepsilon_{it} \quad (2)$$

$$(R_{it} - R_{ft}) = \alpha_{it} + \beta_{1i} (R_{mt} - R_{ft}) + \beta_{2i} SMB_t + \beta_{3i} HML_t + \beta_{4i} UMD_t + \varepsilon_{it} \quad (3)$$

Wherein,

R_{it} : the profit of stock fund i at period t

R_{mt} : the profit of market investment portfolio m at period t.

R_{ft} : risk-free ratio, is the yearly CD ratio of the First bank.

SMB_t (scale-premium factor): It took June of every year as the first trading date, and it was regrouped sorting from large to small based on the market value of last month (May). Based on the definition of Fama and French (1993), size premium means the result that the average turning ratio of three small investment portfolios minus the average turning ratio of three large investment portfolios. The market value divides into two divisions including Small and Big, then, High (the highest 30%), Medium (middle 40%), and Low (the lowest 30%) according to the book to market.

The equation is as follows:

$$SMB_t = \frac{(Small.High + Small.Medium + Small.Low) - (Big.High + Big.Medium + Big.Low)}{3} \quad 4$$

HML_t (High Minus Low): It takes June of every month as first trading date, and it was regrouped by sorting HML (HML=the net of quarterly report in the first quarter/ the market value at the end of May) of last month (May) from large to small. (Excluding the company with negative net value.) According to Fama and French (1993), it was the average return ratio of two high HMLs minus the average return ratios of two low HMLs, hence, it also called value premiums.

The equation is as follows:

$$HML_t = \frac{(Big.High + Small.High) - (Big.Low + Small.Low)}{2} \quad 5$$

UMD_t (Up Minus Down): It is updated once a month, and is regrouped by sorting the stock return ratio of stock two months ago over the past one year from large too small. Referring to the definition of Carhart(1997), it was the average return ratio of two high UMDs that performed well over the past one year minus the average return ratio of two low UMDs that performed poor during the same period.

The equation is as follows:

$$UMD_t = \frac{(Small.High + Big.High) - (Small.Low + Big.Low)}{2} \quad 6$$

ε_t Errors.

α_i 、 β_i are parameters corresponding to the model variables.

We used the multivariate regression framework to do hypothesis test based on the theory that the busy life of a manager would have negative effect on the fund performance. The research model is created by the use of multiple regression analysis, which is to understand and create the relation of a dependent variable and an independent variable. This research aimed at using the multiple regression analysis to discuss the relation between performance and factor of Taiwan domestic stock fund, thereby doing the empirical analysis and verification. Firstly, we used the regression formula (1), (2), (3) to calculate CAPM alpha (regression analysis (7)), three-factor alpha (regression analysis (8)), and four-factor (regression analysis (9)) in each quarter, wherein the equations are as follows:

$$\alpha_{it} = (R_{it} - R_{ft}) - \beta_i(R_{mt} - R_{ft}) \quad 7$$

$$\alpha_{it} = (R_{it} - R_{ft}) - \beta_{1i}(R_{mt} - R_{ft}) - \beta_{2i}SMB_t - \beta_{3i}HML_t \quad 8$$

$$\alpha_{it} = (R_{it} - R_{ft}) - \beta_{1i}(R_{mt} - R_{ft}) - \beta_{2i}SMB_t - \beta_{3i}HML_t - \beta_{4i}UMD_t \quad 9$$

Then, we used alpha that is acquired from the calculation of regression analysis (7), (8), (9) to test the effect of four kinds of dummy variables of busy manager ship, manager properties and basic fund information on CAPM alpha, three-factor alpha and four-factor alpha, wherein the regression equation is as follows:

$$\alpha_{it} = \theta_0 + \theta_1 \text{BusyMgrshipNo}_{it} + \theta_2 \text{Gender}_{it} + \theta_3 \text{MasterEduc}_{it} + \theta_4 \text{ForeignEduc}_{it} + \theta_5 \ln \text{Tenure}_{it} + \theta_6 \ln \text{Fundage}_{it} + \theta_7 \ln \text{Asset}_{it} + \theta_8 \text{Turnover}_{it} + \theta_9 \text{ExpRatio}_{it} + \varepsilon_{it} \quad 10$$

Wherein, four kinds of dummy variables in busy manager ship are BusyMgrship1_{it} , BusyMgrship2_{it} , BusyMgrship3_{it} , and BusyMgrship4_{it} , wherein Gender_{it}

Is gender dummy variable, 1 means that the manager is male, 0 means that the manager is female MasterEduc_{it} is master's degree dummy variable, 1 means that the manager has master's degree, means none. ForeignEduc_{it} is foreign educational degree, 1 means that the manager has foreign educational degree, 0 means none. $\ln \text{Tenure}_{it}$ is the logarithm of a manager's term of office, which is counted by month. $\ln \text{Fundage}_{it}$ is the logarithm of fund age, which is counted by month. $\ln \text{Asset}_{it}$ is the logarithm of net asset, which is counted by thousand. The materials are provided by each Investment Trust or bank. The net assets comes from the mutual fund held by the site of a variety of goods (including cash), its net realizable value on the day of settlement deducting the total amount of all kinds of related expenses, then, dividing it by the total number of benefit unit on that day. Turnover_{it} is the turnover ratio of fund, which is acquired by the total amount of sold listed/counter stocks and security investing trust-bond fund minus net buy-back price of beneficial voucher minus distribution amount of fund gain, and divided by average net asset value, multiplied by the ratio of investable stock to trust-bond fund of stocks and bonds investment and multiplied by 100%. ExpRatio_{it} is fund expense ratio, which is acquired by the total costs divided by 1000, then, the ratio of fund net asset (thousand dollar) and multiplied by 100%.

