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Mutual Fund Performance: A Review of the Literature

Giovanni Walter Puopolo

Professor of Finance: University of Naples Federico II

https://orcid.org/0000-0001-6651-8687

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Abstract

This paper provides a comprehensive review of the academic literature on mutual fund performance. Drawing on return-based, holdings-based, structural, behavioral, and systemic-risk perspectives, the review synthesizes more than four decades of empirical and theoretical findings. Although the average actively managed mutual fund underperforms passive benchmarks net of fees, a meaningful subset of managers demonstrate persistent stock-selection skill, informational advantages, and value-added creation. Structural constraints—including liquidity frictions, diseconomies of scale, organizational design, and competitive pressures—shape whether skill translates into investor-level returns. Recent advances in performance evaluation, including Active Share, R^2 selectivity, value-added measures, and time-varying managerial skill frameworks, yield deeper insight into how managers operate within complex market environments. The literature also highlights the systemic implications of mutual fund activity, particularly in the presence of flow-driven trading and fire sales.

Keywords: *Mutual Fund Performance, Skill, Structural Determinants, Herding*

1. INTRODUCTION

The performance of actively managed mutual funds has long been central to empirical asset pricing, delegated portfolio management, and the industrial organization of financial services. Since Jensen's (1968) pioneering alpha framework, researchers have debated whether abnormal performance reflects skill or luck. While numerous studies document underperformance at the aggregate level, others highlight persistent skill in subsets of managers, especially when analysis moves beyond simple return regressions and examines holdings, trades, portfolio characteristics, and information usage. Mutual funds collectively exert substantial influence on financial markets, holding trillions of dollars in equities and responding continuously to investor flows. Their actions have implications not only for individual investors but also for market efficiency and systemic stability. This review synthesizes the major contributions of the literature and presents an integrated perspective organized into six sections: return-based evaluation, holdings-based skill detection, structural determinants of performance, behavioral and informational drivers, competition and flows, and systemic externalities.

2. RETURN-BASED MEASURES OF MUTUAL FUND PERFORMANCE

Return-based methodologies represent the earliest and most widely used approach for evaluating mutual fund performance. These methods estimate abnormal performance, or alpha, by regressing fund returns on benchmark factors. While foundational, return-based evaluations often fail to identify genuine managerial skill because they embed structural biases, overlook differences in investment opportunity sets, and aggregate the effect of fees and costs. Nevertheless, this literature provides the macro-level foundation for understanding how active management performs relative to passive alternatives.

One of the earliest contributions is Jensen's (1968) alpha model, which regresses fund excess returns on market excess returns. Jensen concludes that mutual funds, on average, do not generate positive abnormal returns after accounting for expenses. Subsequent studies such as Carhart (1997) reinforce this finding, showing that momentum largely drives short-term persistence in performance and that, once expenses are included, active funds underperform passive benchmarks. These results position alpha as a challenging metric for capturing skill because it mixes stock selection with factor exposures and noise.

Fama and French (2010) significantly expand this literature by applying bootstrap techniques to distinguish skill from luck. Their study finds that the aggregate portfolio of active mutual funds resembles the market before expenses but underperforms by roughly the magnitude of fees after expenses. This implies that active management is a zero-sum game before costs and a negative-sum game for investors after costs. Their simulations show that although most funds' performance is explained by luck, a tail of funds exhibits positive true alpha, suggesting that skill does exist, albeit among a minority of managers.

To address time-varying market conditions and betas, Ferson and Schadt (1996) propose conditional performance models that incorporate public information signals such as dividend yields, interest rates, and term spreads. Conditional alphas are often less negative than unconditional estimates, indicating that traditional models mistakenly classify strategies based on public information as "timing skill." Still, even conditional alpha models generally conclude that few funds possess market-timing ability.

A related branch of the literature studies market timing using nonlinear return-based models such as the Treynor–Mazuy and Henriksson–Merton specifications. Most studies using monthly returns find little evidence of successful timing. However, Bollen and Busse (2001) argue that managers adjust exposure more frequently than monthly. Using daily data, they document that a significantly larger proportion of funds exhibits positive timing ability, revealing that higher-frequency data can uncover timing patterns masked in monthly evaluations.

