Mutual Fund 2.0: Broader Perspective and Stronger Motivation

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***Abstract*—In Web 2.0 applications, quality of service could be repeatedly improved and contents of service could be continuously enriched by taking advantage of collective intelligence and diverse perspectives of participants. Based on the successful experience in many Web 2.0 applications, this article proposes a new approach aiming to better manage mutual funds' portfolios through bonding investors in virtual communities. Using this approach, which appears like holding an online portfolio management tournament, the collective intelligence of elite individual investors and professional fund managers could be harnessed to improve fund performance. Besides, the participation of individual investors will form a rival atmosphere that results in stronger-motivated professional fund managers. After delineating the concepts, an operating procedure for conducting the new approach and a supportive Web-based environment were presented. Moreover, opinions and concerns of potential participants in this virtual investment community were collected and analyzed. Challenges for realizing the new concept also were discussed.**

***Index Terms*—Collective intelligence, collaborative management, mutual fund, web 2.0.**

I. Introduction

Mutual funds have become one of major investment vehicles in many households [1]. Most individual investors purchase mutual funds because they want to diversify their portfolios but do not have adequate professional knowledge and time to manage their assets effectively. Although mutual funds are very popular, there are some criticism about mutual funds in terms of performance and weak motivation of managers.

In most of mutual funds, due to the concern about operating cost, decisions of asset allocation and selection are made by one or very few fund managers; statistics indicated that most of mutual funds were managed by sole manager [2]. That means the performance of these funds will be substantially determined by very few persons' skills and experiences. However, evidence showed that broader perspective and more diversity are significantly positive determinants of mutual funds' performance, which was reflected by the fact that funds of funds (FOF) outperform their counterparts [3].

The economies of scale are important in mutual fund industry, thus, most of fund managers are paid according to the scale of the funds they manage [4], instead of the performance that investors are really thoughtful of. Prior studies [5, 6] show that if there is lack of incentive, managers of actively-managed mutual funds will take passive approach toward maximizing excess (risk-adjusted) returns for investors, which often resulted in mediocre or even poor performance. To make managers more active, ownership has been proved as an effective way [7, 8]. However, if there is no regulation or incentive, managers can choose not to hold the mutual funds that she/he manages.

II. Mutual Fund 2.0 and Anticipated Advantages

To resolve the above difficulties that both mutual fund management companies and investors encounter, the essentials of Web 2.0 applications look promising [9]. Among many Web 2.0 features that were identified by Tom O'Rielly [10], the one creating the most significant impact on the quality and richness of Web contents is the collective intelligence through widespread and active participation. We indeed observe this positive impact in popular Web sites including Wikipedia [11], YouTube, Amazon, and many others. Thus, we rationally believe the same story could be successful duplicated in the mutual fund management business by using elaborate methods.

Regarding incorporation of elite individual investors into fund portfolio management, people may superficially think individual investors' portfolio managing capabilities are supposed not to be better than the professional fund managers', so why should fund management companies invite them to manage a fund's portfolio? We do believe even ordinary professional managers are superior to almost every individual investor in managing an entire portfolio due to their professional training, experience, and supportive teams. But an encouraging fact is that individual investors are able to outperform the average market by utilizing their advantages of knowledge and information in familiar domains [12] as well as strategically concentrating [13] on the stocks with advantaged information. Not only being upheld by academic research, we do observe this phenomenon in a number of portfolio management or stock picking simulation contests on investment-related Web sites such as "Virtual Stock Exchange Games" [14], "Investopedia stock simulator" [15], and "CAPS Contests" [16]. Briefly speaking, the success of mutual fund 2.0 will come from the summation of individual (partial) optimum, which together will create a magnificent overall performance.

Moreover, the findings by Rita Martenson show that domain specific knowledge, information [17], and familiarity owned by individual investors play significant and positive

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roles in their involvement and risk willingness toward stock or mutual fund investment. Thus, it is incoherently to worry about the acceptance of the mutual fund 2.0 concept by elite individual investors when there is a fair and convenient environment to perform delegated tasks.

Besides harnessing the group intelligence of elite individual investors and professional fund managers, the participation of elite individual investors in portfolio management brings stronger motivation that eventually will benefit all holders of the mutual fund. The stronger motivation is twofold: the participatory individuals will try their best to maximize the fund performance due to self-interest and self-esteem. On the other hand, the professional fund managers will try more active approach to achieve better performance because of the presence of an informal but perceivable competition between participatory individual investors and them. This kind of competition, to some extent, will put spurs to managers since mutual fund management companies, peers, and other investors also may utilize the competition results to judge their capabilities. Furthermore, the suspense in the competition, which is caused by many fluctuating and unpredictable factors existing in financial markets, specific industries, and particular companies, will bring enjoyment for many participants [18]. The enjoyment definitely will sustain individual investors and professional managers in their current positions, which leads to a favorable circumstance in volatile markets [19].

