International Review of Financial Analysis 47 (2016) 205–221

Contents lists available at ScienceDirect

International Review of Financial Analysis

Fund managers' herding and the sensitivity of fund flows to past performance☆

Lorenzo Casavecchia *

Finance Discipline Group, University of Technology Sydney, PO Box 123, Broadway, NSW 2007, Australia

ARTICLE INFO

Article history:
Received 29 October 2015
Accepted 29 July 2016
Available online 08 August 2016

Keywords:
Managerial herding
Flow-performance sensitivity
Career concerns

ABSTRACT

This study provides a new explanation for the weak sensitivity of investors' flows to poor fund performance based on fund managers' incentives to herd from career concerns. We show that a manager's decision to trade with (against) the herd decreases (increases) significantly investors' willingness to redeem capital from underperforming funds. We argue that this differential investor reaction to poor performance conditional on herding explains the lower termination risk identified among herding managers. We also find that financial intermediaries do not mitigate this sub-optimal investors' response. Our findings support the view that underperforming funds can retain larger payoffs if they herd.

A number of theoretical models have investigated the sources of herding behavior and suggested that concerns for reputation could motivate agents to follow the herd when their actions are observable (Avery & Chavalier, 1999; Prendergast & Stole, 1996; Scharfstein & Stein, 1990; Trueman, 1994; Zwiebel, 1995). Scharfstein and Stein (1990) argue that if the labor market evaluates agents not just on past performance but also on past actions, it could trigger significant implicit incentives to herd since agents straying not too far from the herd could more easily justify, ex post, their investment decisions to principals.

Several empirical studies have adopted this "sharing-the-blame" argument to explain regularities in agents' behavior in the presence of career concerns. For instance, Khorana (1996) illustrates that underperforming fund managers facing greater replacement risk seem to engage in higher portfolio turnover in an attempt to prevent dismissal. The author ascribes this behavior to fund managers' herding mentality which leads them to share the blame of underperforming states of the world when investors evaluate fund performance relative to peer funds. Chevalier and Ellison (1999) argue that if fund managers are judged on actions as well as on performance, the desire to avoid termination could provide them with significant incentives to herd to justify more easily any losses. They show indeed that fund manager's "boldness", as measured in terms of deviations from the typical portfolio of peer funds, seems sure to be punished when they underperform, but might be ignored in the presence of good performance. Similarly, Hong, Kubik, and Solomon (2000) find that being bold and bad leads to worse future career outcomes while being bold and good does not significantly improve an agent's future career prospects.

These empirical studies assume that herding actions should discourage principals from punishing agents for any losses. Not only has the validity of this hypothesis never been tested from the perspective of the principals but, importantly, the possibility that herding behavior could induce systematic distortions in their capital allocation across agents has been equally overlooked. This is an issue of particular concern in the industry of mutual funds where the existence of persistent inefficiencies in the response of the principals (mutual fund investors) to the poor performance of their agents (fund managers) remains still difficult to explain.

This is the first study to explore how mutual fund investors respond to fund managers' decision to herd following poor performance, and whether this decision alters the flow-performance relationship. As such, our paper relates to the vast literature documenting the existence of a weak sensitivity of fund flows to poor performance, implying that mutual fund investors do not punish poorly performing funds with share redemptions (e.g. Ferreira, Keswani, Miguel, & Ramos, 2012; Huang, Wei, & Yan, 2007; Ippolito, 1992; Sirri & Tufano, 1998). A number of studies have attempted to provide plausible explanations for the puzzling failure of investors to promptly flee bad funds along the lines of investors' naivety (Christoffersen & Musto, 2002; Frazzini & Lamont, 2008; Ippolito, 1992), cognitive dissonance (Goetzmann & Peles, 1997), level of fund sales charges (Chordia, 1996; Ivkovic & Weisbenner, 2009), investors' liquidity needs (Johnson, 2007), likelihood of manager-fund separation (Lynch & Musto, 2003), the presence of institutionally disadvantaged

☆ Casavecchia is with the Finance Discipline Group at the University of Technology Sydney, NSW, Australia. I have benefited from helpful comments from Doug Foster, Hardy Hulley, Pedro Matos, Ja Young Suh, Ashish Tiwari and the participants at the FMA Conference, the FMA Asian Conference, and the Finance and Corporate Governance Conference. I gratefully acknowledge the financial support received from the UTS Business School Research Grant (20100561), and the Honorarium Award received from the Financial Management Association International.

* City Campus PO Box 123 Broadway, NSW 2007, Australia.
E-mail address: lorenzo.casavecchia@uts.edu.au.

http://dx.doi.org/10.1016/j.irfa.2016.07.006
1057-5219/

investors such as pension funds (Gruber, 1996), and competitive capital provision by investors (Berk & Green, 2004).

We blend the two strands of literature on career-concerns-motivated herding and flow-performance sensitivity and posit that the puzzling insensitivity of fund flows to poor performance could arise if investors' redemptions are conditioned upon fund manager's decision to herd. If herding makes it easier for underperforming managers to not stand out from the crowd and reduces their termination risk as suggested by Chevalier and Ellison (1999), we would then expect fund investors to be *more tolerant* of bad performance when their managers appear to follow more conventional actions (i.e., herd). Indeed, if investors punished bad managers who herd with share redemptions, they would provide fund advisors with strong incentives to replace these managers as advisory compensation is expressed at a percentage of assets under management (see Deli, 2002; Golec, 1992). Khorana (1996) shows that fund advisors incorporate the magnitude of investors' share redemptions in their decision to fire a bad manager. As such, we conjecture that for herding actions to reduce successfully a manager's termination risk as indicated in previous literature, they should trigger a weaker investors' response to poor performance. Explicitly, our main prediction is that poorly performing funds should experience significantly less net cash outflows if their fund managers herd. At the same time, we expect mutual fund investors to punish underperforming managers with share redemptions if they are observed to have taken bold portfolio decisions.

