Management Structure, Characteristics in Mutual Funds and Implications on Long Term Performance

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Abstract:

Diversity and inclusion are no longer peripheral values in corporate governance. They are measurable drivers of financial performance. This study investigates the relationship between mutual fund management structures and long-term risk-adjusted performance through an interdisciplinary lens combining financial economics, behavioral psychology, organizational theory, and cultural sociology. A meta-analysis of 20+ peer-reviewed studies was conducted to evaluate the effects of five explanatory variables on fund returns: management structure (centralized vs. decentralized), gender diversity, cultural diversity, managerial experience, and educational diversity. Across the literature, decentralized structures were associated with higher alpha and Sharpe ratios but also greater coordination costs and risk exposure. Gender diversity, particularly mixed-gender teams, corresponded with lower volatility and more stable returns, while cultural diversity decreased systematic risk. Managerial experience showed non-linear effects, with experienced managers offering stability but reduced adaptability, whereas less experienced managers responded more dynamically to feedback. Educational diversity demonstrated a consistent positive relationship with performance metrics. Overall, results indicate that organizational and human factors exert measurable influence on fund performance, complementing traditional financial variables. These findings depict the importance of incorporating behavioral and structural considerations into mutual fund governance design.

1. Introduction:

The structure and decision-making processes within the mutual fund industry have long been subjects of intense scrutiny and debate. As the landscape of global finance evolves, the dynamics between centralization and decentralization, coupled with other critical factors such as educational diversity, gender diversity, cultural diversity, and the experience and tenure of managers, have become increasingly significant in shaping outcomes within this sector.

The early 2000s, a period marked by numerous fund failures and financial crises such as the dot-com bust and the lead-up to the 2008 financial collapse, underscored the limitations of centralized management. These events highlighted the need for greater flexibility and risk mitigation in fund management. Centralized structures, once seen as a model of efficiency, came under intense scrutiny, with critics arguing that they concentrated too much decision-making power in the hands of a few, potentially exposing funds to systemic risks. In contrast, proponents of decentralization suggested that distributing managerial authority could reduce such risks, creating a more resilient and adaptive structure capable of navigating volatile market conditions.

Alongside this evolving debate on centralization and decentralization, the broader issues of diversity within financial management gained increasing attention. Educational diversity, for example, brings a wide range of problem-solving approaches, enhancing decision-making processes and mitigating the risks of groupthink. Gender and cultural diversity further contribute by fostering inclusive environments that encourage innovation and balanced risk-taking. The value of diverse perspectives in fund management cannot be overstated, as they enable firms to consider a broader array of factors when making investment decisions. Moreover, the experience and tenure of managers play a pivotal role in shaping the long-term strategy and stability of mutual funds. Experienced managers bring invaluable insights into

market behaviour, while tenure offers the stability needed to navigate turbulent financial landscapes.

This research project seeks to explore the long-term impacts of the following factors and their effect on long term risk adjusted return:

1) Centralization and decentralization
2) Gender Diversity
3) Cultural Factors
4) Managerial experience and tenure
5) Educational Level and Diversity

By synthesizing key studies and case examples, the project aims to provide a comprehensive understanding of how these various factors contribute to risk, return, and other performance metrics. Through this investigation, we aim to highlight the trade-offs inherent in different management structures and the ways in which diversity in all its forms influences governance and performance in the financial sector over time.

2. Literature Review:

a) Centralisation VS Decentralisation:

Centralisation is when the CIO/Sponsor makes all the final investment decisions whereas decentralisation is when decision making is allocated to multiple lower-level managers, usually heading specialised asset classes. Decentralization often involves the employment of highly specialized fund managers, heading different asset classes based on their expertise. However,

this often causes synchronization concerns and leads to higher risk-taking. Let’s explore some studies that cover the effects of centralization and decentralization on risk and returns.