In order to test whether there is any potential exogenous variable between the busy manager ship and fund performance, we re-evaluated the busy manager ship by using the dummy variable of busy manager ship which falls behind for a quarter via the regression analysis (10) to test the stability of empirical result. The regression formula is as follows:

$$\alpha_{it} = \theta_0 + \theta_1 \text{LagBusyMgrshipNo}_{it} + \theta_2 \text{Gender}_{it} + \theta_3 \text{MasterEduc}_{it} + \theta_4 \text{ForeignEduc}_{it} + \theta_5 \ln \text{Tenure}_{it} + \theta_6 \ln \text{Fundage}_{it} + \theta_7 \ln \text{Asset}_{it} + \theta_8 \text{Turnover}_{it} + \theta_9 \text{ExpRatio}_{it} + \varepsilon_{it} \quad 11$$

Wherein, four kinds of dummy variables of busy manager ship which fall behind are $\text{LagBusyMgrship1}_{it}$, $\text{LagBusyMgrship2}_{it}$, $\text{LagBusyMgrship3}_{it}$ and, $\text{LagBusyMgrship4}_{it}$ respectively.

Besides, in order to track the variation of busy manager ship and fund performance and test their causality, in the regression analysis (12), we took the variation rate of alpha which ahead of 4 quarters as the dependent variable and as for the busy manager ship, we took the variation rate of dummy variable of busy manager ship which falls behind 4 quarters as the independent variable to do the regression analysis, the regression analysis is as follows:

$$(\alpha_{i(t+4)} - \alpha_{it}) = \theta_0 + \theta_1 (\text{BusyMgrshipNo}_{it} - \text{BusyMgrshipNo}_{i(t-4)}) + \theta_2 \text{Gender}_{it} + \theta_3 \text{MasterEduc}_{it} + \theta_4 \text{ForeignEduc}_{it} + \theta_5 \ln \text{Tenure}_{it} + \theta_6 \ln \text{Fundage}_{it} + \theta_7 \ln \text{Asset}_{it} + \theta_8 \text{Turnover}_{it} + \theta_9 \text{ExpRatio}_{it} + \varepsilon_{it} \quad 12$$

Wherein, $\alpha_{i(t+4)}$ is the alpha which ahead of 4 quarters and four kinds of dummy variables of busy manager ship that fall behind four quarters are $BusyMgrship1_{i(t-4)}$, $BusyMgrship2_{i(t-4)}$, $BusyMgrship3_{i(t-4)}$, and $BusyMgrship4_{i(t-4)}$ respectively.

During tracking the variation between busy manager ship and fund performance, we also used analysis direction which opposites to the regression analysis (12). We used the variation rate of dummy variable of busy manager ship which is ahead of four quarters as the dependent variable, and on busy manager ship, we used the variation rate of alpha which falls behind 4 quarters as the independent variable to do the regression analysis, the regression analysis is as follows:

$$\begin{aligned} (BusyMgrshipNo_{i(t+4)} - BusyMgrshipNo_{it}) = & \theta_0 + \theta_1(\alpha_{it} - \alpha_{i(t-4)}) + \theta_2 Gender_{it} \\ & + \theta_3 MasterEduc_{it} + \theta_4 ForeignEduc_{it} + \theta_5 lnTenure_{it} + \theta_6 lnFundage_{it} \\ & + \theta_7 lnAsset_{it} + \theta_8 Turnover_{it} + \theta_9 ExpRatio_{it} + \varepsilon_{it} \end{aligned} \quad 13$$

Wherein, $\alpha_{i(t-4)}$ is the alpha which falls behind four quarters and four kinds of dummy variables of busy manager ship that are ahead of four quarters are $BusyMgrship1_{i(t+4)}$, $BusyMgrship2_{i(t+4)}$, $BusyMgrship3_{i(t+4)}$, and $BusyMgrship4_{i(t+4)}$ respectively.

3. Empirical result and analysis:

3.1 Descriptive statistics and analysis

From 2002 to 2012, in the yearly data of descriptive statistics and analysis from category 1 to category 4 of manager and busy manager, the quantity of file managed varies as time elapses. The total number of managers was approximately stable at plus or minus of 700 people. At the same time, the average number of busy managers rapidly grows from 107 people to about 313 people. During 2007 to 2008, the number of busy managers even accounts for up to 60% of the total number of managers. Besides, the ratio of busy manager ship also accounts for more than half of manager ship after 2014.

In the regression equation, we assume that all variables are all continuous variables. If there is a nominal scale variable, we can use the dummy variable to do the analysis. Dummy variable is also called as Categorical Variable, which is typically distinguished by (0,1) in the category. Table 2 describes the statistics of busy dummy variable and other relevant characteristics of different calculating standard of all manager ship and busy manager ship. Dummy variable: busy means to use 1 as the busy manager ship, 0 as the non-busy manager ship; gender means to use 1 as male, 0 as female; master's degree means to use 1 as having a master's degree, 0 as not having a master's degree; foreign educational degree means to use 1 as having foreign educational degree, 0 as not having foreign educational degree. Other variables also including the term of office of manager, fund age, net asset and its logarithm, turnover ratio and expense ratio. Panel A uses all manager ships as sample and Panel B uses the busy manager ship taken from the sub-sampling as sample. The sample period is the quarterly data of 42 quarters from Q1 in 2002 to Q2 in 2010. All samples are 6776, category 1 of busy manager ship samples taken from sub-sampling are 3030, category 2 of busy manager ship samples taken from sub-sampling are 3073, category 3 of busy manager ship samples taken from sub-sampling are 3043, and category 4 of busy manager ship samples taken from sub-sampling are 3048. We can see from Panel A and Panel B that the average ($R_i - R_f$) of busy manager ship, average of CAPM alpha, average of 3-Factor alpha, average of 4-Factor alpha are all worse than variable averages of all manager ship. The busy behavior of manager indeed will have negative impact on the fund performance.

Table 3 compares the manager characteristics and fund data by gender, master's degree, foreign educational

degree, term of office, fund age, net asset, turnover ratio, expense ratio, and etc. to review which type of fund the non-busy manager and busy manager of domestic stock fund will manage. The result shows, during the sampling period, the busy manager ship has more female manager, more managers with master's and foreign educational degrees, managers have longer term of office, longer fund age, more net asset, lower turnover ratio, and less expense ratio. We can also found that in domestic stock fund, there is more male manager, more managers with master's degree, fewer managers with foreign educational degree.