As there is no unique way to measure the intensity of managerial herding, we use three proxies to evaluate the degree of boldness of fund manager's portfolio decisions. According to the Investment Company Institute (ICI), 41% of retail investors regularly monitor managers' actions using portfolio holdings disclosures, and 35% of them deem portfolio holdings as critical information for their capital allocation decisions. As such, our first herding proxy, *HERD1*, quantifies the extent of similarity between the portfolio holdings of a fund manager and those of other managers. We are not the first to assume that investors rely on fund portfolio holdings to evaluate managerial actions. For instance, Musto (1999) shows that fund managers change portfolio holdings based on what they believe investors infer from holding disclosures. Wang (2014) argues that investors' use of portfolio holdings creates incentives for fund managers to window dress their portfolios. Agarwal, Gay, and Ling (2014) and Massa and Yadav (in press) illustrate that investors' flows respond to fund performance as well as to fund portfolio holdings.

Our next two herding proxies are the excess unsystematic volatility (*HERD2*) and the excess systematic volatility (*HERD3*) of mutual funds. Contrary to *HERD1*, these two metrics do not assume investors' reliance on portfolio holding disclosures. *HERD2* is computed as the absolute value of the difference between a fund's unsystematic volatility and the average unsystematic volatility of all funds in the same investment objective. Chevalier and Ellison (1999) show that this measure quantifies fund managers' herding as a response to career concerns. Explicitly, they show that managers with weaker departures (low *HERD2*) from the typical portfolio of peer funds tend to herd more and face lower replacement risk. *HERD3* is computed instead as the absolute value of the difference between a fund's beta and the average beta of all funds with the same style. Funds with low *HERD3* are more likely to herd as they take smaller bets on the direction of the market relative to peer funds.

Our main contribution is to show empirically that the puzzling insensitivity of investors' demand to poor fund performance is largely explained by the intensity of fund managers' herding. We illustrate that in the presence of poor performance, high-herding funds experience less net cash outflows than low-herding funds. Our evidence confirms that investors are more indulgent with portfolio managers if poor performance is associated with more conventional actions. Further, we show that investors do redeem their shares if bad managers seem to have taken unconventional actions hence confirming that investors' flows are sensitive to poor performance for bold managers. Our results are robust to the use of different herding proxies (i.e., *HERD1*, *HERD2*, and *HERD3*), time fixed effect, fund and family characteristics, turnover, sectoral-level flows, investment styles, and fund managers' tenure and age. For instance, a one standard deviation increase in *HERD1* causes an economically and statistically significant decrease in net cash outflows among underperforming funds by about 40%, an economic magnitude which is certainly interesting for studies of the flow-performance relationship. These findings offer a new explanation for investors' unwillingness to withdraw capital from underperforming funds.

We conduct an extensive set of robustness tests on the inverse relationship between flow-performance sensitivity and herding behavior, and indicate that this relationship strengthens after controlling for common factors known to attract (or retain) flows. These factors include: (i) difference in performance sensitivity between young and old funds (Chevalier & Ellison, 1997); (ii) positive spillover effect of star-funds on fund family market share (Del Guercio & Tkac, 2008; Khorana & Servaes, 1999; Nanda, Wang, & Zheng, 2004); and (iii) level of fund sales charges or minimum investment period of mutual fund investors not to incur redemption fees (Chordia, 1996). We also document a greater rate of asset retention among underperforming funds characterized by high levels of herding hence supporting the view that these funds are able to hold on to larger payoffs if they herd. It is worth noting that our results also survive the introduction of fund fixed effects and a control for selection bias, computed using the Heckman (1979) two-stage correction model.

Next, we test the robustness of our findings by examining the explicit incentives of fund advisors from the underlying compensation contract to regulate the actions of fund managers. If underperforming funds do indeed experience considerably less net cash outflows when managers herd as indicated in this study, we should then observe a significant reduction in the termination risk of herding managers. Consistent with Khorana (1996), we first show that fund advisors are more likely to replace their fund managers following investors' cash redemptions. More importantly, our findings confirm previous evidence that bad managers are less likely to be fired if their bad performance is associated with more conventional actions. This result suggests that the weak sensitivity of flows to poor performance identified among herding funds is unlikely to be driven by greater investors' expectations of manager-fund separation (Lynch & Musto, 2003).

Our paper contributes also to the literature on the role of brokerage distribution in channelling flows into the mutual fund industry (Bergstresser, Chalmers, & Tufano, 2009; Christoffersen, Evans, & Musto, 2013). It is reasonable to assume that brokers' advice could somehow attenuate the suboptimal capital allocation of intermediated investors among herding funds. However, after separating our sample into direct-sold versus broker-sold funds we find results consistent with Bergstresser et al. (2009): Investors' allocation does not appear to be significantly better among broker-sold funds.

Finally, we document that herding increases following poor performance thus reflecting managerial implicit incentives from career concerns. We show that a manager's incentive to revise the portfolio composition in an attempt to maximize his or her proximity to peer funds intensifies in the third calendar quarter, consistent with performance being evaluated primarily towards the end of the calendar year. We also find that herding is much more likely among young and inexperienced managers possibly due to their exposure to greater investors' scrutiny.

1. Data and methodology

1.1. Data sources and sample selection

The data underlying this study come from several sources. For mutual funds, we obtain data from the CRSP Survivor-Bias-Free US Mutual Fund Database. This database contains mutual fund returns, total net