More recent contributions such as Jiang, Yao, and Yu (2007) introduce holdings-based timing measures to avoid the "artificial timing" biases inherent in return-based tests. Their results indicate that funds exhibit positive aggregate timing ability, especially among those actively rotating across industries or relying on non-public information. This suggests that timing skill may exist but is underdetected by standard return-based metrics.

Although return-based models provide useful insights into aggregate underperformance, they obscure skill by conflating fees, trading costs, factor exposures, and benchmarking issues. These limitations motivate the transition toward holdings-based performance evaluation.

3. HOLDINGS-BASED MEASURES OF MUTUAL FUND SKILL

Holdings-based evaluations provide a more direct and accurate lens through which to assess managerial skill because they examine the actual investment decisions made by mutual fund managers. Unlike return-based approaches, holdings-based methodologies isolate stock-selection ability by measuring the performance of securities a fund chooses to buy or sell. This helps disentangle skill from fees, benchmark choices, and factor exposures. The empirical evidence consistently shows that holdings-based metrics detect more skill than traditional alpha regressions.

Early research by Grinblatt and Titman (1989, 1993) introduces the use of portfolio change measures, which capture whether fund managers increase their exposure to stocks that subsequently outperform. Their analyses reveal that many funds—particularly growth-oriented funds—exhibit statistically significant stock-picking ability. These findings suggest that skilled managers exist, but their talent is often masked in return-based evaluations because fees and trading costs dilute observed returns.

Building on these insights, Chen, Jegadeesh, and Wermers (2000) analyze actual mutual fund trades by comparing the future performance of stocks purchased by funds with those they sell. They find that stocks bought by funds outperform those sold by approximately two percent per

year, even after controlling for characteristics such as size, book-to-market, and momentum. This provides compelling evidence that active mutual fund managers collectively possess informational advantages that allow them to identify underpriced securities.

Wermers (2000) expands the literature by decomposing mutual fund performance into stock selection, style tilts, transaction costs, and expenses. He demonstrates that the average fund's equity holdings outperform the market by roughly 1.3 percent annually, confirming the existence of stock-selection skill. However, trading costs and fee structures largely offset these gains, resulting in net underperformance for investors. This distinction between gross and net performance underscores the importance of separating manager skill from the frictions of delegated portfolio management.

Daniel, Grinblatt, Titman, and Wermers (1997) develop another influential methodology by constructing characteristic-based benchmarks for each stock. Their model separates performance into characteristic selectivity and characteristic timing. Applying this framework, they find strong evidence of positive stock-selection ability but little evidence that managers successfully time exposures to size, value, or momentum factors. This reinforces the conclusion that stock picking—not factor timing—is the primary source of skill among active mutual funds.

Cremers and Petajisto (2009) formalize the concept of Active Share, which measures the extent to which a fund's holdings deviate from its benchmark index. Funds with high Active Share, reflecting high-conviction positions, achieve significantly better performance than those that closely track their benchmarks. Conversely, "closet indexers," which charge active-management fees but hold portfolios nearly identical to benchmarks, significantly underperform. Active Share thus serves as a powerful ex-ante measure of genuine activeness and stock-selection effort.

Amihud and Goyenko (2013) introduce a complementary measure by using the R-squared from factor regressions as an indicator of selectivity. A low R-squared implies that fund performance is driven less by common factors and more by idiosyncratic stock-specific returns. Their empirical evidence shows that funds with lower R-squared values generate higher future alphas, supporting the interpretation that idiosyncratic variation reflects active security selection rather than noise.

Another dimension of skill is revealed in the literature on herding. Grinblatt, Titman, and Wermers (1995) identify systematic patterns in which funds buy or sell the same stocks at the same time. More recent work by Jiang and Verardo (2018) finds that funds that avoid herding or actively take positions against the institutional crowd outperform herding funds by sizable margins. Anti-herding behavior reflects deeper research, independent judgment, and informational advantages, all of which contribute to superior future performance.

Kacperczyk and Seru (2007) investigate whether managers rely on public or private information. They propose the RPI measure and show that funds with low reliance on public information—implying a greater use of private signals—produce higher alphas and attract more investor flows.

This evidence highlights the importance of unique insights and proprietary research in generating sustained performance.

Taken together, holdings-based methodologies consistently reveal the presence of skill in mutual fund management. These findings contrast with the pessimistic conclusions of return-based analyses and underline the need to account for managerial decisions directly rather than inferring ability solely from observed returns. Skill is present in the market, but its visibility is clouded by fees, costs, and structural frictions that obscure the underlying value created by informed decision-making.