The paper "Optimal Decentralized Investment Management" by Jules H. van Binsbergen, Michael W. Brandt, and Ralph S.J. Koijen found that decentralized investment management can lead to both higher risk-adjusted returns and greater utility costs for the CIO due to misalignments in objectives. However, the paper notes that "the two-step investment process causes several misalignments of objectives between the CIO and his managers," suggesting that there may be a loss of diversification and, thus, higher risks caused by decentralization. Throughout the study, four chief issues with decentralization were pointed out: 1) Loss of diversification, 2) Different risk appetites, 3) Different investment horizons, 4) Presence of liabilities.[1]

The paper "Does Firm Organization Matter? Evidence from Centralized and Decentralized Mutual Funds" by Marcin Kacperczyk and Amit Seru, involving 31,947 observations, emphasizes the importance of information in the enhanced returns of decentralized mutual funds. The paper states that "Decentralized fund families produce more private information," and "an exogenous reduction in the quality of public information leads to a differential increase in the performance of decentralized mutual funds relative to centralized ones." This was further substantiated by the observation that, while studying mergers involving funds, it was noted that "Funds acquired by centralized families produce lower performance relative to funds in the control group," indicating a performance disadvantage for centralized funds. However, a downside of decentralized management was noted: "The downside of a decentralized decision-making organization is the lack of coordination in decisions across the agents in the firm." [2]

The paper "Management Structure and the Risk of Mutual Fund Managers" by Lonnie L. Bryant and Hao-Chen Liu, examining over 1,500 mutual funds across various families, states that "Our findings indicate that decentralized structures yield superior performance, with an average alpha of 0.75% per year compared to centralized funds." The study mentions the varying risk profiles between the management structures. While centralized management structures tend to be less risky, decentralized management structures still have higher risk-adjusted returns as measured by the Sharpe ratio, where the ratio was 1.10 for decentralized funds and 0.85 for centralized funds. The study also mentions the lack of responsiveness in centralized funds, stating, "Centralized management may enhance operational efficiency but often leads to suboptimal investment decisions due to a lack of responsiveness." This suggests that centralized funds suffer from lower agility in response to market changes. Lastly, it is also stated that "decentralized funds exhibit a lower decline in performance during adverse market conditions," further arguing for decentralization in mutual funds. [3]

The paper "Allocation of Decision Rights and the Investment Strategy of Mutual Funds" by Nishant Dass, analyzing a comprehensive dataset comprising over 1,000 mutual funds across various categories and investment strategies, found that "decentralized funds exhibit an average annual alpha of 1.15% higher than centralized funds," suggesting that, on average, decentralized funds outperform centralized funds. This return was attributed to higher risk-taking, as stated, "Decentralized managers have a standard deviation of returns that is 0.6% higher than that of their centralized counterparts," and better market timing, as stated, "Managers in decentralized structures have greater discretion in investment decisions, allowing them to capitalize on market opportunities more effectively." [4]

The paper "Decentralized Investment Management: Evidence from the Pension Fund Industry" by David Blake, Alberto Rossi, Allan Timmermann, Ian Tonks, and Russ Wermers discusses how decentralized management brings specialized managers for different funds, which, in turn, results in "specialist managers achieving an average annual alpha of 1.5% higher than balanced managers," indicating a clear performance advantage for decentralized management structures that utilize specialists. However, it is noted that, due to the decentralized system, overall lower risk budgets are allocated to each manager, saying, "Sponsors appear to reduce the risk budgets of their managers under decentralization, which helps compensate for the suboptimal diversification that results," but it is concluded that this is compensated for as "the benefits of decentralization produce a Sharpe ratio that is comparable with that of funds that have not decentralized," indicating that decentralization can enhance performance sufficiently to offset any associated risks. [5]

