Why Do Mutual Funds Share Stock Tips?[ξ]

Mehran Azimi[ϕ] Shawn Mobbs[φ] Kevin Mullally[δ] Shane Underwood[ς]

March 2019

ABSTRACT

We study the practice of voluntarily disclosing investment ideas by mutual funds in their annual reports to shareholders. The practice involves, at a minimum, expressing views on stocks which fund managers are optimistic about. We find that managers of larger and better performing funds discuss positions that have recently underperformed, those that make up a larger portion of their portfolio, and those that they have held for a longer period. A portfolio of stocks that managers discuss generates an abnormal return of 7.8% per year. Our findings suggest that managers disclose these recommendations to boost their own fund performance and to attract additional capital. We also document interesting differences in the stocks that different managers select from their portfolio to reveal their additional information.

Keywords: mutual funds, disclosure, information, fund performance

JEL Classification: G11; G12; G14; G23

[ξ] We have benefitted from helpful comments and suggestions from Sugata Ray. We also thank Eren Cifci for excellent research assistance.

[ϕ] Mehran Azimi is from the University of Alabama, Culverhouse College of Business, Box 870224, Tuscaloosa, AL 34587, USA. E-mail: mazimi1@crimson.ua.edu.

[φ] Shawn Mobbs is from the University of Alabama, Culverhouse College of Business, Box 870224, Tuscaloosa, AL 34587, USA. E-mail: smobbs@cba.ua.edu. Tel: +1 205–348–6097.

[δ] Kevin Mullally is from the University of Alabama, Culverhouse College of Business, Box 870224, Tuscaloosa, AL 34587, USA. E-mail: kmullally@cba.ua.edu. Tel: +1 205–348–7858.

[ς] Shane Underwood is from Baylor University, Hankamer School of Business, One Bear Place #98004, Waco, TX 76798, USA. E–mail: shane_underwood@baylor.edu. Tel: +1 254-710-4524.

ABSTRACT

We study the practice of voluntarily disclosing investment ideas by mutual funds in their annual reports to shareholders. The practice involves, at a minimum, expressing views on stocks which fund managers are optimistic about. We find that managers of larger and better performing funds discuss positions that have recently underperformed, those that make up a larger portion of their portfolio, and those that they have held for a longer period. A portfolio of stocks that managers discuss generates an abnormal return of 7.8% per year. Our findings suggest that managers disclose these recommendations to boost their own fund performance and to attract additional capital. We also document interesting differences in the stocks that different managers select from their portfolio to reveal their additional information.

Keywords: mutual funds, disclosure, information, fund performance
JEL Classification: G11; G12; G14; G23

1. Introduction

Mutual funds are required to publicly disclose their portfolio holdings under the Securities Exchange Act of 1934 and the Investment Company Act of 1940. These disclosures are critical for investors' ability to monitor fund managers and for securities market regulation. While beneficial for some market participants and for market quality, these disclosures appear to be costly for funds. A large literature has documented that portfolio holdings disclosure has a detrimental effect on fund performance and suggests that this effect is due to copycatting or front running.[1] For this reason, fund managers often take actions to avoid or delay disclosing their portfolio holdings for fear of disclosing their own "trade secrets."[2]

Despite the fact that, on average, mandatory disclosure has a detrimental effect on fund performance, some mutual fund managers voluntarily reveal their views about the future performance of specific securities in their regulatory filings. For example, in its 2012 N-CSR filing, the Goldman Sachs Growth Investment Team states "In our view, SBA Communications is well positioned to benefit from increased data usage, network upgrades and improved coverage as well as from industry regulations that govern the construction of new towers and create high barriers to entry." Over the next 12 months SBA Communications gained 56% over the S&P 500. The goal of this paper is two-fold. First, we want to determine whether the stock "tips" disclosed contain information.[3] Second, why do managers reveal these views publicly?

There are at least two reasons why fund managers might engage in this behavior. First, managers may reveal private information about a stock to get that information impounded into the

[1] For example, Wermers (2001), Frank et al (2004), Agarwal et al (2015), and Shi (2017).
[2] For example, Agarwal et al (2013) and Aragon, Hertzel, and Shi (2013). For examples of money managers fighting disclosure, see "Hedge Funds Take on SEC over Disclosure Requirements" (https://www.cnbc.com/id/18722751).
[3] We use the word "tip" to refer to any discussion of the fund's views concerning future prospects for the stocks in its portfolio. Our use of the word tip does not suggest any sort of revelation of material nonpublic information.

stock's price. One way fund managers earn alpha is by identifying mispriced stocks and trading accordingly. However, capital constraints or fund investment restrictions may restrict a fund's ability to single-handedly push a stock's price back to its fundamental value which means that they are exposed to noise trader risk (DeLong et al (1990)). Managers may be using these public disclosures as a way to get other market participants to trade these mispriced stocks. This hypothesis suggests that managers will disclose "tips" about stocks for which they have already established large positions and those stocks that are more likely to be mispriced due to limited information. Moreover, this hypothesis suggests that the stocks managers disclose will have higher future performance. Second, revealing tips may be a way for managers to signal their stock-picking ability. It is possible that managers who engage in this behavior could benefit by attracting additional capital flows or obtaining additional labor market opportunities (e.g., employment at a larger mutual fund family or hedge fund or additional funds to manage).