Table 4 is the comparison of four-factor variable between non-busy manager and busy manager. From non-busy manager ship to busy manager ship, alpha has negative difference which changes from 0.08% to 0.24%, busy manager ship has lower alpha value, which means that due to the limitation of limited resources distribution, the fund performance managed by busy manager falls down. From the non-busy manager ship to busy manager ship, $(R_{mt} - R_{ft})$ has positive difference which changes from 0.06% to 0.5%, non-busy manager ship has a higher $(R_{mt} - R_{ft})$ value, which means that busy manager ship has a higher systemic risk $(R_{mt} - R_{ft})$.

3.2 Performance Comparison between non-busy and busy manager ships:

In order to observe the performance difference between non-busy manager and busy manager which uses different regression model, in the regression analysis (7), (8), (9), we used the quarterly data of CAPM alpha, 3-factor alpha, and 4-factor alpha as dependent variables, in which the control variables are gender, master's degree, foreign educational degree, manager's term of office, fund age, net asset, turnover ratio, and expense ratio. The result in table 5 shows that when three-factor alpha and four-factor alpha are used as the regression formula of dependent variables, the busy dummy variable has 1% significance, which means busy manager does not have enough ability and resource to manager multi-ticks fund, and the fund performance shows negative relation. When the busy dummy variable of busy manager in category 1 increases by 1%, it will make the four-factor alpha decrease by 0.6%. In other characteristics, except for 1% significant positive relation exists in the manager's term of office and four-factor alpha, other significant characteristics, foreign educational degree, turnover ratio, and expense ratio, all show negative relation with 4-factor alpha. In table 5, the performance of busy manager ship, from category 2 to category 4, and fund performance are roughly identical to that of busy manager ship in category 1.

3.3 Robustness test of variable in busy manager ship which falls behind:

Table 6 is the result of variable correlation which tests the busy manager ship and fund performance that falls behind. Fund performance used the alpha which was gained by using four-factor model to calculate to test the busy dummy variable a quarter later, therefore, the quantity of samples decreases from 6776 to 6551, and then we tested whether the busy manager ship of last quarter would have impact on the following quarterly fund performance. Other characteristics will fall behind a quarter with the fallen-behind of busy dummy variable and please refer to Table 6 for the empirical result.

3.4 Tracking the variation of busy manager ship and performance:

Table 7 and table 8 took the sample after Subsampling to do the causality test, which used four-quarter Lead change of alpha as dependent variable and four-quarter Lag change of BusyMgrship as independent variable, and other characteristics including gender, educational background and term of office, fund age, net asset, turnover ratio, and expense ratio. The test in table 7 is to test how the variation of manager ship over the past year affects the fund performance in the next year. It majorly tests whether the past busy behavior of fund manager will increase or decrease the fund performance in the future. Assuming from the empirical result in table 7, we found that the increase of dummy variable variation rate in busy manager ship which falls behind four quarters will have negative effect on the variation rate of alpha which is ahead of 4 quarters.

Table 8 conducts an opposite causality test, where we used dummy variable variation rate in busy manager ship which is ahead of four quarters as the dependent variable, while four-factor alpha which falls behind four quarters were used as independent variable to test how the fund performance of last year affects the manager ship of the following year. It majorly tests whether the past increase of fund performance would constitute the busy behavior of fund manager in the future. We also found in the table 8 that the increase of alpha variation rate which falls behind four quarters will rise up the dummy variable variation rate in busy manager ship, which is ahead of four quarters. This means that managers with better past performance will be easy in managing more multi-ticks funds, namely to be busier.

3.5 Correlation between manager ship and performance variation:

In order to discuss deeper causality, table 9 analyzes the correlation between manager ship and alpha variation. In Panel A, we categorized the manager ships in different categories, then, according to the variation in the manager ship of this quarter (t) minus the manager ship of last quarter (t-1), ($Mgrship_t - Mgrship_{t-1}$) which are -1, 0, 1 respectively. The result shows that to keep the quantity of manager ship in the last quarter the same that the variation of fund performance is in positive relation and the variation is in the minimum. Besides, no matter from the non-busy status to busy status or from busy status to non-busy status, they all have negative relation with the variation of fund performance. However, the variation of fund performance from busy status to non-busy status is a little bit better than the variation of fund performance from non-busy status to busy status. Extending the variation period from the past year (t-4) to present year (t) to analyze, it shows the same result as the variation from past quarter to present quarter.

Panel B divides alpha into two categories. According to the past quarter (t-1) to present quarter (t), we divide the variation of fund performance into increasing or decreasing. When the performance variation from past quarter to present quarter is increasing, it does not cause the increasing of manager ship quantity in next quarter but show a decreasing result. However, on extending the variation period to past year (t-4) to present year (t) to analyze, when the performance variation from past year to present year is increasing, it will cause the increasing of the manager ship quantity in next quarter.

4. Conclusion:

This research tested the effect of busy manager ship on fund performance in domestic stock fund from Q1 in 2002 to Q2 in 2012. Around 2007, the quantity of busy manager and busy manager ship in domestic stock fund was at the peak time. Although the quantity decreased thereafter, it was still over half of the percentage. There are more female managers in busy manager ship than in non busy manager ship. The manager's educational background is better, the term of office is longer, the fund turnover ratio is smaller, and expense ratio is less. However, the findings showed that the expense ratio and fund return still showed negative relation. In the content, we divided the manager ship into four categories to do the research, and the empirical result does not show significant difference between four categories of manager ship.

Combined as the empirical results of this Study, among domestic stock funds, the use of dummy variable in busy manager ship indicated that busy managers actually will have negative effect on the fund performance. Data selection does not only eliminate the survivor bias, but also used the dummy variable of manager, which falls behind a quarter, to do the robustness test to strengthen the accuracy of sample.

This research used sub-sampling to do the simple causality test. We found that the past busy behavior of manager will affect the fund performance in the future, which means that the past busy manager ship had negative relation with fund performance in the future. And good or bad of past fund performance will also affect the future busy effect of manager, which means that managers with better past fund performance will have more opportunities being entrusted to manage multi-ticks fund and become busy managers.