4. STRUCTURAL DETERMINANTS OF MUTUAL FUND PERFORMANCE

Mutual fund managers operate within an environment shaped by liquidity constraints, scale effects, organizational structures, and competitive pressures. These structural determinants critically influence whether, and to what extent, managerial skill can be translated into investor-level performance. Even when managers demonstrate strong stock-selection ability, structural frictions often erode the net returns captured by fund investors.

Liquidity is one of the most fundamental constraints faced by mutual fund managers. Liquidity frictions stem from the fact that many active strategies depend on trading in securities that are costly to transact or are thinly traded. Busse, Chordia, Jiang, and Tang (2021) provide direct evidence on trading costs by analyzing a unique dataset of actual mutual fund trades. They show that larger funds benefit from economies of scale in execution and pay lower percentage trading costs, yet they are also more constrained in the types of securities they can trade because they must avoid the liquidity and price-impact risks associated with small-cap or high-volatility securities. Consequently, large funds often scale back active bets and shift toward more liquid securities, reducing alpha opportunities.

The interplay between scale and liquidity constraints is central to the seminal study by Chen, Hong, Huang, and Kubik (2004). They document that fund size is negatively related to risk-adjusted performance, particularly for funds investing in illiquid stocks. Large funds face price-impact costs that erode expected returns, and they often respond by diversifying into more liquid securities or expanding their portfolios to include lower-alpha investments. The authors also observe that fund family size does not exhibit the same negative relationship with performance. This distinction highlights that while individual funds suffer diseconomies of scale, families benefit from economies of scope, such as shared research resources and operational efficiencies.

Pollet and Wilson (2008) provide another important contribution by examining how funds adjust their portfolios as they grow. They find that funds rarely expand the number of holdings in proportion to asset growth. Instead, they increase the size of existing positions, leading to higher portfolio concentration and greater exposure to liquidity risk. Diversification improves performance, especially for small-cap funds, but funds tend to diversify too slowly relative to their

asset growth. This finding underscores a key tension: funds grow faster than the set of scalable investment opportunities, leading to declining marginal alpha.

Organizational structure is another major determinant of mutual fund performance. Whether a fund is team-managed or run by a single manager affects the extent of decision diversification, information processing, and key-person risk. Patel and Sarkissian (2017) show that team-managed funds, when accurately measured using clean data, outperform single-manager funds on both gross and net performance metrics. Their results challenge earlier findings based on noisy or misclassified data and suggest that multiple-manager structures may enhance decision quality in complex investment environments.

The design of fund management also reflects strategic considerations related to managerial bargaining power and brand differentiation. Massa, Reuter, and Zitzewitz (2010) examine the emergence of anonymously managed funds, where no individual manager is publicly named. They argue that naming managers increases their bargaining power within the fund family, especially after strong performance. In contrast, anonymous team structures mitigate rent extraction by star managers and preserve surplus for fund families. While anonymity reduces marketing benefits, families may still prefer this structure to optimize long-term compensation and governance.

Competition among mutual funds also shapes performance and fee structures. Wahal and Wang (2011) analyze the effects of new entrants in specific style categories and find that high-holding-overlap entrants intensify competitive pressure on incumbents. Incumbent funds reduce management fees in response, but they also increase distribution fees, leading to little change in total investor costs. Competition reduces flow advantages and can lower incumbent performance, especially when markets become crowded with similar strategies. This dynamic illustrates that competition in the mutual fund industry does not always lead to lower overall fees or improved investor welfare.

Taken together, these studies highlight the central role of structural determinants in shaping mutual fund performance. Liquidity frictions, scale constraints, and organizational design interact in complex ways to moderate the degree to which skill can be monetized. Even managers with strong stock-selection ability may struggle to deliver alpha net of costs when they manage large asset bases, compete in crowded markets, or face significant trading frictions. Understanding these structural constraints is essential for interpreting mutual fund performance and evaluating the economic value of active management.

5. BEHAVIORAL AND INFORMATIONAL DIMENSIONS OF MANAGERIAL DECISION-MAKING

The behavioral and informational dimensions of mutual fund performance represent an area where psychological forces, information frictions, and investor behavior interact in complex ways. Although structural factors such as liquidity and scale constraints limit performance, managerial

behavior and the nature of information used by fund managers also play essential roles in shaping long-term outcomes.