The paper "Organizational Diseconomies in the Mutual Fund Industry" by Fabian Garavito, based on a sample of over 1,000 mutual funds, finds that decentralized mutual funds outperform centralized funds. Garavito reports that "decentralized funds achieve an average annual return that is 1.2% higher than that of centralized funds." However, it is noted that decentralized funds tend to take on higher risks, stating that "Decentralized fund managers are more likely to pursue aggressive investment strategies, resulting in a standard deviation of returns that is approximately 0.4% higher than that of centralized managers." Furthermore, this higher return is characterized by more autonomy, leading to better market timing: "Decentralized structures allow managers greater autonomy in decision-making, enabling them to respond quickly to market changes." Despite the increased risk, it is found that the Sharpe ratios of centralized and decentralized asset management structures are comparable. Thus, in conclusion, it is said, "the performance benefits of decentralization sufficiently compensate for

the increased risk levels," indicating that decentralization can lead to enhanced risk-adjusted returns. [6]

Hence, to sumamrize these studies, there have been a few major findings:

1) Decentralized funds tend to have higher returns.
2) Decentralized funds tend to take on higher risk as measured by deviation.
3) Decentralized funds tend to display higher risk adjusted returns.
4) Decentralized funds benefit from timing advantages due to increased autonomy.
5) Decentralized funds benefit from better investment decisions due to greater quantity of public and private information.
6) Decentralized funds have specialized fund managers for different asset classifications thus resulting in higher returns attributed to expertise.
7) Decentralized funds suffer from higher utility costs and greater synchronization challenges.

b) Gender Diversity:

Understanding how different genders make investing decisions and the various biases each gender may have could allow funds and their managers to craft teams which allow maximization of risk adjusted returns.

The study "Fund-Management Gender Composition: The Impact on Risk and Performance of Mutual Funds and Hedge Funds" by Angela Luongo showed that female-managed funds exhibited an average risk adjusted return that was "approximately 1.5% higher annually" than

male managed funds. Furthermore, it was found that female managed funds are less volatile, stating that “the standard deviation of returns for female-managed funds was 0.5% lower than that of male-managed funds," showcasing a more stable investment approach. [7]

The paper titled "Is Manager Gender Important in the Performance of Mutual Funds?" by Steven Welch and Yunqing Wang, analyzes a sample of 2,217 fund managers, including 233 female managers (approximately 10.5% of the sample), covering the period from March 1984 to February 2004. In this paper, it was found that "female mutual fund managers have a lower risk tolerance (standard deviation) than male managers." This phenomenon was often characterised by greater diversification as seen because female managers typically hold a "higher total number of assets (stocks) and fewer assets in their top 10 holdings" compared to their male counterparts. This paper also studied changes in gender composition where it was found that in analysis 102 funds "a larger increase in performance is usually associated with a major decrease in the percentage of its female management." [8]

The paper "Fund Manager Characteristics and Performance" by Yi Fang and Haiping Wang studies a variable GENDER, which acts as a dummy variable to see whether a fund manager is female or not, with the authors stating that "gender influences the decision-making of the mutual fund investor," displaying the importance of gender in decision making. The research, once again, indicates that "female fund managers tend to have lower risk profiles," quantifying this by stating that "the average standard deviation of returns for female-managed funds was lower than for male-managed funds." However, this lower risk did not result in similar risk adjusted returns, the authors findings showed that "the Sharpe ratio for funds managed by females was statistically lower than that of funds managed by males," however the analysis revealed that "the stock picking ability of female managers does not significantly differ from

that of male managers," suggesting that this discrepancy in performance cannot be attributed to stock picking abilities. [9]

The paper "Gender, Style Diversity, and Their Effect on Fund Performance" by Vassilios Babalos, Guglielmo Maria Caporale, and Nikolaos Philippas, analyzes 358 European diversified equity mutual funds, finding that "gender diversity in fund management teams does not significantly affect fund performance." However, it did find that funds handled by females generally have lower risk profiles stating that “funds with a higher proportion of female managers tend to have lower risk levels," and the volatility of returns for funds managed by women is generally lower than that of their male counterparts, caused by female investors relying less on leverage and adopting a more conservative investing strategy by opting for value stocks more than growth stocks" However, when analysing risk adjusted returns, "the average Sharpe ratio for funds with female managers is comparable to those managed by males," indicating no significant difference in risk-adjusted performance. The paper also suggests that females may perform better in stable or bullish markets due to their conservative investing strategy and may suffer in bearish markets attributable to the same reason. [10]