III. Proposed Operating Procedure and Environment

To realize the mutual fund 2.0 concept, an operating procedure and environment need to be set up. The operating environment aims to facilitate all portfolio management tasks that need to be performed by elite individual investors and internal fund managers. A Web-based environment is appropriate because many fund management companies, brokers, insurance companies, and banks have been providing fund investors Web-based environments for buying, selling, analyzing, and transferring their mutual funds online. Accordingly, most of investors are familiar with the Web-based interface. Moreover, the World Wide Web is a widely recognized ideal platform for efficient data access and information sharing, which are critical to effective and collaborative portfolio management.

The proposed operating procedure consists of the following six stages:

(1) Portfolio allocation planning: fund management companies and managers should discuss and then decide which section(s) of the entire fund portfolio could be opened to individual investors and how much funding in each section could be allocated to the participatory individual investor.

(2) Screening and call for participation: fund management companies send invitation to pre-screened individual investors holding the fund. In general, fund management companies hope to invite those who with adequate qualification, such as high holding in the fund for stronger motivation, professionalism in particular sections for more advantage than other investors, longer investment history for better risk management skill, etc. After passing the pre-screening and accepting the invitation, an individual investor becomes a candidate of the external but interested portfolio management team (EXIPORMT).

(3) Evaluation by simulation: fund management companies need only the best candidate in each open section to join the EXIPORMT. Thus, it is necessary to hold competitions to rank candidates in each section according to their capabilities of portfolio management. Only the top-ranked candidate in each section is qualified for joining the EXIPORMT and is responsible for managing portfolio in the delegated section.

(4) Agreement signing: before participating in any investment decisions, members in the EXIPORMT must sign necessary documents that ask them to comply with corresponding policies, regulations, and procedures. The purpose is to make sure their behavior regarding the fund's portfolio management will be legal and not against the interest of fund management companies and other fund holders.

(5) Participation in investment decision and execution: in this stage, individual invertors in the EXIPORMT have opportunities to demonstrate their capabilities and potential through showing people an impressive performance. The performance data of each open section that was delegated to a particular elite individual investor will be posted online individually, along with the performance of professional fund managers. So, people can easily find and compare those performance data; and further, the comparison will create a competitive and inspiring atmosphere.

(6) Periodical evaluation and substitution: after a period of time, say, 12 months, the performance of all participatory individual invertors must be re-evaluated to justify their positions within the EXIPORMT. If anybody in the EXIPORMT can not pass the re-evaluation, the above stages (1) through (5) must be performed to pick the substitutes. Because of the rigorous qualification and ongoing re-evaluation process, once individual investors obtain an important character on the stage of portfolio management, they tend to cherish this opportunity by accomplishing all delegated tasks and showing the best result. The operational environment that realizes the Mutual Fund 2.0 concept is illustrated in Fig. 1.

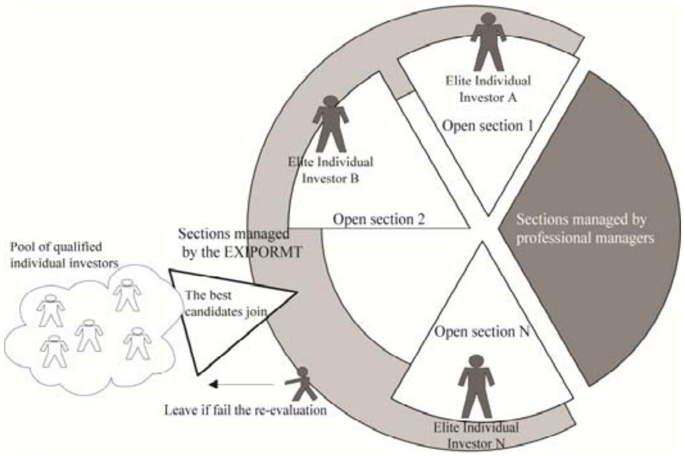

Fig. 1. The operational environment of the mutual fund 2.0 concept.

IV. Preliminary Responses from Potential Participants

A survey was conducted to obtain insight into potential participants' opinions and concerns about the proposed idea. Before asking questions, an introduction explaining the mutual fund 2.0 concept, operational environment, and procedures was presented to the subjects. The participants of the survey were recruited from online forums of individual investors. 186 subjects participating in the survey completed the questionnaire effectively. Their demographical data are summarized in Table I.