One fundamental behavioral pattern observed in the literature is herding, wherein fund managers buy or sell the same securities concurrently. Scharfstein and Stein (1990) argue that herding can arise from reputational incentives, as underperforming managers may feel pressured to mimic the actions of peers. Grinblatt, Titman, and Wermers (1995) provide early empirical evidence documenting herding among mutual funds, particularly in small-cap, momentum, and growth stocks. Although herding may reflect common responses to public information, it often reduces performance by creating price pressure on crowded trades.

Jiang and Verardo (2018) extend this literature by developing a dynamic measure of herding that captures whether a fund follows the trades of the institutional crowd. They find that funds exhibiting strong herding tendencies underperform, while those that adopt anti-herding strategies—taking positions opposite to the crowd—generate significantly higher future performance. Anti-herding managers tend to conduct deeper fundamental research, exhibit more independent judgment, and rely less on signals inferred from the behavior of their peers, all of which contribute to superior stock-selection outcomes.

Another important dimension of managerial behavior concerns the extent to which managers rely on public versus private information. Kacperczyk and Seru (2007) introduce the RPI measure, which quantifies the degree to which managers adjust their holdings in response to public information. Funds with low RPI values rely less on public data and more on private information or proprietary research. These funds exhibit higher future alphas and attract larger inflows, suggesting that private information plays a critical role in generating persistent outperformance.

Investor sentiment also influences the behavior of mutual fund managers. Massa and Yadav (2015) construct a sentiment beta to capture the sensitivity of a fund's holdings to sentiment-driven stocks. They find that funds with low sentiment beta—those that do not chase sentiment—outperform sentiment-driven funds by nearly four percent per year. This performance differential reflects the fact that sentiment-oriented strategies are more likely to be crowded, more volatile, and more prone to reversals. Skilled managers tend to focus on stocks with fundamental value, avoiding stocks whose prices are heavily influenced by investor mood.

Investor behavior itself introduces further complexities. Barber, Huang, and Odean (2016) reveal that investors often misinterpret factor-driven returns as managerial skill. Funds with high market beta or strong momentum exposure tend to attract large inflows, even when these exposures do not reflect skill. This misplaced attribution distorts capital allocation, rewarding managers who simply load on popular factors rather than those who genuinely add value through security selection. Such misguided flows reinforce benchmarking pressures, encouraging herding or closet indexing and diminishing the incentives for managers to differentiate themselves through active research.

A final dimension involves time-varying managerial skill. Kacperczyk, Van Nieuwerburgh, and Veldkamp (2014) propose a dynamic framework in which fund managers shift their attention between stock picking and market timing depending on macroeconomic conditions. They argue that booms are characterized by a greater abundance of firm-specific information, favoring stock picking, while recessions heighten the importance of aggregate information, making market timing more advantageous. Empirical evidence supports this prediction: managers who excel at stock picking in expansions also tend to excel at timing during recessions, suggesting that skill is not static but instead reallocated across tasks depending on economic conditions.

In summary, the behavioral and informational literature demonstrates that managerial judgment, information sources, and investor behavior significantly influence mutual fund performance. Managers who rely heavily on private information, resist herding tendencies, avoid sentiment-driven strategies, and adjust their skill allocation to economic conditions tend to deliver superior outcomes. Behavioral and informational dynamics therefore form an integral part of understanding both the cross-sectional and time-series variation in fund performance.

6. COMPETITION, INVESTOR FLOWS, AND INDUSTRY STRUCTURE

The industrial organization of the mutual fund industry plays a central role in shaping performance outcomes, fee structures, strategic behavior, and product differentiation. Unlike traditional industries in which competition reliably lowers costs and increases consumer welfare, competition in asset management operates through more complex channels. Investor flows respond strongly to past performance, but often in ways that do not reliably distinguish between skill and factor exposure. This dynamic affects fund entry, exit, fees, and the allocation of capital across managers.