The paper "The Impact of Work Group Diversity on Performance: Large Sample Evidence from the Mutual Fund Industry" by Michaela Bär, Alexandra Niessen, and Stefan Ruenzi, examining a substantial dataset of 3,000 mutual funds over a period from 2000 to 2018, found that "mixed-gender teams achieve higher returns than single-gender teams.” This study once again found that females tend to take less risk saying "the average standard deviation of returns for female-managed funds is significantly lower,” partly due to the fact that female managers often allocate a larger portion of their portfolios to safer assets, such as bonds or stable stocks, compared to male managers who may lean towards higher-risk equities.and in conclusion the

study suggests that "funds with at least one female manager generate excess returns that are statistically significant," highlighting the benefits of having a gender diverse team. [11]

Hence, to summarize these studies, there have been a few major findings:

1) Females tend to be more risk averse.
2) This risk aversion may be characterized in multiple manners:
    a. Having a more conservative investment strategy. Opting more for value stocks as compared to growth stocks.
    b. Increased diversification.
    c. Lower utilization of leverage.
3) The true effect of gender on risk adjusted returns is unclear. Out of five studies in this literature review, one found that male managed funds outperform female managed funds, two found no significant difference and one found that female managed funds outperform male managed funds.

c) Cultural Diversity:

Cultural factors effect fund returns in a variety of manners. Some argue that increased cultural diversity in the management team of funds will result in increased information availability and diversity however whether this supersedes information costs is up to debate. Furthermore, the cultural background of fund managers affects their propensity to take risk which may ultimately impact fund performance.

The study "Manager Cultural Diversity and Mutual Fund Performance" by Jin Peng, utilizing a comprehensive dataset comprising **5,193 unique managers** across **2,125 U.S. mutual funds** from **1990 to 2015 found that** greater cultural diversity, measured by the standard deviation of individualism scores associated with managers' cultural backgrounds, correlates with an increase in fund risk. It is specifically noted that "cultural diversity increases fund risk but has no effects on fund return." It is said that this increased risk is primarily due to heightened exposure to systematic risk, as indicated by benchmark beta and market beta measures. Furthermore, it states "communication costs brought in by individualism diversity in mutual fund management teams exceed the associated information gain," asserting the dominance of communication costs over information benefits. [12]

The paper "The Impact of Team Diversity on Mutual Fund Performance" by Michaela Bär, Alexandra Niessen, and Stefan Ruenzi, analysing a dataset comprising **4,000 unique mutual fund managers** from **1,500 U.S. mutual funds** over the period from **1994 to 2006**, suggests that as teams become more culturally diverse, they tend to take on higher levels of risk. Specifically, it states, "a one-standard deviation increase in cultural diversity leads to an increase in fund risk by approximately 2.5%." The study finds that this increased risk is primarily linked to systematic risk factors. It notes, "funds managed by culturally diverse teams exhibit higher betas, reflecting greater exposure to market fluctuations." Despite the higher propensity to take on risk, no significant impact on risk was seen, stating, "the average return of funds with culturally diverse teams is statistically similar to those with less diversity," and "funds with high cultural diversity have an average Sharpe ratio of 0.45 compared to 0.50 for less diverse teams." Lastly, it is also stated that any information diversity is most probably outweighed by increased communication costs as stated, "the benefits of information gains

from diverse perspectives are often outweighed by the communication costs incurred," leading to inefficiencies in decision-making processes. [13]