To shed light on these issues, we download and process mutual funds' annual reports (e.g., funds' N-CSR filings) from 2012-2016. We parse each filing and identify sentences that contain forward-looking predictions about individual stocks. Our sample contains 13,691 unique N-CSR filings from 4,955 unique actively-managed mutual funds. We find that 5.94% of fund disclosures contain a tip during this period and that there are 3,027 separate stock tips in these disclosures. Not surprisingly, because very few mutual funds hold short positions, the vast majority of our sample of tips are positive. We focus our analysis on these positive views.

We begin our analysis by examining the determinants of a fund revealing a tip. At the fund-level, larger, better-performing funds and funds with lower turnover are more likely to disclose a tip. At the position level, we find that funds are more likely to tip stocks that i) make up a greater percentage of their portfolios, ii) they have built up a position in for a longer time, and iii) have

lower past returns. Combined, these results are consistent with our first hypothesis. They suggest that more visible funds with longer term strategies are more likely to disclose their views on large, underperforming positions to get other market participants to help correct the prices of these stocks.

Next, we examine whether these disclosures are informative. To do so, we form calendar time portfolios of tipped stocks each month based on funds' disclosures from the prior 3 months. We regress the monthly portfolio returns on the Fama and French (1993) excess market, size, and book-to-market factors as well as the Carhart (1997) momentum factor to obtain the portfolio's alpha. Our results indicate that the portfolio of tipped stocks generates a statistically significant alpha of 65 basis points per month, or 7.8% per year. We also investigate whether tips about certain types of stocks are more informative. Tips about smaller stocks, stocks with lower analyst coverage, and less liquid stocks have higher average future stock alphas. Combined, these results suggest that funds are using their annual reports to disclose substantive information about undervalued stocks to the market and stocks for which there is relatively less information available.

To gain insight into why managers reveal tips, we separate tipped stocks into those which are tipped by many managers (commonly tipped stocks) and those which are tipped by only a single or very few managers (uniquely tipped stocks). We find that unique tips outperform the commonly tipped stocks. Thus, not all tippers are the same. Tips on widely tipped stocks do not appear to reveal managerial skill, whereas unique tips seem to be much more informative. It is significantly more meaningful (and risky) for a manager to mention a unique holding that fewer of their peers are discussing.

Our final set of analysis focuses on the rationale for managers to reveal these tips. To do so, we examine the effect of managers disclosing a correct tip on both fund performance and fund

flows. We find that, when managers are right more often or when the average alpha of their tips is higher, both their future fund performance is higher and their funds receive higher flows. Both of these results are conditional on the fund's past performance. Combined, they suggest that disclosing tips is a way that managers can i) improve their funds' performance by getting the information they have acquired impounded into the prices of the stocks they hold and ii) increase the size of their funds by signaling their stock-picking ability.

Our paper makes several contributions to the literature. First, we add to the nascent literature on funds' strategically disclosing investment ideas, or "talking their books." The paper closest to ours is Crawford, Gray, and Kern (2017) who examine a sample of investors who voluntarily share and discuss investment recommendations on the private website Value Investors Club. There are important differences between our setting and theirs. First, unlike the contributors to Value Investors Club, the funds that disclose the tips in our sample are not anonymous. This means that we are able to measure the effect disclosing a tip has on the fund's performance and capital flows. Second, because we can see fund's portfolio holdings we are able to screen out non-informative views that are given to explain away poor past performance or even create temporary price pressure. Another related study is Ljunqvist and Qian (2016) which examines a small sample of activist short sellers and find that these short-sellers release public reports about these stocks because they are too constrained to move prices on their own. Luo (2018) examines the effect of stock pitches by hedge fund managers at investment conferences and finds that, while these stocks perform well, funds sell them soon after pitching them. Our study differs from Luo (2018) in that we identify tangible benefits to the disclosing fund.

Second, our paper provides a different prospective on the impact that disclosure has on fund performance. Papers such as Agarwal et al (2013, 2015), Aragon, Hertzel, and Shi (2013),

and Shi (2017) provide evidence that disclosure adversely affects performance and that funds take action to conceal their most valuable private information. Unlike these papers, our paper suggests that some funds actually strategically disclose to benefit their own performance or reveal their stock-picking skills to the market.

Third, our findings are related to the literature on the role of reputation in capital markets. In a theoretical framework, Diamond (1989) shows that reputation can affect one's ability to access capital markets. Empirically, Gompers (1996) reports evidence that reputation incentives motivates young venture capital firms to grandstand in an effort to showcase their talent. He finds that companies backed by younger VCs are more underpriced and argues that this is due to the venture capitalist incentives to establish a good reputation to facilitate raising capital for future funds. Our findings reveal similar incentives and corresponding behavior among fund managers who choose to give tips on some of their portfolio holdings to signal their talent and subsequently attract greater fund flows.