In the Panel Data of manager ship variation and alpha variation, the unvaried fund performance in fund

manager ship will be better than that of the manager ship from non-busy status to busy status or busy status to non-busy status. However, in one-year performance variation, it also verified the increase of fund performance affecting the increase of the manager ship in the next quarter and further caused the busy effect.

5. Reference:

- Chun-An, L. and Hong-Cheng, L. (2009), "Effect of information disclosing frequency to behavior of fund manager" *Review of Securities and Futures Market*, 21(3), 143-179
- Carhart, M. M. (1997), "On persistence in mutual fund performance," *Journal of Finance*, 52(1), 57-82.
- Chevalier, J. and Ellison, G. (1999), "Are some mutual fund managers better than others? Cross-Sectional Patterns in Behavior and Performance," *Journal of Finance*, 54(3), 875-899.
- Choi, D. W., Kahraman, C. B. and Mukherjee A. (2013), "Performance-Chasing Behavior and Mutual Funds: New Evidence from Multi-Fund Managers," unpublished manuscript, The Hong Kong University of Science & Technology.
- Core, J. E., Holthausen, R. W. and Larcker, D. F. (1999), "Corporate Governance, Chief Executive Officer Compensation, and Firm Performance," *Journal of Financial Economics*, 51(3), 371-406.
- Fama, E. F. and Jensen, M. C. (1983), "The Separation of Ownership and Control," *Journal of Law and Economics*, 26(2), 301-325.
- Fich, E. M. and Shivdasani, A. (2006), "Are busy boards effective monitors," *Journal of Finance*, 61(2), 689-724.
- Golec, J. H. (1996), "The Effects of Mutual Fund Managers' Characteristics on Their Portfolio Performance, Risk and Fees," *Financial Services Review*, 5(2), 133-148.
- Jan, Y. C., and Hung, M. W. (2003), "Mutual fund attributes and performance," *Financial Services Review*, 12(2), 165-178.
- Otten, R. and Bams, D. (2004), "How to measure mutual fund performance : economic versus statistical relevance," *Accounting and Finance*, 44(2), 203-222.
- Shivdasani, A. and Yermack, D. (1999), "CEO involvement in the selection of new board members: An empirical analysis," *Journal of Finance*, 54(5), 1829-1853.
- Tarkovska, V. (2012), "Busy Boards, Corporate Liquidity and Financial Risk: Evidence from UK Panel Data," unpublished manuscript, University of Liverpool.
- Yadav, V. (2011), "Portfolio Matching by Multiple-Fund Managers: Effect on Fund Performance and Flows," *Job Market Paper*, Institut Européen d'Administration des Affaires.
- Zhang, J. N. (2011), "Do Busy Managers Perform Better? Evidence from Mutual Funds," unpublished manuscript, Pennsylvania State University.

Table1. Busy Manager Ship

Busy manager dummy	Has more on-duty days in that month	The beginning of each month
Has more on-duty months in that month	the first type (Busy Mgrship1)	the third type (Busy Mgrship3)
The beginning of each month	the second type (Busy Mgrship2)	the fourth type (Busy Mgrship4)

Table 2. Sample Statistics for All Mgrship and Busy Mgrship Characteristics

Uses CAPM alpha, 3-Factor alpha and 4-Factor alpha that measured by regressions (7), (8) and (9)
 Panel A: All Mgrship

	Variable	Average	Mean	Standard Deviation	1st Pct	99 th Pct
First Type Mgrship	Busy	0.4472	0	0.4972	0	1
	Gender	0.7329	1	0.4425	0	1
	Master’s Degree	0.8396	1	0.3670	0	1
	Foreign Educational Degree	0.2924	0	0.4549	0	1
Second Type Mgrship	Busy	0.4535	0	0.4979	0	1
	Gender	0.7330	1	0.4424	0	1
	Master’s Degree	0.2896	0	0.4536	0	1
	Foreign Educational Degree	0.8406	1	0.3661	0	1
Third Type Mgrship	Busy	0.4491	0	0.4974	0	1
	Gender	0.7329	1	0.4425	0	1
	Master’s Degree	0.2898	0	0.4537	0	1
	Foreign Educational Degree	0.8408	1	0.3659	0	1
Forth Type Mgrship	Busy	0.4498	0	0.4975	0	1
	Gender	0.7332	1	0.4423	0	1
	Master’s Degree	0.2900	0	0.4538	0	1
	Foreign Educational Degree	0.8409	1	0.3658	0	1
	Tenure(month)	24	18	19	6	118
	Fund Age(month)	5000	5047	1583	1277	9194
	Net Asset (K dollars)	1606019	921471	1969350	77735	10070295
	InAsset	5.9883	5.9645	0.4326	4.8906	7.0030

Turnover	25.4074	20.1400	22.9947	-2.7000	103.9850
Expense	0.1461	0.1450	0.0350	0.0978	0.2015
Ri-Rf	-0.0019	0.0086	0.1242	-0.2723	0.2510
Rm-Rf	0.0157	0.0168	0.1081	-0.2177	0.2272
AlphaCAPM	-0.0174	-0.0197	0.0634	-0.1626	0.1500
AlphaFrench	-0.0134	-0.0162	0.0545	-0.1344	0.1418
AlphaCarhart	-0.0136	-0.0166	0.0531	-0.1332	0.1341