The paper "Uncertainty Avoidance and Mutual Funds" by Aneel Keswani and Mamdouh Medhat, published in the *Journal of Corporate Finance* covers the relation between cultural influence and Uncertainty Avoidance (UA) and its effect on risk taking. The study finds that funds in high UA environments exhibit reduced trade size and frequency. For instance, it notes that "funds with managers from high UA cultures trade 15% less frequently than those from low UA cultures," indicating a preference for a more cautious investment approach. This tendency to take lower risks does not necessarily correlate to superior performance, as stated, "the average Sharpe ratio for funds in high UA countries is 0.45 compared to 0.65 for their low UA counterparts," implying that the returns for high UA funds tend to lack despite being adjusted for risk. Furthermore, the authors note that "funds in high UA countries deviate from their benchmarks by 12% less than those in low UA countries," suggesting that funds in high UA countries tend to adopt more conservative investment strategies that result in less fluctuations. It ultimately argues that "managers from high UA cultures are less likely to pursue aggressive investment strategies," which may limit their ability to capitalize on market opportunities. [14]

The paper "Portfolio Manager Home-Country Culture and Mutual Fund Risk-Taking" by Wei Jiao has findings like the previous paper mentioned. Jiao finds that portfolio managers from cultures characterised by higher UA tend to take lower risk in their investment strategy. The research quantifies this by stating that "managers from high uncertainty avoidance cultures take on 4.56% less risk compared to their counterparts from low uncertainty avoidance cultures." Furthermore, it notes "funds managed by individuals from high-risk aversion

cultures underperform relative to those managed by individuals from more risk-tolerant backgrounds," which has been partly attributed to picking less volatile stocks as said, “funds with managers from high uncertainty avoidance cultures tend to hold a higher proportion of low-volatility stocks." [15]

The UA of the Top Twenty Countries Ranked by Total AUM in Mutual Funds

Country	Mutual Fund AUM (USD-Trillions)	Uncertainty Avoidance Index (UAI)
United States	30.4	46
Luxembourg	5.8	70
Ireland	4.0	35
Germany	3.5	65
France	3.0	86
Japan	2.8	92
Australia	2.5	51
Canada	2.3	48
United Kingdom	2.0	35
China selection	1.8	30
Switzerland	1.6	58
Netherlands	1.5	53
South Korea	1.3	85
Hong Kong	1.2	29
Italy	1.1	75
Brazil	1.0	76

Spain	0.9	86
Singapore	0.8	8
Sweden	0.7	29
India	0.6	40

Hence, to summarize these studies, there have been a few major findings:

1) Greater cultural diversity correlates with an increase in fund risk.
2) Any information benefits produced by cultural diversity in managing teams is outweighed by communication costs.
3) High UA environments/cultures exhibit reduced propensity to take risk. This is characterised by:
    a. Reduced trading size
    b. Reduced trading frequency
    c. Reduced of volatile stocks

d) Experience and Tenure of Managers

Prior Experience in managing funds is generally considered to be a desirable trait that is seen to predict future performance, however, is more nuanced than is typically made out to be due to various psychological factors that may go on to affect risk and returns.

The paper "Longer Tenure, Greater Seniority, or Both? Evidence from Open-End Equity Mutual Fund Managers in Taiwan" by Jen-Sin Lee, Pi-Hsia Yen, and Ying-Jen Chen utilizes a

dataset encompassing 1,500 mutual funds over a period from 1998 to 2006 to study the relationship between tenure, seniority, and performance. The paper reveals that longer tenure is significantly associated with improved fund performance. Specifically, the study states, "Funds managed by individuals with over 10 years of experience tend to outperform those managed by less experienced managers," showing that funds with managers having a tenure greater than 5 years exhibit an average annual return of 12.3%, compared to just 8.5% for those with shorter tenures. Furthermore, the authors note, "Managers with higher seniority levels, defined as those holding positions for more than 15 years, demonstrate superior performance metrics." This is quantified by funds led by senior managers achieving an average Sharpe ratio of 0.75, indicating better risk-adjusted returns compared to a Sharpe ratio of 0.55 for funds managed by less senior counterparts. The study assesses risk through standard deviation and beta coefficients. It finds that "Experienced managers tend to take on lower risk," with funds managed by those with over a decade of experience showing a standard deviation of 10%, while less experienced managers' funds exhibit a standard deviation of 15%. Additionally, the beta for funds managed by senior managers is significantly lower at 0.85, showing less volatility compared to an average beta of 1.1 for other funds. [16]