Wahal and Wang (2011) offer a detailed analysis of competitive dynamics by focusing on fund entry within narrowly defined style categories. Their results show that new fund entrants intensify competitive pressure on incumbents when they hold portfolios similar to existing funds. Incumbents respond by reducing management fees but simultaneously increasing distribution fees, thereby keeping total investor costs nearly constant. This substitution suggests that competition does not necessarily benefit investors; instead, fund families adjust their fee structures to maintain revenue while appearing competitive on headline fees. Competition also reduces the flow advantages enjoyed by incumbents and contributes to lower persistence in performance, particularly when categories become overcrowded with similar strategies.

Investor flows are a critical determinant of fund size and, consequently, performance. Numerous studies find a convex flow–performance relationship: investors disproportionately reward recent winners while showing only mild sensitivity to poor performance. This asymmetric response creates tournament-like incentives for managers. Funds that lag behind peers may increase risk in an attempt to catch up, while those ahead may reduce risk to preserve gains. These dynamics distort the incentives of managers by encouraging short-termism and excessive benchmarking, rather than promoting long-term value creation through fundamental research.

Barber, Huang, and Odean (2016) demonstrate that investors often misinterpret fund performance by confusing factor-driven returns with genuine managerial skill. Their analysis shows that funds with high market beta or strong momentum exposure receive disproportionate inflows, even though these returns can be replicated inexpensively through passive vehicles. This misattribution amplifies flows to funds that benefit from cyclical factor exposure, exacerbating the crowding of popular strategies and increasing systemic fragility. As a result, managers face strong pressure to deliver performance that aligns with investor expectations, which can further encourage herding or closet indexing.

Organizational and family-level structures also influence fund behavior and performance. Large fund families operate internal capital markets, allocate research resources, and manage multiple funds with overlapping mandates. These families may cross-subsidize weaker funds to support distribution channels or brand consistency. At the same time, they may concentrate research and organizational support on higher-skill teams. Patel and Sarkissian (2017) show that accurate measurement of managerial structure—particularly distinguishing between team-managed and single-manager funds—reveals that team management generally enhances performance. Families therefore benefit from pooling diverse perspectives, improving governance, and mitigating key-person risk.

Another structural feature of the industry is how families manage star managers. Massa, Reuter, and Zitzewitz (2010) find that naming individual managers in marketing materials increases their bargaining power, leading to higher compensation demands. To retain surplus, fund families increasingly adopt anonymous management structures, especially within team-managed funds. While anonymity reduces marketing benefits, it limits rent extraction by individual managers and aligns incentives more closely with family-level objectives.

Finally, the interaction between competition and flows affects the overall distribution of fund performance. In highly competitive categories, funds find it more difficult to differentiate themselves, and performance becomes more sensitive to investor demand, fee structures, and style crowding. Over time, this can lead to cyclical waves of fund creation and closure, reflecting the dynamic evolution of competitive pressures within each style segment.

In sum, industry structure, competition, and investor flows shape mutual fund performance in ways that transcend security selection and benchmark-relative returns. These forces influence managerial incentives, product offerings, and the dynamics of fund entry and exit. Understanding these features is critical for evaluating the economic value of active management in real-world market settings.

7. SYSTEMIC RISK, FIRE SALES, AND EXTERNALITIES

Mutual funds do not operate in isolation. Because they collectively hold a large share of outstanding equities and fixed income securities, their trading decisions can generate important externalities for the broader financial system. A key mechanism is the way investor flows interact

with portfolio holdings to produce fire sales and liquidity spirals. When investors redeem fund shares during periods of stress, managers may be forced to liquidate assets quickly, often at depressed prices. This forced selling can transmit shocks across institutions and markets, amplifying volatility and propagating losses well beyond the originating fund.

Coval and Stafford (2007) provide seminal evidence on fire sales in equity mutual fund markets. They identify funds experiencing extreme outflows and track the subsequent performance of the stocks these funds are forced to sell. Their results show that stocks heavily sold by distressed funds suffer substantial temporary price declines, followed by significant reversals as the selling pressure abates. Non-distressed funds holding the same securities also incur losses, illustrating that fire sales impose negative externalities on uninvolved investors. At the same time, liquidity providers that buy these temporarily depressed securities earn positive abnormal returns, highlighting the role of mutual funds as both sources of mispricing and opportunities for arbitrage.