Panel B: busy Mgrship

Variable	Average	Mean	Standard Deviation	1st Pct	99thPct
First Type Busy					
Mgrship					
Gender	0.6822	1	0.4657	0	1
Master's Degree	0.8508	1	0.3563	0	1
Foreign Educational Degree	0.3013	0	0.4589	0	1
Tenure(month)	27	20	22	8	118
Fund Age(month)	5148	5071	1648	1199	9194
Net Asset (K dollars)	1616610	968900	1911851	75335	9952937
lnAsset	5.9964	5.9863	0.4357	4.8770	6.9979
Turnover	21.5739	16.9050	19.4264	-3.3352	86.8198
Expense	0.1457	0.1450	0.0404	0.0820	0.2262
(R_t-R_f)	-0.0023	0.0070	0.1261	-0.2689	0.2605
(R_m-R_f)	0.0148	0.0168	0.1095	-0.2177	0.2272
CAPM alpha	-0.0169	-0.0187	0.0621	-0.1617	0.1508
3-Factor alpha	-0.0151	-0.0182	0.0539	-0.1319	0.1426
4-Factor alpha	-0.0154	-0.0183	0.0525	-0.1328	0.1378
Second Type Busy					
Mgrship					
Gender	0.6847	1	0.4647	0	1
Master's Degree	0.8493	1	0.3578	0	1
Foreign Educational Degree	0.2945	0	0.4559	0	1
Tenure(month)	27	20	22	8	118
Fund Age(month)	5140	5071	1656	1199	9194
Net Asset (K dollars)	1607608	964670	1897470	75437	9926715
lnAsset	5.9952	5.9844	0.4339	4.8776	6.9968
Turnover	21.4672	16.8600	19.2408	-3.2836	84.6420

Expense	0.1456	0.1450	0.0403	0.0814	0.2206
(R_i-R_f)	-0.0020	0.0079	0.1266	-0.2699	0.2582
(R_m-R_f)	0.0141	0.0168	0.1101	-0.2177	0.2272
CAPM alpha	-0.0159	-0.0180	0.0619	-0.1601	0.1506
3-Factor alpha	-0.0142	-0.0179	0.0537	-0.1318	0.1409
4-Factor alpha	-0.0145	-0.0178	0.0523	-0.1325	0.1369

Third Type Busy

Mgrship

Gender	0.6845	1	0.4648	0	1
Master's Degree	0.8521	1	0.3550	0	1
Foreign Educational Degree	0.2951	0	0.4562	0	1
Tenure(month)	27	20	22	8	118
Fund Age(month)	5142	5071	1658	1199	9194
Net Asset (K dollars)	1615608	964555	1915500	75650	10014220
lnAsset	5.9968	5.9843	0.4339	4.8788	7.0006
Turnover	21.5841	16.8900	19.2963	-3.0558	86.7704
Expense	0.1456	0.1450	0.0403	0.0808	0.2162
(R_i-R_f)	-0.0021	0.0077	0.1265	-0.2682	0.2594
(R_m-R_f)	0.0144	0.0168	0.1099	-0.2177	0.2272
CAPM alpha	-0.0164	-0.0181	0.0620	-0.1616	0.1507
3-Factor alpha	-0.0146	-0.0180	0.0537	-0.1319	0.1421
4-Factor alpha	-0.0149	-0.0180	0.0523	-0.1327	0.1375

Forth Type Busy

Mgrship

Gender	0.6841	1	0.4650	0	1
Master's Degree	0.8517	1	0.3554	0	1
Foreign Educational Degree	0.2946	0	0.4559	0	1
Tenure(month)	27	20	22	8	118
Fund Age(month)	5144	5071	1657	1199	9194
Net Asset (K dollars)	1613643	961294	1914377	75668	10010462
lnAsset	5.9962	5.9829	0.4339	4.8789	7.0005
Turnover	21.5989	16.9050	19.3087	-3.0553	86.7514
Expense	0.1456	0.1450	0.0403	0.0809	0.2161
(R_i-R_f)	-0.0022	0.0077	0.1266	-0.2694	0.2592
(R_m-R_f)	0.0145	0.0168	0.1099	-0.2177	0.2272
CAPM alpha	-0.0164	-0.0181	0.0620	-0.1615	0.1507
3-Factor alpha	-0.0146	-0.0180	0.0537	-0.1319	0.1419
4-Factor alpha	-0.0149	-0.0181	0.0523	-0.1327	0.1374

Table 3. Comparison with Nonbusy Mgrship and Busy Mgrship Characteristics

Describes the difference between Nonbusy and Busy manager characteristics, including managers' gender, educational background, terms of office and fund ages, net asset, turnover and expense.

Mgrship	No. of Mgrship1	Gender	Master's Degree	Foreign Educational Degree	Tenure(month)	Fund Age(month)	Net Asset (K dollars)	Turnover	Expense
Nonbusy	3746	0.77	0.83	0.285	21.25	163	1597453	28.51	0.1465
Busy	3030	0.68	0.85	0.301	26.94	172	1616610	21.57	0.1457
Difference		-0.09	0.02	0.016	5.69	9	19157	-6.94	-0.0008
Mgrship	No. of Mgrship2	Gender	Master's Degree	Foreign Educational Degree	Tenure(month)	Fund Age(month)	Net Asset (K dollars)	Turnover	Expense
Nonbusy	3703	0.77	0.83	0.285	21.21	163	1604701	28.68	0.1466
Busy	3073	0.68	0.85	0.295	26.86	171	1607608	21.47	0.1456
Difference		-0.09	0.02	0.010	5.65	8	2907	-7.21	-0.0010
Mgrship	No. of Mgrship3	Gender	Master's Degree	Foreign Educational Degree	Tenure(month)	Fund Age(month)	Net Asset (K dollars)	Turnover	Expense
Nonbusy	3733	0.77	0.83	0.286	21.27	163	1598203	28.52	0.1465
Busy	3043	0.68	0.85	0.295	26.83	171	1615608	21.58	0.1456
Difference		-0.09	0.02	0.009	5.56	8	17405	-6.94	-0.0009
Mgrship	No. of Mgrship4	Gender	Master's Degree	Foreign Educational Degree	Tenure(month)	Fund Age(month)	Net Asset (K dollars)	Turnover	Expense
Nonbusy	3728	0.77	0.83	0.286	21.26	163	1599786	28.52	0.1465
Busy	3048	0.68	0.85	0.295	26.87	171	1613643	21.60	0.1456
Difference		-0.09	0.02	0.009	5.61	8	13857	-6.92	-0.0009
Average Difference		-0.09	0.02	0.011	5.63	8	13332	-7.00	-0.0009