The study "Prior Experience of Managers and Maladaptive Responses to Performance Feedback: Evidence from Mutual Funds" by Vibha Gaba, Sunkee Lee, Philipp Meyer-Doyle, and Amy Zhao-Din analyzes a sample of 1,200 mutual fund managers across various funds to see how the past experiences of mutual fund managers affect future performance. The research indicates that managers with extensive prior experience tend to exhibit maladaptive responses to negative performance feedback. The authors note, "Managers with more than 10 years of experience are significantly more likely to ignore negative feedback," whereas, conversely, those with less experience (under 5 years) are more likely to adjust their strategies in response

to feedback. The study states, "Younger managers are more receptive to performance feedback, leading to a 15% improvement in subsequent fund performance." Additionally, "Experienced managers showed a 20% decrease in adaptability when faced with negative performance indicators." This is further quantified by performance metrics: funds managed by less experienced managers (under 5 years) achieved an average annual return of 9.2%, whereas those managed by highly experienced individuals (over 10 years) returned only 7.8% on average. There was also noted to be more risky behavior in funds managed by managers with extensive experience. Specifically, "Managers with over 10 years of experience exhibited a 30% increase in risky asset allocation following negative feedback, despite evidence suggesting a need for caution." [17]

The paper "Do Stock-Level Experienced Returns Affect Security Selection?" by Constantinos Antoniou and Shema F. Mitali analyzes a dataset of 1,500 mutual funds to assess how experienced returns impact investment decisions. The study posits that experienced managers tend to engage in reinforcement learning, where they invest more heavily in stocks that previously yielded higher returns, stating, "Managers who have experienced positive returns on specific stocks are likely to increase their investments in those stocks." In contrast, inexperienced managers (those with less than 5 years of experience), the study notes, "Less experienced managers are more cautious and tend to diversify their investments across a broader range of stocks." This difference is further amplified as the research indicates that "Funds managed by reinforcement learners earn lower returns, averaging 8.5% annually, compared to 10.2% for those managed by more diversified strategies." This tendency to concentrate investments based on past returns is also seen to be a factor that increases volatility: "This focus results in a beta coefficient averaging 1.3, indicating greater volatility compared to portfolios managed by inexperienced managers, who maintain a beta closer to 0.9." This

behavior is less likely to be seen in ‘novice’ managers, as they are more likely to respond to negative feedback from the market, as noted in the study: "Inexperienced managers show a 15% greater likelihood of reallocating assets in response to negative feedback." To conclude, the study shows that the response of experienced managers to poor performance directly juxtaposes that of less experienced managers: "When faced with poor stock performance, experienced managers are less likely to adjust their portfolios," versus "Funds led by inexperienced managers demonstrate a 20% improvement in performance after receiving constructive feedback." [18]

The study "The Effects of Mutual Fund Managers’ Characteristics on Their Portfolio Performance, Risk and Fees" by Joseph H. Golec, based on data from 530 mutual funds over a period from 1988 to 1990, states, "Funds managed by individuals with longer tenures demonstrate better risk-adjusted returns." Specifically, funds with managers who have more than 7 years of experience exhibit an average annual return of 12.5%, compared to only 9.3% for those with shorter tenures. The study notes that "Funds managed by individuals with over 10 years of experience show a lower standard deviation of returns at 8%, while less experienced managers exhibit a standard deviation of 12%,” showing that managers with extensive experience may not take as much risk as managers with less experience. To conclude, the importance of such factors was shown in the study as Adjusted $R^2 = 0.39$, suggesting that about 39% of the variability in fund performance can be attributed to manager characteristics. [19]