TABLE I: Demographic Data of Respondents (N=186) in The Survey

Characteristic	n(%)
Gender	
Male	115 (61.83%)
Female	71 (38.17%)
Age (years)	
20 and under	14 (7.53 %)
21 ~ 30	23 (12.36 %)
31 ~ 40	46 (24.73 %)
41 ~ 50	68 (36.56 %)
Over 50	35 (18.82 %)
Education (level)	
Elementary school and under	18 (9.68%)
Junior high	33(17.74%)
Senior high	45 (24.19%)
College/University	68 (36.56%)
Graduate school and above	22 (11.83%)
Online investment experience	
Never	18 (9.68%)
Less than 1 year	27 (14.52%)
1 ~ 3 years	43 (23.12%)
3 ~ 5 years	57 (30.65%)
Over 5 years	41 (22.04%

Subjects were asked to rate how they perceived the prototype that will realize the proposed idea, through 5 relevant items in five-point Likert-scale and how they thought the prototype could be improved through an open-ended question. The answers of the sixth, an open-ended question, were collected and grouped into the following four major categories: (1) enhancing mutual trust, (2) resolving conflict of interest, (3) disclosing more details of investment decisions, and (4) fair scheme of profit sharing. The contents and the responses of the questionnaire are summarized in Table 2.

Based on the survey result, we found that potential participants' concerns are generally in line with ours. Particularly, response of Q1 indicated that they worry a lot about whether the recruited amateur investors will manage portfolios respectably. Besides, response of Q2 showed their strong confidence that the proposed approach will bring better performance due to the effect of broader perspectives and group intelligence, which rationally make most of them be willing to invest this kind of mutual funds. The answers of the open-ended question showed that potential participants expect more concrete methods such as disclosing more details of decision making, which can further improve the mutual trust between different parties (elite investors, share owners, and professional fund managers). Moreover, they thought a fair profit-sharing (incentive) scheme is necessary to better motivate amateur elite investors.

TABLE II: The Questionnaire and Results

Descriptions of items (Q1 ~Q6 are in 5-point Likert-scale; 1 indicates strongly disagree and 5 indicates strongly agree)	Avg.	Std. dev.
Q.1 I think my portfolio could be well managed in the proposed scheme as it is managed in ordinary mutual funds.3.12 1.03	3.12	1.03
Q.2 I think my portfolio would perform better in the proposed scheme since there are more information and experience available for making decisions. 3.81 0.78	3.81	0.78
Q3. I think the management of the MF 2.0 styled funds would encounter difficulties associated with the coordination between professional managers and amateur investment elites. 3.14 0.79	3.14	0.79
Q4. I think the cost for managing the MF 2.0 styled funds should be lower than it for managing ordinary funds since partial work of managing funds could be delegated to amateur investors.	2.95	0.67
Q5. I am willing to invest the fund that run in the MF 2.0 style.	3.25	0.64
Q6. In your opinion, what is (are) the most wanted task(s) for improving the MF 2.0 scheme?	A. enhance mutual trust (56% of the subjects) B. disclose more details of investment decisions (42%) C. resolve the conflicts of interest (27%) D. fair profit sharing scheme (19%)	

V. Challenges and FUTURE Works

The mutual fund 2.0 concept expectantly can bring benefits for the fund holders as well as new opportunities for fund management companies that are willing to renovate current business models. However, many future works are necessary to remove the obstacles in front of us. There are two major issues need to be resolved besides those were confirmed or found through the aforementioned survey. First of all, the revision of corresponding laws and regulations is inevitable in order to allow the mutual fund industry adopt the new approach. Because of the joining of these external but interested individual investors, the revised laws and regulations need to govern the new inter-relationships between them and the other three existing interested groups: the fund holders, fund management companies, and professional fund managers. Besides, the revised laws and regulations also must adapt to the inter-relationships among the three existing interested groups, which already are complicated [7, 20, 21], and may become worse in consequence of the addition of the EXIPORMT.

Secondly, revamped and glamorous business models must be devised for mutual fund management companies which want to join the trend of mutual fund 2.0. The new business models must take both technical and managerial issues into account. The major technical issues include the security and data access control mechanisms, which are devised to maintain good balance between security and transparency. The managerial issues include how to coordinate and reconcile professional fund managers, management companies, and participatory individual investors to avoid conflict of interest; how to control the information disclosure; how to adjust the asset allocation, etc.

VI. Conclusion Remarks

This article presents the concept of mutual fund 2.0, its essence is importing the collective intelligence of elite individual investors into fund portfolio management. Even each of participatory investors specialize in only one or very few specific domains, the fusion of these individual specialties will create a favorable environment for achieving better performance, which is a common and observed scenario in many Web 2.0 applications such as wikipedia.org. In addition to the broader perspective and more opportunities, the participation of elite individual investors also will lead to stronger motivation, which eventually will benefit all investors of the mutual funds embracing this new idea.

Although there are a number of challenges, the realization of the mutual fund 2.0 concept can create opportunities for mutual fund management companies that try to distinguish themselves from other competitors by adopting innovative business models. In addition, the concept of participation and openness in mutual fund 2.0 will be attractive to many individual investors, especially those who have advantaged information in specific industries/companies and desire self-fulfillment by means of playing a noticeable and respected character in an open and competitive environment.

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