Our paper proceeds as follows. Section 2 details the data we use and the process to parse funds' disclosures. Section 3 describes our empirical methodology and results. Section 4 concludes.

2. Data and Variable Construction

2.1. Data Sources

The main source of data in our study is mutual funds' N-CSR annual reports filed with the SEC. These filings contain funds' portfolio holdings, expenses, as well as the manager's discussion of fund performance (MDFP). Funds are required by the SEC to file these forms electronically within 10 days after the transmission of annual reports to stockholders. We download the N-CSR

filings provided by WRDS SEC Analytics Suite during 2012 to 2016. Each N-CSR filing contains reports of one or more mutual funds. We download and parse 13,691 N-CSR filings which represent 19,742 fund-level annual reports (N-CSR filings often contain the reports of multiple funds). We parse these filings to find instances where managers disclose expectations about individual stocks in their letters to shareholders or in their management discussion of the fund performance. We identify potential tips as sentences that i) includes a stock name and ii) a forward-looking word such as "think", "expect", "believe", "feel", "see", or "view". Our code creates an output file which includes the filing information, stock name, and CRSP PERMNO for each sentence identified using this approach. Finally, we manually read each sentence and exclude the ones that do not contain forward-looking expectations. We also manually check to ensure stock names are identified correctly.

Our code initially identifies 7,760 sentences. We exclude 3,356 of them that are irrelevant for our purpose. For the remaining 4,404[4] sentences we have stock names, corresponding CRSP PERMNO, and EDGAR filing information such as accession number, filing date, CIK, and reporting date. One challenge for our analysis is identifying the specific fund that discloses a given tip. Although the SEC provides a Series ID and a Series Name for the funds whose disclosures are in a given filing, this information is often incomplete and the order of funds that are reported in a filing also varies within a given fund company's time series of filings. Combined, these factors make it difficult to programmatically identify the fund that is revealing each view. To overcome this challenge, we match the N-CSR disclosures to the CRSP Mutual Fund Holdings Database with a two-step process. First, we use the link table of Central Index Key – Series IDs that the SEC

[4] This sample includes all duplicate sentences that occur within the same filing but for different funds or share classes of the same fund.

provides – to match the set of funds in a given N-CSR filing to CRSP by fund ticker.[5] Second, we manually match to the CRSP database using the fund or fund company name filing a given N-CSR. Our final step is to attribute a given tip to all matching funds in a given N-CSR filing and who also hold the stock being discussed. Our final sample is 3,027 separate tips disclosed by domestic equity funds.

Aside from the CRSP Mutual Fund Holdings database, our study also relies on the fund characteristics, performance, and holdings data from the CRSP Mutual Fund database, stock price information from CRSP, and accounting information from Compustat. Lastly, we obtain data on analyst coverage from I/B/E/S.

2.2. Variable Construction

We calculate several variables based on fund characteristics and fund performance. First, we measure fund performance using *Four Factor Alpha*. Specifically, we calculate a fund's performance from the past 12-months by regressing the fund's excess returns on the excess market return, size, and book-to-market factors of Fama and French (1993) and the momentum factor of Carhart (1997). *Four Factor Alpha* is the intercept of those regressions multiplied by 12 to get an annualized measure. *Fund Flow* is calculated using the following formula as in Sirri and Tufano (1998):

$$Flow_{i,t-1} = \frac{AUM_{i,t} - AUM_{i,t-1} \times \left(1 + Return_{i,t-1}\right)}{AUM_{t-1}} \quad (1)$$

where *AUM* is the fund's assets under management and *Return* is the fund's 12-month raw return.

[5] The table can be found online here: https://www.sec.gov/open/datasets-investment_company.html.

The rest of our fund characteristics data comes directly from the CRSP Mutual Fund database. Specifically, *Fund Size* is the natural logarithm of 1 plus the fund's assets under management. *Team Size* is the number of managers running a given fund. *Fund Age* is the number of months between the current date and the inception date of the fund's oldest share class. *Manager Age* and *Manager Tenure* are the average age and tenure of the fund's managers, respectively.

Table 1 shows the summary statistics for equity funds during 2012 to 2016. Panel A shows that out of 19,742 fund-year observations, 1,173 of them disclose tips in their N-CSR filings. Note that this number is significantly lower than the number of separate tips (3,027) as some funds disclose more than one tip. Panel A also reports several characteristics of funds, their most recent performance relative to their benchmark, and the estimated past fund flows.

We also calculate several stock characteristic variables. *Market Capitalization, Book-to-Market*, and *Momentum* are calculated following Daniel et al (1997). *Analyst Coverage* is the number of analysts following a given stock. *Amihud* is the illiquidity measure of Amihud (2002) and is calculated as the absolute stock return divided by the dollar trading volume for a given stock. Lastly, we calculate *Trade Length* following Agarwal et al (2015) as the number of consecutive months a fund either builds up or unwinds a given stock position.