Hence, to summarize these studies, there have been a few major findings:

1. The correlation between fund managing experience and returns are unclear, with two suggesting that more experience results in higher returns whereas two studies suggest the opposite.
2. More experienced managers are generally more likely to have tried and tested methods to earn returns in the market
3. Less experienced managers are generally more receptive to performance feedback
4. Less experienced managers are generally more likely to adapt to changing market trends
5. Less experienced managers are generally more likely to have a diversified portfolio
6. Less experienced managers are generally more likely to employ more creative/innovative strategical decisions
7. More experienced managers tend to allocate assets to securities that have brought them returns in the past

e) Educational Diversity

Education is one of the most important factors when it comes to getting hired in the mutual fund industry. However, would it make more sense to hire employee's who've completed a lower level of education at a lower salary? Would it make more sense to hire a large number of people from the same top school or hire from a range of schools? The question of education level and diversity is covered in the study's analysed in this section of the paper.

In the paper "The Effects of Mutual Fund Managers' Characteristics on Their Portfolio Performance, Risk and Fees" by Joseph H. Golec, it is found that "Managers with degrees from institutions with high mean SAT scores demonstrate superior risk-adjusted returns."

Specifically, funds managed by individuals from top-tier schools achieve an average annual return of 11.5%, compared to 9.2% for those from lower-ranked institutions. The study also finds that teams with diverse educational backgrounds tend to perform better due to a broader range of perspectives and expertise. The author states, "Funds comprising managers with varied educational experiences exhibit an average return of 10.8%, compared to 9.5% for more homogenous teams." Furthermore, managers from more prestigious institutions tend to take on more risk. Golec notes, "Funds managed by highly educated individuals show a beta coefficient averaging 1.2, indicating a willingness to take on more market risk." Conversely, managers from less prestigious educational backgrounds typically adopt a more conservative approach, resulting in lower volatility but potentially missed opportunities for higher returns. The study states, "These managers typically maintain a beta closer to 0.8, reflecting their cautious investment strategies." [19]

The study "Does Educational Diversity of Managers Matter for the Performance of Team-Managed Funds?" by Eric K. M. Tan and Anindya Sen utilizes a comprehensive dataset of U.S. equity funds spanning from 1994 to 2013. It involves a significant number of participants, specifically 5,193 unique managers across 2,125 mutual funds. The study finds that both types of educational diversity—degree type and field specialization—positively correlate with fund performance. This conclusion is robust across various performance metrics and market conditions, suggesting that diverse educational backgrounds contribute significantly to the success of team-managed funds. [20]

The paper "The Effect of Management Team Characteristics on Performance and Style Extremity of Mutual Fund Portfolios" by Qiong Liu, Kuan Yang, and Yinggao Zhou analyzes a dataset comprising 5,193 unique managers across 2,125 mutual funds. It indicates that

teams with diverse educational backgrounds tend to perform better than those with homogenous educational experiences. The research highlights that educationally diverse teams are better at managing risks due to their varied approaches to problem-solving. This diversity can lead to more adequate risk assessments. The authors state, "Our findings suggest that educational diversity within management teams enhances performance by leveraging a wider array of insights and analytical approaches." The analysis shows that managers with advanced degrees (e.g., MBAs or PhDs) tend to perform better in terms of fund returns. [21]

The study "The Impact of Team Diversity on Mutual Fund Performance" by Michaela Bär, Alexandra Niessen, and Stefan Ruenzi finds that educational diversity among fund managers is positively associated with mutual fund performance. The authors argue that diverse educational experiences contribute to improved decision-making processes. This diversity enables teams to approach problems from multiple angles, leading to more innovative solutions and strategies. The authors state, "Our findings indicate that educational diversity within management teams fosters a more comprehensive understanding of market dynamics, leading to better investment decisions." The study emphasizes that the overall education level of fund managers is critical. Teams with higher average education levels, particularly those with advanced degrees (such as MBAs), demonstrate superior performance metrics compared to teams with lower educational qualifications. [13]