Table 4. 4-factor Variables Comparison between Nonbusy Mgrship and Busy Mgrship

(R_i-R_t)	Nonbusy	Busy	Nonbusy	Busy	Nonbusy	Busy	Nonbusy	Busy
	First Type Mgrship	First Type Mgrship	Second Type Mgrship	Second Type Mgrship	Third Type Mgrship	Third Type Mgrship	Forth Type Mgrship	Forth Type Mgrship
alpha	-0.0125 (-13.7548)	-0.0148 (-15.1483)	-0.0132 (-14.3505)	-0.0140 (-14.4285)	-0.0129 (-14.1049)	-0.0144 (-14.7411)	-0.0128 (-14.0836)	-0.0143 (-14.6554)
(R_m-R_t)	1.0605 (121.1720)	1.0638 (111.3645)	1.0615 (119.1301)	1.0621 (113.5850)	1.0598 (119.9656)	1.0648 (112.7354)	1.0593 (119.8046)	1.0643 (112.6365)
SMB_t	0.3135 (23.3204)	0.2414 (16.4025)	0.3131 (23.1099)	0.2418 (16.5824)	0.3145 (23.3085)	0.2396 (16.3427)	0.3133 (23.1770)	0.2418 (16.5247)
HML_t	-0.2786 (-33.9827)	-0.2870 (-27.6769)	-0.2799 (-33.7142)	0.1378 (14.0106)	-0.2776 (-33.7291)	-0.2880 (-27.9136)	-0.2778 (-33.6743)	-0.2868 (-27.8965)
UMD_t	90.1392 (14.2934)	0.1394 (12.8753)	-0.2835 (-27.8205)	0.1410 (13.1712)	0.1392 (14.2300)	0.1398 (12.9657)	0.1395 (14.2417)	0.1388 (12.8945)
Sample Size	3746	3030	3703	3073	3733	3043	3728	3048
R²	0.8099	0.8270	0.8069	0.8298	0.8076	0.8294	0.8074	0.8292
F value	0	0	0	0	0	0	0	0

Notes: 1. *** means 1% significance level, ** means 5% significance level, * means 10% significance level.

2. Describes Carhart(1997)4-factor model, and takes different types (R_i-R_t) as dependent variables; Carhart alpha, (R_m-R_t) beta, SMB beta, HML beta and UMD beta are independent variables to calculate the difference between Nonbusy and Busy manager alpha and beta variables.

	CAPM alpha	3-Factor alpha	4-Factor alpha		CAPM alpha	3-Factor alpha	4-Factor alpha
BusyMgrship1	-0.0025	-0.0062***	-0.0060***	BusyMgrship2	-0.0007	-0.0044***	-0.0043***
	(-1.6148)	(-4.5469)	(-4.4939)		(-0.4514)	(-3.2491)	(-3.2508)
Gender	-0.0019	-0.0019	-0.0024	Gender	-0.0018	-0.0015	-0.0021
	(-1.0727)	(-1.2321)	(-1.5887)		(-0.9906)	(-1.0082)	(-1.4155)
Master's Degree	0.0062	0.0042	0.0040	Master's Degree	0.0050	0.0036	0.0035
	(-1.5386)	(-0.5141)	(-0.3692)		(-1.4520)	(-0.5395)	(-0.3352)
Foreign Educational Degree	-0.0027***	-0.0008**	-0.0005**	Foreign Educational Degree	-0.0026***	-0.0008*	-0.0005*
	(2.8170)	(2.2251)	(2.1683)		(2.2734)	(1.9022)	(1.8925)
Tenure(month)	0.0001***	0.0002***	0.0002***	Tenure(month)	0.0001***	0.0002***	0.0002***
	(2.9446)	(4.7158)	(5.1992)		(2.9015)	(4.6191)	(5.2343)
Fund Age(month)	0.000000005	0.000000614	0.000000813*	Fund Age(month)	-0.000000046	0.000000569	0.000000773*
	(0.0093)	(1.4287)	(1.9358)		(-0.091)	(1.3228)	(1.8395)
Net Asset (K dollars)	-0.0011	0.0007	0.0020	Net Asset (K dollars)	-0.0009	0.0008	0.0020
	(-0.5629)	(0.4073)	(1.1990)		(-0.4726)	(0.4816)	(1.2487)
Turnover	-0.0003***	-0.0002***	-0.0002***	Turnover	-0.0003***	-0.0002***	-0.0001***
	(-9.3735)	(-7.5865)	(-5.0077)		(-9.1996)	(-7.4375)	(-4.8458)
Expense	-0.1177***	-0.0551***	-0.0507***	Expense	-0.1177***	-0.0552***	-0.0509***
	(-5.2936)	(-2.8779)	(-2.7126)		(-5.2897)	(-2.8818)	(-2.7206)
Intercept	0.0099	-0.0099	-0.0214**	Intercept	0.0090	-0.0109	-0.0223**
	(0.7843)	(-0.9130)	(-2.0195)		(0.7139)	(-1.0057)	(-2.1030)
Sample Size	6776	6776	6776	Sample Size	6776	6776	6776
R²	0.02	0.02	0.02	R²	0.02	0.02	0.01
F VALUE	0.00	0.00	0.00	F VALUE	0.00	0.00	0.00