Panel B of Table 1 tabulates summary statistics of stocks in the portfolio of funds that disclose tips. Funds disclose tips on approximately 2% of their holdings. The average fund holds approximately 106 stocks at a time meaning that the average portfolio weight for a given position is 0.94%. The average holding in a fund's portfolio is followed by 15 analysts and has a market capitalization of $31 billion.

3. Empirical Results

3.1. Determinants of Tipping

We start our analysis by examining the determinants of a given fund disclosing a tip. Panel A of Table 2 shows univariate analysis of the determinants. We compare the characteristics and performance of funds that do and do not disclose using *t*-tests. The results indicate that funds disclosing tips are larger, better performing, and have lower turnover ratios. Older funds and those with longer tenured managers are also more likely to disclose.

We next perform multivariate analysis of the fund-level determinants by estimating the following logistic regression:

$$Tip_{i,t} = f(Performance_{i,t-1}, Size_{i,t-1}, Turnover_{i,t-1}, ExpenseRatio_{i,t-1}, Flow_{i,t-1}) \quad (2)$$

where $Tip_{i,t}$ is an indicator variable that equals one if a fund *i* discloses at least one tip at time *t* and zero otherwise. We also include various managerial characteristics and year dummies in certain variants of these regressions. Panel B of Table 2 contains the results of these tests. Just as in our univariate analysis, better-performing, larger funds are more likely to disclose tips. Moreover, funds with lower turnover ratios, are also more likely to reveal their views, which suggests that funds with longer investment horizons are those who believe they can benefit from the market helping to impound this information into prices. In addition, older funds and those with more experienced managers are also more likely to disclose tips. We also estimate linear probability models and find similar results. Combined, these results suggest that longer term, more visible funds are those that disclose since they are those who can most benefit from other funds trading on the information they provide as well as those who are most likely to influence other traders' behavior.

Next, among funds that disclose their views, we analyze the determinants of the specific stock(s) from their portfolio that they select. Our expectation is that funds will be more likely to reveal their views about stocks which i) encompass a greater percentage of their portfolio, ii) are more likely to beundervalued, and iii) they have already finished building up their position.

Panel A of Table 3 shows the univariate analysis. Tipped stocks have a higher weight in the portfolio of tipping funds and have lower past performance. We perform multivariate analysis by estimating both logistic and linear probability models using the following specification:

$$Tip_{i,j,t} = \beta_1 PortfolioWeight_{ij,t} + \beta_2 Momentum_{j,t-1} + \beta_3 MarketCap_{j,t-1} + \beta_4 AnalystCoverage_{j,t-1} + \beta_5 Amihud_{j,t-1} + \beta_6 TradeLength_{i,j,t-1} + \gamma_{i,t} \quad (3)$$

where *Tip* is equal to one if there is a tip on a stock and zero otherwise, and γ are fund × quarter fixed effects. It is important to note that the inclusion of these fixed effects allows us to examine the variation within a given fund's portfolio. The sample includes all stocks held by the tipping funds. Panel B of Table 3 shows the results of these tests.

Stocks that have more weight in the fund portfolio and have a longer trade length are more likely to be tipped. The longer trade length suggests that funds reveal additional information about the stocks on which they have finished their trading strategies. We also find that, after controlling for analyst coverage, small and illiquid stocks are more likely to be tipped. Note that these variables are highly correlated, so we interpret these results with caution. Columns 3 and 4 of Table 3 also report estimates of a logistic model with the same variables as in equation 2. The results from these models are consistent with the linear probability model estimates in columns 1 and 2.

Overall, the results of Tables 2 and 3 suggest that more visible funds with skilled managers are more likely to disclose tips on their stock holdings in which have they have larger positions

and that are more likely to be underpriced. These results support the hypothesis that funds' motive to disclose a tip is to help attract market attention, increase demand for the stock, and ultimately raise its price to help funds' performance.

3.2. Do these tips actually contain information?

Next, we turn our attention to determining whether these disclosures actually contain valuable information. To answer this question, we construct portfolios based on the tipped stocks and examine their performance. At the beginning of each month, we construct a portfolio that holds the tipped stocks. We hold each tipped stock in the portfolio for 3 (6) months and we rebalance the portfolio at the end of each month based on the market capitalization of the stocks. We calculate the alpha of the portfolio based on the Fama-French three factor model and momentum and report the results in Table 4. Using monthly returns and holding each tipped stock for 3 months in the portfolio results in an annual alpha of 0.65% × 12 = 7.8%. The portfolios are relatively diversified as we condition that the number of stocks in the portfolio in each month should exceed 20. Using a higher lower-bound for the number of stocks reduces the number of months in which we can form a portfolio but tests using lower thresholds yield approximately the same results. In sum, trading based on tips that mutual funds disclose is a profitable strategy and we conclude that tips are, on average, informative.