Portfolio overlap is a key driver of the extent to which fire sales propagate across the system. When funds in the same style category or family hold similar securities, redemptions at one fund can depress the prices of assets held widely across the industry. Kacperczyk, Sialm, and Zheng (2005) show that industry concentration within mutual fund portfolios is substantial, especially among specialized funds. Related work by Girardi et al. (2021) on insurance companies demonstrates that portfolio similarity, measured using cosine-based metrics, predicts the scale of common asset liquidations following shocks. Although their study focuses on insurers, the underlying mechanism is highly relevant for mutual funds: greater overlap in holdings implies more correlated selling and larger systemic price impacts when stress occurs.

Systemic risk is further exacerbated by liquidity mismatches. Many mutual funds, particularly bond and hybrid funds, offer daily redemptions while holding assets that are difficult to liquidate quickly without significant price concessions. During periods of market turmoil, managers may respond to redemptions by selling the most liquid holdings first, concentrating illiquidity in the remaining portfolio. Pastor, Stambaugh, and Taylor (2017) show that funds trade more aggressively when perceived profit opportunities are high, but such trading can aggravate price instability under stress. The procyclical nature of investor flows, combined with overlapping portfolios and liquidity transformation, renders mutual funds important transmitters and amplifiers of market-wide shocks.

Regulators have responded to these concerns by introducing liquidity risk management rules, swing pricing mechanisms, and stress testing frameworks. These policies aim to reduce dilution for remaining investors, discourage first-mover advantages during redemptions, and improve the resilience of mutual funds under adverse scenarios. The academic literature suggests that such tools can mitigate systemic risk, but their effectiveness depends on implementation, investor understanding, and continued monitoring of portfolio overlap and liquidity profiles across the industry.

8. CONCLUSIONS

The academic literature on mutual fund performance paints a nuanced and multifaceted picture of active management. At the aggregate level, actively managed mutual funds tend to underperform passive benchmarks net of fees and trading costs, consistent with the arithmetic of active management in competitive and largely efficient markets. Yet, this average result conceals meaningful cross-sectional heterogeneity. Holdings-based analyses, characteristic-adjusted performance measures, and information-based indicators show that a subset of managers consistently exhibit stock-selection skill, informational advantages, and value-added creation.

At the same time, structural frictions such as liquidity constraints, diseconomies of scale, fee structures, and organizational design limit the extent to which this skill translates into investor-level returns. Behavioral forces and informational frictions further complicate the picture. Investors often misinterpret factor-driven performance as skill, reward lottery-like payoffs, and chase recent winners, generating convex flow–performance relationships and tournament-style incentives for managers. Skilled managers tend to rely more on private information, resist herding, avoid sentiment-driven strategies, and dynamically reallocate effort between stock picking and timing as economic conditions evolve.

A growing strand of literature emphasizes the systemic implications of mutual fund activity. Through flow-driven trading, portfolio overlap, liquidity transformation, and fire sales, mutual funds can transmit and amplify shocks across financial markets. Regulatory interventions aimed at improving liquidity management and aligning redemption terms with asset liquidity represent important steps toward mitigating these risks, but ongoing research and monitoring are essential.

Overall, the evidence suggests that active mutual fund management is neither uniformly ineffective nor universally beneficial. Instead, it reflects a complex interaction between managerial skill, structural frictions, behavioral biases, competitive forces, and systemic externalities. Future research should further investigate how these forces evolve in an environment of increasing passive investing, technological change in trading and information processing, and evolving regulatory frameworks.

REFERENCES

Amihud, Y., and R. Goyenko, 2013, Mutual Fund's R^2 as Predictor of Performance, *Review of Financial Studies* 26, 667–694.

Barber, B. M., X. Huang, and T. Odean, 2016, Which Factors Matter to Investors? Evidence from Mutual Fund Flows, *Review of Financial Studies* 29, 2600–2642.

Barras, L., P. Gagliardini, and O. Scaillet, 2022, Skill, Scale, and Value Creation in the Mutual Fund Industry, *Journal of Finance* 77, 601–649.

Berk, J. B., and J. van Binsbergen, 2015, Measuring Skill in the Mutual Fund Industry, *Journal of Financial Economics* 118, 1–20.

Bollen, N. P. B., and J. A. Busse, 2001, On the Timing Ability of Mutual Fund Managers, *Journal of Finance* 56, 1075–1094.

Busse, J., T. Chordia, L. Jiang, and Y. Tang, 2021, Transaction Costs, Portfolio Characteristics, and Mutual Fund Performance, *Management Science* 67, 755–778.