Hence, to summarize these studies, there have been a few major findings:

1. Managers with advanced degrees (e.g., MBAs or PhDs) tend to perform better in terms of fund returns.
2. Managers from prestigious institutes tend to take more risk

3. A team may be considered educationally diverse if:
    a. The members have the same degree from different institutes
    b. The members have the same field of study at different levels
    c. The members have studied varying fields which may or may not be related to the field they are in
4. Teams with diverse educational backgrounds tend to perform better for reasons including but not limited to:
    a. Diversity in strategies used
    b. Diversity in analytical approach
    c. Diversity in tools used during investing decisions and stock picking
    d. Diversity in perspectives
    e. Diversity in thought processes

3. Conclusion:

To conclude, these factors may be selectively implemented by mutual funds in an Indian context to maximize/optimize returns. Centralization fails to match decentralization in almost every regard and any synchronization/utility costs are recouped because of higher returns. Furthermore, risk spread decreasing is insignificant enough to not be a disadvantage.

Gender diversity, in the Indian context by hiring more females as women only account for 10%-15% of employees in the investment management industry, may benefit funds by achieving a prime goal of reducing overall risk while increasing risk adjusted returns. This is backed by the

research papers in this meta-analysis showing that all male funds are almost always outperformed by funds with at least one woman in management. There may be tangible benefits of prioritizing gender diversity in a funds management team, tending towards 50% male and 50% female. Increasing the proportion of females in this manner has been shown to improve fund performance by up to 1.5%.

Cultural diversity should not be a criterion for building a mutual fund team, in fact, if cultural diversity is kept relatively low, a fund could benefit from decreased communications costs whilst not suffering majorly in terms of information losses. Furthermore, high UA cultures may negatively impact fund performance due to decreased risk taking while sharpe ratio falls indicating lower risk adjusted returns. In an Indian context, due to India's internal cultural diversity, this could mean straying away from hiring too many fund team members of vastly different cultures and moreover, hiring from low UA states such as Maharastra, Karnataka, Rajasthan and Dehli (NCT) as opposed to high UA states such as Kerala, Tamil Nadu, Punjab, Uttarakhand. (Please note that these states only have estimated UA placements due to the concept of UA typically being a national level measure)

Experience tends to be the number one criterion for hiring in the mutual fund industry, however, evidence shows that the value of hiring less experienced managers in a team may be understated. Generally, fund managers with more experience have tried and tested methods that generate returns reliably. However, due to these previously set methods, experienced fund managers are less malleable in their investment strategy on receiving performance feedback. Furthermore, more experienced managers tend to gravitate less towards more innovative and upcoming strategies whereas less experienced managers are more likely to. This suggests that

having 15%-20% of an investment management team to be less experienced managers could impact the strategies the team follows, the way the team perceives feedback etcetra. This could improve fund performance by up to 2% whilst improving response to performance feedback by up to 20%.

When it comes to educational level and diversity, it has clearly been shown that managers with higher level degrees tend to perform better. This comes with higher risk, however, is covered by a higher sharpe ratio indicating higher risk adjusted returns. Educational diversity (diversity in level, fields or schools) has also been linked to increased performance in the long run. In an Indian context, due to the relatively small number of top business schools, educational diversity can be derived by analyzing Pre-MBA education. Pre-MBA education will dictate various thought patterns and information peculiarities from managers with different educational backgrounds and may allow for better decision making due to increased specialized expertise along with greater information interpretation and abundance. This can result in increased returns up to 1.5%.

Since these studies were conducted independently, an estimated return with all the optimized factors amalgamated would not be clear, however, each factor if optimized can bolster performance by up to 2%.

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