Next, we further our analysis of the informativeness of tips by examining how the abnormal return of the tipped stocks is related to their characteristics. Do we see more informative tips where the market is expected to be less efficient? We expect a tip to be more informative when a stock is more likely to be overlooked and mispriced, *i.e* smaller stocks with low analyst coverage that are held by fewer funds. To examine this hypothesis, we partition our sample of tipped stocks into two

groups based on stock characteristics and compare their performance after the filing date. Table 5 shows the results. Tipped stocks that are small and illiquid outperform other tipped stocks. In addition, tipped stocks with low analyst coverage and the ones that are held by fewer funds outperform other tipped stocks. These results are consistent with the hypothesis that tips on stocks that are more likely to be mispriced are more informative. We also examine the performance of tipped stocks for which the tipping fund has previously decreased its holding. These tips are less likely to be actual tips, otherwise funds would be less likely to decrease their position on them. Results in Table 5 Panel D show that those tips underperform others. Lastly, we partition tipped stocks into two groups based on how many times in our sample they show up. The idea is that tips that are more unique are more likely to be informative. The results show that more unique tips outperform other tips.

Next, we perform multivariate analysis by estimating the following equation:

$$CAR_i = Const. + \beta_1 \,.\, Tip + \beta_2 \,.\, Stock\ Characteristic_i + \beta_3 \,.\, TIPS \,.\, Stock\ Characteristic + \alpha \,.\, Controls + fund\text{-}year\text{-}quarter\ FE \quad (4)$$

where *Tip* is equal to one if there is a tip on a stock and zero otherwise. *CAR* is cumulative abnormal return based on Fama-French three factor model plus momentum and is calculated for several time windows. The coefficient of the interaction term, β_3, is our coefficient of interest. Table 6 shows the results. We use two variables as *Stock Characteristic*: *Market Cap* (Panel A)*and Illiquidity* (Panel B). The results show that tips are more informative for smaller and illiquid stocks. This result is consistent with the univariate analysis in Table 5.

In sum, the results in Tables 4, 5, and 6 show that tips are informative, that the informativeness is greatest when the market is expected to be less efficient, and that the tipping

funds are providing valuable information to the market. We now ask why do mutual funds give tips?

3.4. Tips, Fund Performance, and Fund Flow

The two primary incentives for funds to disclose tips are to improve fund performance and to attract more funds. To investigate these possibilities, we estimate the following equation:

$$Y_{i,t+1} = Const. + \beta_1 \, . \, X_{i,t} + \alpha \, . \, Controls_{i,t} \qquad (5)$$

where Y is fund performance (measured by alpha based on the Fama-French three factor model plus momentum) and fund flow. Subscript t and i represent year and fund, respectively. X is a measure of the quality of the tips disclosed and β_1 is our coefficient of interest. We calculate X in two ways. First, we calculated the percentage of *right* tips a fund discloses. A tip is *right* when the performance of the stock in the future is superior, *i.e.* it has a positive alpha. Second, we calculate the average future performance, *i.e.* alpha, of stocks on which a fund gives tips. We calculate alpha based on Fama-French three factor model plus momentum. We use a time window of 90 days after the report date to calculate alpha. *Controls* include fund performance, fund flow, turnover ratio, and fund size.

We estimate equation 5 for each measure of the quality of the tips separately and report the results in Table 7. Columns 1 and 2 reports the results with future fund performance as the dependent variable. The quality of tips is positively related to fund performance the next year. We interpret this result in two ways that are not mutually exclusive. First, the quality of tips signals fund managers' skills. Second, the performance of the tipped stock is not trivial and helps the performance of the fund.

Next, we estimate equation 5 with future fund flow as the dependent variable. Columns 3 and 4 in Table 7 show the results. Disclosing tips that turn out to be informative are related to higher future fund flow for the tipping funds. In sum, these results suggest that funds have incentive to disclose tips since quality tips result in higher fund flows and better fund performance.

4. Conclusion

In this paper we have investigated the tendency of mutual funds to share additional information about the stocks held in their portfolios through the discussion sections of their annual report. In addition, we investigate whether these disclosures are informative about future stock returns, as well as whether these disclosures signal information about the quality of the fund and its ability to attract future inflows. Our results suggest that fund managers systematically share tips about particular types of stocks: poorly performing stocks that make up a larger fraction of the fund's portfolio. We also find that these tips are informative: tipped stocks outperform in the months following this disclosure, and funds seem to attract more flows in response to accurate stock tip recommendations.

Our research is the first that we are aware of to document in a systematic way this voluntary disclosure of a fund's investment thesis for certain stocks it holds. These results shed important new light on the channels managers may use to help improve performance and signal quality to current and potential investors in the fund. There is much to be learned from the ways -- both formal and informal -- that funds communicate with their investors, and we believe this paper is an important first step in better understanding those communications.

References

Agarwal, Vikas, Gerald D. Gay, and Leng Ling, 2014, Window dressing in mutual funds, *Review of Financial Studies* 27, 3133-3170.