Table 5. alpha Measurement Comparison between Nonbusy Mgrship and Busy Mgrship

BusyMgrship3	-0.0014	-0.0052***	-0.0051***	BusyMgrship4	-0.0016	-0.0053***	-0.0050***
	(-0.9142)	(-3.8536)	(-3.8151)		(-1.0293)	(-3.8825)	(-3.8033)
Gender	-0.0015	-0.0017	-0.0022	Gender	-0.0016	-0.0016	-0.0022
	(-0.8713)	(-1.0792)	(-1.4837)		(-0.9156)	(-1.0621)	(-1.4475)
Master's Degree	0.0056	0.0037	0.0034	Master's Degree	0.0056	0.0038	0.0035
	(-1.3627)	(-0.4935)	(-0.3163)		(-1.4197)	(-0.5314)	(-0.3444)
Foreign Educational Degree	-0.0024***	-0.0008*	-0.0005*	Foreign Educational Degree	-0.0025***	-0.0008**	-0.0005*
	(2.5333)	(1.9502)	(1.8614)		(2.5647)	(2.0089)	(1.9108)
Tenure(month)	0.0001***	0.0002***	0.0002***	Tenure(month)	0.0001***	0.0002***	0.0002***
	(2.9858)	(4.6454)	(5.1986)		(3.0024)	(4.7273)	(5.3036)
Fund Age(month)	-0.000000020	0.000000585	0.000000784*	Fund Age(month)	-0.000000015	0.000000591	0.000000790
	(-0.0393)	(1.3599)	(1.8673)		(-0.0296)	(1.3749)	(1.8820)
Net Asset (K dollars)	-0.0010	0.0008	0.0021	Net Asset (K dollars)	-0.0010	0.0007	0.0020
	(-0.5157)	(0.4769)	(1.2607)		(-0.5294)	(0.4481)	(1.2295)
Turnover	-0.0003***	-0.0002***	-0.0001***	Turnover	-0.0003***	-0.0002***	-0.0001***
	(-9.2702)	(-7.5016)	(-4.9107)		(-9.2936)	(-7.5067)	(-4.9070)
Expense	-0.1175***	-0.0551***	-0.0508***	Expense	-0.1176***	-0.0552***	-0.0509***
	(-5.2825)	(-2.8790)	(-2.7170)		(-5.2881)	(-2.8835)	(-2.7208)
Intercept	0.0090	-0.0106	-0.0220**	Intercept	0.0092	-0.0105	-0.0219**
	(0.7101)	(-0.9776)	(-2.0729)		(0.7311)	(-0.9664)	(-2.0655)
Sample Size	6776	6776	6776	Sample Size	6776	6776	6776
R²	0.02	0.02	0.02	R²	0.02	0.02	0.02
F VALUE	0.00	0.00	0.00	F VALUE	0.00	0.00	0.00

Notes: 1. *** means 1% significance level, ** means 5% significance level, * means 10% significance level.

2. Test the quarterly performance with different calculation bases, and the empirical results of busy Mgrship and other related characteristics. Each regression ses CAPM alpha, 3-Factor alpha and 4-Factor alpha that measured by regressions (7), (8) and (9)

Table 6. Robustness Test of change in busy mgrship which falls behind

	(1)	(2)	(3)	(4)
LagBusyMgrship1	-0.00529*** (-3.9417)			
LagBusyMgrship2		-0.00501*** (-3.74085)		
LagBusyMgrship3			-0.00548*** (-4.08981)	
LagBusyMgrship4				-0.00558*** (-4.16762)
Gender	-0.00237 (-1.5683)	-0.00264* (-1.7477)	-0.00258* (-1.7114)	-0.00258* (-1.70777)
Master's Degree	0.003387* (1.810657)	0.003396* (1.817535)	0.003025 (1.617725)	0.003129* (1.672817)
Foreign Educational Degree	-0.00086 (-0.57344)	-0.00068 (-0.45039)	-0.00054 (-0.36059)	-0.00064 (-0.42411)
Tenure(month)	0.000178*** (4.855739)	0.000175*** (4.794222)	0.000177*** (4.833181)	0.000177*** (4.849824)
Fund Age(month)	8.02E-07* (1.861239)	7.81E-07* (1.814039)	7.93E-07* (1.840603)	8.00E-07* (1.858557)
Net Asset (K dollars)	0.00126 (0.764023)	0.001247 (0.755703)	0.001264 (0.766621)	0.001235 (0.748924)
Turnover	-0.0002*** (-6.42755)	-0.0002*** (-6.44264)	-0.0002*** (-6.46861)	-0.0002*** (-6.47737)
Expense	-0.05593*** (-2.98183)	-0.05651*** (-3.01221)	-0.056258*** (-2.99878)	-0.05622*** (-2.99726)
Intercept	-0.01573 (-1.46423)	-0.01535 (-1.42774)	-0.01515 (-1.40926)	-0.01504 (-1.39889)
Sample Size	6551	6551	6551	6551
R²	0.01812	0.017984	0.018271	0.018379
F value	0.00000	0.00000	0.00000	0.00000

Notes: *** means 1% significance level, ** means 5% significance level, * means 10% significance level.

Table 7. Tracking changes in Busy Mgrship and alpha: Lead Busy Mgrship and Fall Behind alpha

	(1)	(2)	(3)	(4)
4-qrt Lag change of BusyMgrship1	-0.274773*** (-7.04309)			
4-qrt Lag change of BusyMgrship2		-0.27185*** (-6.96436)		
4-qrt Lag change of BusyMgrship3			-0.26787*** (-6.86735)	
4-qrt Lag change of BusyMgrship4				-0.27172*** (-6.96553)
Gender	-0.069328 (-1.604499)	-0.08942** (-2.07388)	-0.08168* (-1.89302)	-0.08566** (-1.98482)
Master's Degree	0.19878*** (3.652512)	0.21712*** (3.982948)	0.1936*** (3.552514)	0.19947*** (3.657784)
Foreign Educational Degree	-0.073278* (-1.682968)	-0.06496 (-1.49185)	-0.06684 (-1.53534)	-0.06933 (-1.59272)
Tenure(month)	0.007443*** (7.272725)	0.00727*** (7.10436)	0.007382*** (7.21246)	0.00732*** (7.158366)
Fund Age(month)	2.75E-05** (2.017007)	2.70E-05** (1.97567)	2.65E-05* (1.944167)	2.68E-05** (1.964948)
Net Asset (K dollars)	-0.445904*** (-9.033)	-0.44463*** (-9.00725)	-0.44157*** (-8.9475)	-0.44238*** (-8.96316)
Turnover	-0.003974*** (-4.560088)	-0.00403*** (-4.61638)	-0.00392*** (-4.50192)	-0.00396*** (-4.54255)
Expense	1.894131*** (2.969114)	1.848273*** (2.897012)	1.872192*** (2.93384)	1.86612*** (2.924754)
Intercept	2.917562*** (8.720501)	2.921088*** (8.732302)	2.908164*** (8.69333)	2.915331*** (8.715594)
Sample Size	5066	5066	5066	5066
R ²	0.034895	0.034786	0.034362	0.034561
F value	0.00000	0.00000	0.00000	0.00000

Notes: *** means 1% significance level, ** means 5% significance level, * means 10% significance level.