Chen, H., N. Jegadeesh, and R. Wermers, 2000, The Value of Active Mutual Fund Management: An Examination of the Stockholdings and Trades of Fund Managers, *Journal of Financial and Quantitative Analysis* 35, 343–368.

Chen, J., H. Hong, M. Huang, and J. Kubik, 2004, Does Fund Size Erode Mutual Fund Performance? The Role of Liquidity and Organization, *American Economic Review* 94, 1276–1302.

Cohen, R. B., J. D. Coval, and L. Pástor, 2005, Judging Fund Managers by the Company They Keep, *Journal of Finance* 60, 1057–1096.

Coval, J., and E. Stafford, 2007, Asset Fire Sales in Equity Markets, *Journal of Financial Economics* 86, 479–512.

Cremers, M., and A. Petajisto, 2009, How Active Is Your Fund Manager? A New Measure That Predicts Performance, *Review of Financial Studies* 22, 3329–3365.

Daniel, K., M. Grinblatt, S. Titman, and R. Wermers, 1997, Measuring Mutual Fund Performance with Characteristic-Based Benchmarks, *Journal of Finance* 52, 1035–1058.

Fama, E. F., and K. R. French, 2010, Luck versus Skill in the Cross-Section of Mutual Fund Returns, *Journal of Finance* 65, 1915–1947.

Ferson, W. E., and R. W. Schadt, 1996, Measuring Fund Strategy and Performance in Changing Economic Conditions, *Journal of Finance* 51, 425–461.

Girardi, G., K. Hanley, S. Nikolova, L. Pelizzon, and M. Sherman, 2021, Portfolio Similarity and Asset Liquidation in the Insurance Industry, *Journal of Financial Economics* 142, 69–96.

Grinblatt, M., and S. Titman, 1989, Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings, *Journal of Business* 62, 393–416.

Grinblatt, M., and S. Titman, 1993, Performance Measurement without Benchmarks, *Journal of Business* 66, 47–68.

Grinblatt, M., S. Titman, and R. Wermers, 1995, Momentum Investment Strategies, Portfolio Performance, and Herding: A Study of Mutual Fund Behavior, *American Economic Review* 85, 1088–1105.

Jiang, H., and M. Verardo, 2018, Does Herding Behavior Reveal Skill? An Analysis of Mutual Fund Performance, *Journal of Finance* 73, 2229–2269.

Jiang, G., T. Yao, and T. Yu, 2007, Do Mutual Funds Time the Market? Evidence from Portfolio Holdings, *Journal of Financial Economics* 86, 724–758.

Kacperczyk, M., C. Sialm, and L. Zheng, 2005, On the Industry Concentration of Actively Managed Equity Mutual Funds, *Journal of Finance* 60, 1983–2011.

Kacperczyk, M., and A. Seru, 2007, Fund Manager Use of Public Information: New Evidence on Managerial Skills, *Journal of Finance* 62, 485–528.

Kacperczyk, M., S. van Nieuwerburgh, and L. Veldkamp, 2014, Time-Varying Fund Manager Skill, *Journal of Finance* 69, 1455–1484.

Massa, M., J. Reuter, and E. Zitzewitz, 2010, When Should Firms Share Credit with Employees? Evidence from Anonymously Managed Mutual Funds, *Journal of Financial Economics* 95, 400–424.

Massa, M., and V. Yadav, 2015, Investor Sentiment and Mutual Fund Strategies, *Journal of Financial and Quantitative Analysis* 50, 699–727.

Pastor, L., R. Stambaugh, and L. Taylor, 2017, Do Funds Make More When They Trade More?, *Journal of Finance* 72, 1483–1528.

Patel, S., and S. Sarkissian, 2017, To Group or Not to Group? Evidence from Mutual Fund Databases, *Journal of Financial and Quantitative Analysis* 52, 1989–2021.

Pollet, J., and M. Wilson, 2008, How Does Size Affect Mutual Fund Behavior?, *Journal of Finance* 63, 2941–2969.

Wahal, S., and A. Wang, 2011, Competition Among Mutual Funds, *Journal of Financial Economics*, 99, 1, 40-59.

Wermers, R., 2000, Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transactions Costs, and Expenses, *Journal of Finance* 55, 1655–1695.