Agarwal, Vikas, Kevin Mullally, Yuehua Tang, and Baozhong Yang, 2015, Mandatory portfolio disclosure, stock liquidity, and mutual fund performance, *Journal of Finance* 70, 2733-2776.

Agarwal, Vikas, Wei Jiang, Yuehua Tang, and Baozhang Yang, 2013, Uncovering hedge fund skill from the portfolio holdings they hide, *Journal of Finance* 68, 739-783.

Aragon, George, Michael Hertzel, and Zhen Shi, 2013, Why do hedge funds avoid disclosure? Evidence from confidential 13F filings, *Journal of Financial and Quantitative Analysis* 48, 1499-1518.

Carhart, Mark, 1997, On persistence in mutual fund performance, *Journal of Finance* 52, 57-82.

Crawford, Steven, Wesley Gray, and Andrew Kern, 2017, Why do fund managers identify and share profitable ideas?, *Journal of Financial and Quantitative Analysis* 52, 1903-1926.

Diamond, Douglas, 1989, Reputation acquisition in debt markets, *Journal of Political Economy* 97, 828-862.

Fama, Eugene, and Kenneth French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3-56.

Frank, Mary Margaret, James M. Poterba, Douglas A. Shackelford, and John B. Shoven, 2004, Copycat funds: Information disclosure regulation and the returns to active management in the mutual fund industry, *Journal of Law and Economics* 47, 515-541.

Gompers, Paul, 1996, Grandstanding in the venture capital industry, *Journal of Financial Economics* 42, 133-156.

Ljunqvist, Alexander, and Wenlen Qian, 2016, How constraining are limits to arbitrage, *Review of Financial Studies* 29, 1975-2028.

Luo, Patrick, 2018, Talking your book: Evidence from stock pitches at investment conferences, working paper, Harvard University.

Shi, Zhen, 2017, The impact of portfolio disclosure on hedge fund performance, *Journal of Financial Economics* 126, 36-53.

Sirri, Erik and Peter Tufano, 1998, Costly search and mutual fund flows, *Journal of Finance* 53, 1589-1622.

Solomon, David H., Eugene Soltes, and Denis Sosyura, 2014, Winners in the spotlight: Media coverage of fund holdings as a driver of flows. *Journal of Financial Economics* 113, 53-72.

Wermers, Russ. "The Potential Effects of More Frequent Portfolio Disclosure on Mutual Fund Performance," *Investment Company Institute Perspective* (2001): 1-12

Table 1. Summary Statistics

Panel A tabulates summary statistics of equity funds during 2012-2016. Each observation is a fund-year pair. *Tip* is a dummy variable that is equal to one if the fund is disclosing tips and zero otherwise. Panel B tabulates summary statistics of stocks that are held by funds that disclose tips. Each observation is a stock-fund-year. *Tip* is a dummy variable that is equal to one for stocks on which a fund discloses a tip and zero otherwise.

Panel A: Fund Variables

	N	Mean	SD
Tip (0/1)	19,742	0.0594	0.236
Expense Ratio	19,742	0.0108	0.00755
Turnover	19,742	0.992	1.743
Fund Size (in $mill.)	19,742	1,314	3,027
Past 12-month Alpha	19,742	-0.0199	0.0688
Manager Tenure	16,489	74.57	53.38
Manager Age	12,816	49.39	7.225
Team Size	18,755	2.879	1.597
Annual Fund Flow	19,742	0.165	0.801
Fund Age	19,742	158.4	131.8

Panel B: Stock Variables

	N	Mean	SD
Tip (0/1)	169,118	0.018	0.13
Portfolio Weight	169,118	0.94	1.11
Analyst Coverage	169,118	15.5	10.31
Momentum	169,118	0.137	0.30
Illiquidity	169,118	0.0024	0.01
Market Capitalization	169,118	30,655	64,219
Trade Length	58,027	3.475	11.28

Table 2. Fund Level Determinants

Panel A (B) presents univariate (multivariate) analysis of the determinants of disclosing a tip at a fund level. In Panel B, the dependent variable in each column is *Tip* which is an indicator variable equal to 1 if the fund discloses a tip in a given year and 0 otherwise. The remaining variables are as defined in Table 1.Standard errors are in parentheses and are clustered by fund. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Panel A. Univariate Analysis

	Control funds	Tipping funds	*p*-value of diff.
Alpha	-0.02	-0.01	0.00***
Fund Size	0.49	0.69	0.00***
Turnover	1.00	0.80	0.00***
Expense Ratio	0.011	0.012	0.00***
Flow	0.17	0.09	0.00***
Fund Age	4.71	5.07	0.00***
Manager Tenure	4.01	4.24	0.00***
Team Size	0.87	0.85	0.56