Table 8. Tracking changes in Busy Mgrship and alpha: Lead Busy Mgrship and Fall Behind alpha

	4-qrt Lead change of BusyMgrship1	4-qrt Lead change of BusyMgrship2	4-qrt Lead change of BusyMgrship3	4-qrt Lead change of BusyMgrship4
4-qrt Lag change of alpha	0.409609*** (9.877831)	0.399079*** (9.616802)	0.39778*** (9.599241)	0.39778*** (9.599241)
Gender	-0.08653* (-1.85921)	-0.08189* (-1.75958)	-0.08124* (-1.74329)	-0.08124* (-1.74329)
Master's Degree	-0.00204 (-0.035)	-0.01417 (-0.24368)	-0.01653 (-0.28324)	-0.01653 (-0.28324)
Foreign Educational Degree	-0.01354 (-0.28939)	-0.01581 (-0.33734)	-0.00686 (-0.14653)	-0.00686 (-0.14653)
Tenure(month)	0.000138 (0.120204)	0.000479 (0.416965)	0.000392 (0.34181)	0.000392 (0.34181)
Fund Age(month)	-5.13E-05*** (-3.51853)	-5.06E-05*** (-3.46986)	-5.10E-05*** (-3.49226)	-5.10E-05*** (-3.49226)
Net Asset (K dollars)	0.534924*** (10.51906)	0.535096*** (10.50943)	0.5338*** (10.49148)	0.5338*** (10.49148)
Turnover	0.003236*** (3.207372)	0.003316*** (3.279168)	0.003191*** (3.161538)	0.003191*** (3.161538)
Expense	-1.63711*** (-2.73249)	-1.60272*** (-2.67385)	-1.62325*** (-2.70788)	-1.62325*** (-2.70788)
Intercept	-2.51618*** (-7.4675)	-2.52517*** (-7.48561)	-2.50684*** (-7.43565)	-2.50684*** (-7.43565)
Sample Size	5066	5066	5066	5066
R²	0.043683	0.042792	0.042657	0.042657
F VALUE	0.00000	0.00000	0.00000	0.00000

Notes: *** means 1% significance level, ** means 5% significance level, * means 10% significance level.

Table 9: Correlation between Mgrship and Performance Change

Panel A: Correlation between Past Mgrship and Future Alpha Variation

	Freq	Future Change in alpha		Fraction of Future Rising alpha	
		From t to t+1	From t to t+4	From t to t+1	From t to t+4
Past Change in Mgrship1 from t-1 to t					
-1	341	0.052	-0.098	54.8%	51.9%
0	5805	0.003	0.051	55.1%	54.5%
1	405	0.044	-0.141	53.1%	50.9%
Past Change in Mgrship2 from t-1 to t					
-1	347	-0.111	-0.160	49.9%	49.3%
0	5798	0.051	0.054	55.8%	54.6%
1	406	-0.137	-0.130	47.5%	53.0%
Past Change in Mgrship3 from t-1 to t					
-1	347	-0.061	-0.163	50.7%	49.9%
0	5797	0.044	0.054	55.6%	54.6%
1	407	-0.089	-0.120	50.1%	52.1%
Past Change in Mgrship4 from t-1 to t					
-1	345	-0.069	-0.154	50.1%	50.1%
0	5804	0.045	0.051	55.6%	54.5%
1	402	-0.088	-0.090	50.0%	53.0%

Notes: Compares changes in past Mgrship and future alpha. The 1st part is categorized the change between the previous quarter (t-1)Mgrship to the current quarter (t)Mgrship as the different type, and for those managers who didn't manage any fund in previous quarter are exempted from this item. (t-1)Mgrship means to have one fund, and (t+1) Mgrship means to have two funds. Categorization of Mgrship change is 1; the (t-1) Mgrship is held two funds, and (t+1) is still held two funds, thus the change in Mgrship categorization is 0. Analyze the categorization alpha by combining the 1st and 2nd parts. Alpha will be categorized according to the changes in (t)alpha to (t+1)alpha, and changes in (t)alpha to (t+4)alpha, as well as calculated the ratio of alpha increment.

Panel B: Correlation between Changes in Past alpha and Future Mgrship

Past Change in alpha	Freq	Future Change in Mgrship1	Future Change in Fraction of BusyMgrs	Future Change in Mgrship2	Future Change in Fraction of BusyMgrs	Future Change in Mgrship3	Future Change in Fraction of BusyMgrs	Future Change in Mgrship4	Future Change in Fraction of BusyMgrs
		From t to t+1		From t to t+1		From t to t+1		From t to t+1	
Up from t-1 to t	3602	-0.0058	5.6%	-0.00360910	5.7%	-0.00388673	5.8%	-0.00333148	5.8%
Down from t-1 to t	2949	0.0027	6.7%	-0.00033909	6.6%	0.001356392	6.7%	0.001017294	6.6%
Up from t-4 to t	3257	0.0111	5.5%	0.0094392	5.6%	0.012770683	5.8%	0.013048306	5.9%
Down from t-4 to t	2630	-0.0220	5.2%	-0.01627670	5.5%	-0.02136317	5.1%	-0.02068497	5.1%

Notes: Compares changes in past alpha and future Mgrship. The 1st part is categorized past alpha to 2 categories up or down according to the change in the past quarter (t-1)alpha to (t)alpha, and (t-4)alpha to (t); and for those managers who didn't manage any fund in previous quarter are exempted from this item. Mgrship takes 1 as the busy Mgrship, and 0 as the virtual variable of Nonbusy Mgrship. Analyze the categorization alpha by combining the 1st and 2nd parts. Alpha will be categorized according to the changes in (t)Mgrship to (t+1)Mgrship, and makes the statistics of next quarter as the ratio of becoming Busy manager.