Panel B. Multivariate Analysis

	Logistic Models		Linear Probability Models	
	(1)	(2)	(3)	(4)
Fund Alpha	0.854*	1.103*	0.035	0.052*
	(0.455)	(0.566)	(0.021)	(0.030)
Fund Size	0.421***	0.274***	0.027***	0.022***
	(0.052)	(0.067)	(0.004)	(0.005)
Turnover Ratio	-0.273***	-0.324***	-0.012***	-0.010***
	(0.039)	(0.051)	(0.001)	(0.001)
Expense Ratio	61.100***	56.122***	3.300***	3.260***
	(5.026)	(6.732)	(0.317)	(0.418)
Fund Flow	-0.099*	0.071	-0.003*	0.004*
	(0.058)	(0.056)	(0.002)	(0.003)
Fund Age		0.295***		0.015***
		(0.065)		(0.004)
Manager Tenure		0.100*		0.006**
		(0.055)		(0.003)
Team Size		0.096		0.006
		(0.071)		(0.004)
Year FE/Year Dummies	Yes	YES	Yes	Yes
Observations	19,740	16,135	19,740	16,135
Pseudo/Adj. R2	0.040	0.051	0.017	0.021

Table 3. Position Level Determinants

Panel A (B) presents univariate (multivariate) analysis of the determinants of disclosing a tip at the position level. These regressions only include the subsample of fund-year-stock holdings in which a given fund discloses a tip. In Panel B, standard errors are in parentheses and are clustered by fund × year. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Panel A. Univariate Analysis

	No Tips	Tips	*p*-value of the diff.
Trade Length	3.45	4.50	0.002***
Portfolio Weight	0.91	2.28	0.000***
Past Return	0.14	0.12	0.009***
Illiquidity (Amihud)	0.002	0.001	0.000***
Log(Market Cap)	9.00	9.84	0.000***
Log(Analyst Coverage)	2.53	2.99	0.000***

Panel B. Multivariate Analysis

	Linear Probability Models		Logistic Models	
	(1)	(2)	(3)	(4)
Portfolio Weight	0.021***	0.025***	0.478***	0.527***
	(0.001)	(0.002)	(0.016)	(0.025)
Momentum	-0.008***	-0.005*	-0.475***	-0.323*
	(0.002)	(0.003)	(0.109)	(0.180)
Amihud	0.134***	0.201***	-0.274	-3.025
	(0.030)	(0.037)	(4.830)	(9.375)
Market Capitalization	-0.003***	-0.003***	-0.162***	-0.251***
	(0.001)	(0.001)	(0.030)	(0.051)
Analyst Coverage	0.008***	0.008***	0.692***	0.765***
	(0.001)	(0.001)	(0.050)	(0.090)
Trade Length		0.000**		0.007**
		(0.000)		(0.003)
Fund × Year FE	Yes	Yes	Yes	Yes
Observations	169,118	58,027	169,118	58,027
Adj./Pseudo R2	0.035	0.043	0.102	0.106

Table 4. Returns to a Portfolio of Tipped Stocks

This table contains the results of tests examining whether the portfolio of tipped stocks generates abnormal returns. The portfolio is rebalanced monthly and returns are calculated using stocks' market capitalizations. In Column 1, each stock is held for 3 while in Column 2 each stock is held for 6 months. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)
Constant (Alpha)	0.0065***	0.0041***
	(0.002)	(0.001)
Excess Return on the Market	1.0328***	1.0438***
	(0.068)	(0.030)
SMB	-0.1868**	-0.2533***
	(0.088)	(0.039)
HML	-0.2152**	-0.1432***
	(0.096)	(0.042)
UMD	-0.1378*	-0.0550*
	(0.073)	(0.033)
Observations	61	64
Adjusted R-squared	0.829	0.957

Table 5. Tipped Stock Characteristics and Stock Performance

This table presents analysis comparing the abnormal returns of various subsets of tipped stocks for 1, 2, 3, and 6 months after the filing date. Panel A contains the results when stocks are divided based on analyst coverage. Panel B contains the results when stocks are divided based on the Amihud illiquidity measure. Panel C contains the results when stocks are divided based on market capitalization. Panel D compares the performance of stocks based on whether or not the disclosing fund reduced its position in the stock. Panel E contains the results when tips are divided based on the number of other funds who also disclose the same tip. The differences in abnormal returns are compared using *t*-tests and the *p*-value of the difference is reported. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Panel A. Tips Divided by Analyst Coverage

	High Analyst Coverage	Low Analyst Coverage	*p*-value of Diff.
1-Month Alpha	-0.45%	0.43%	0.007***
2-Month Alpha	-0.58%	0.94%	0.001***
3-Month Alpha	-1.01%	0.80%	0.003***
6-Month Alpha	-1.15%	1.37%	0.009***

Panel B. Tips Divided by Amihud

	Liquid Stocks	Illiquid Stocks	*p*-value of Diff.
1-Month Alpha	-0.77%	0.72%	0.000***
2-Month Alpha	-1.35%	1.64%	0.000***
3-Month Alpha	-1.93%	1.65%	0.000***
6-Month Alpha	-3.24%	3.36%	0.000***

Panel C. Tips Divided by Market Capitalization

	Large Stocks	Small Stocks	*p*-value of Diff.
1-Month Alpha	-0.93%	0.88%	0.000***
2-Month Alpha	-1.79%	2.09%	0.000***
3-Month Alpha	-2.71%	2.43%	0.000***
6-Month Alpha	-4.67%	4.79%	0.000***

Panel D. Tips Divided by Fund Action

	Maintain/Increase Position	Decrease Position	*p*-value of Diff.
1-Month Alpha	0.38%	-0.91%	0.000***
2-Month Alpha	1.23%	-1.84%	0.000***
3-Month Alpha	1.16%	-2.51%	0.000***
6-Month Alpha	1.78%	-2.73%	0.000***

Panel E. Tips Divided by Tip "Uniqueness"

	Non-Unique Tips	Unique Tips	p-value of Diff.
1-Month Alpha	-0.70%	0.61%	0.000***
2-Month Alpha	-1.1%	1.35%	0.000***
3-Month Alpha	-1.9%	1.55%	0.000***
6-Month Alpha	-2.80%	2.74%	0.000***

Table 6. Stock Characteristics and Performance

This table contains the results of linear regressions of the abnormal return of funds holdings on various fund and stock characteristics. The dependent variable is Alpha, which is calculated by regressing the stock's returns on the three Fama-French (1993) factors plus Carhart (1997) Momentum for 2,3, and 6 months after the N-CSR filing date. *Tips* is an indicator variable equal to 1 if a fund discloses a tip about a given stock holding and 0 otherwise. Panel A contains the results when we include *Tips* and the interaction of *Tips* and a stock's market capitalization while Panel B contains the results when we include *Tips* and the interaction of *Tips* and *Illiquidity*. Fund-year fixed effects is included in all regressions. Standard errors are in parentheses and are clustered by fund-year-quarter. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Panel A. Market Capitalization

	(1)	(2)	(3)
	2-Month Alpha	3-Month Alpha	6-Month Alpha
Tips	0.036**	0.041**	0.045*
	(0.014)	(0.017)	(0.025)
Tips × Market Cap.	-0.003***	-0.004**	-0.004*
	(0.001)	(0.002)	(0.002)
Past 12-Month Return	-0.118***	-0.173***	-0.338***
	(0.002)	(0.002)	(0.003)
Amihud	0.132	0.146	0.375*
	(0.117)	(0.158)	(0.198)
Market Capitalization	-0.000	0.001**	0.003***
	(0.000)	(0.000)	(0.001)
Book-to-Market	-0.000	0.001	0.004**
	(0.001)	(0.001)	(0.002)
Fund × Year FE	Yes	Yes	Yes
Observations	163,682	163,682	163,682
Adjusted R-squared	0.110	0.140	0.219

Panel B. Amihud Illiquidity

	(1) 2-Month Alpha	(2) 3-Month Alpha	(3) 6-Month Alpha
Tips	0.002	-0.000	0.005
	(0.002)	(0.003)	(0.004)
Tips × Amihud	0.740	1.271**	1.667*
	(0.566)	(0.644)	(0.862)
Past 12-Month Return	-0.118***	-0.173***	-0.338***
	(0.002)	(0.002)	(0.003)
Amihud	0.126	0.137	0.365*
	(0.117)	(0.158)	(0.199)
Market Capitalization	-0.000	0.001*	0.003***
	(0.000)	(0.000)	(0.001)
Book-to-Market	-0.000	0.001	0.004**
	(0.001)	(0.001)	(0.002)
Fund × Year FE	Yes	Yes	Yes
Observations	163,682	163,682	163,682
Adjusted R-squared	0.110	0.140	0.219

Table 7. Tips, Fund Performance, and Fund Flow

This table presents the results of linear regressions of future fund performance and fund flow on measures of the quality of tips a fund discloses. *% Right Tips* is equal to percentage of the tips a given fund discloses that have positive alpha for three months after the report date. *Avg. Tip Alpha* is equal to the average 3-month alpha of a given fund's tips after the report date. Dependent variables are *Fund Alpha* (columns 1-2) and *Fund Flow* (columns 3-4) for the year after the tips are disclosed. Control variables are *Fund Size*, *Turnover Ratio*, *Fund Flow*, and *Fund Performance* at time *t.* All columns include year fixed effects. Standard errors are in parentheses and are clustered by fund. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

	Fund Alpha		Fund Flow	
	(1)	(2)	(3)	(4)
Past 12-Month Fund Alpha	0.025	0.028	1.350***	1.351***
	(0.045)	(0.045)	(0.263)	(0.262)
% Right Tips	0.008*		0.071**	
	(0.004)		(0.030)	
Avg. Tip Alpha		0.008*		0.043*
		(0.004)		(0.023)
Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Observations	1,184	1,184	1,194	1,194
Adjusted R-squared	0.056	0.057	0.074	0.072