Does Visibility Affect Mutual Fund Flows?[°]

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First draft: January 15, 2005

Preliminary Version

Abstract

The question we address in this paper is whether mutual fund flows are affected by fund visibility. Previous research shows that past fund performance, return volatility, fees and other non-performance-related fund characteristics influence mutual fund flows. The impact of fund visibility on flows is a relatively unexplored issue. We measure fund visibility with two proxies: media attention and advertising efforts. We collected and analyzed over 7,000 news articles appeared on daily and weekly periodicals. For each article the attitude toward the investment company has been evaluated according to a pre-specified grading protocol.
We find that media coverage affects mutual fund flows. Specifically, the stance of media coverage influences fund flows: articles with a positive (negative) tone increase (decrease) fund flows. The number of articles mentioning the fund, that proxies the extent of media coverage, is negatively related to fund flows. Since the extent of media coverage is positively related to fund size and fund flows are decreasing in fund size, we interpret the negative sign associated with the number of articles as capturing a size effect.
Our data set allows us to decompose net flows in purchase and redemption flows. Interestingly, fund advertising has a positive and statically significant effect on net flows, and no effect on fund purchases. The empirical analysis also controls for variables that have been previously found to be associated with mutual fund flows, such as historical performance, fund category flows, fund size, and fund fees. The impact of the control variables is highly consistent with previous studies both in terms of direction and statistical significance. Economic significance analysis shows that, also controlling for fund visibility, historical performance and category fund flows are the most important drivers of fund flows.

Keywords: mutual fund flows; media coverage; advertising.

JEL Classification: G20; G29.

EFM Classification: 530.

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I. INTRODUCTION

Several studies on mutual fund flows have been published in the last few years. Past fund performance has been found to be an important determinant of fund flows (Ippolito, 1992; Gruber, 1996; Chevalier and Ellison, 1997; Sirri and Tufano, 1998). Specifically, past performance *asymmetrically* influences current fund flows: investors heavily buy previous period winners, although they do not as quickly sell previous period losers.

Prior studies also document that non-performance-related fund characteristics affect both the level of fund flows and the sensitivity of flows to past performance. For example, Chevalier and Ellison (1997) document the impact of fund age on flows, Huang, Wei and Yan (2004) highlight the importance of performance volatility for fund flows, Nanda, Wang and Zheng (2004) provide evidence of the significance of the affiliation with large or 'star'-producing fund families.

This paper examines the importance of mutual fund visibility in explaining mutual fund flows. We measure fund visibility with advertising effort and media coverage, both factors expected to reduce investor searching costs. Sirri and Tufano (1998) were the first to highlight the role of searching costs in mutual fund trading decisions. They proxied searching costs with three measures: mutual fund complex size, total fees, and media coverage. However, as the authors openly admit "neither complex size nor fee levels are direct measures of brand recognition" (Sirri and Tufano, 1998, page 1609). In this paper we use direct measures of advertising efforts.

This study adds to the existing literature in the area in two ways. First, this contribution is the first to our knowledge that jointly considers, through direct measures, both media coverage and advertising effort as determinants of mutual fund flows. Two very recent papers separately look at the impact of those factors on mutual fund flows: Gallaher, Kaniel, and Starks (2004) study the relation between mutual fund flows and advertising, while Kaniel, Starks, and Vasudevan

(2004) examine the relation between media coverage of mutual funds and money flows to the funds. In this study we jointly consider both factors.

Second, this study separately analyzes mutual fund purchases and redemptions. Previous studies tipically look at fund net flows, which are fund purchases minus redemptions. Due to unavailability of detailed information on money inflows and outflows, a standard way to measure net fund flows in previous research is to compute the increase in fund total net assets that would have occurred had no new funds flowed in based on time-weighted return *per* fund share. Our data set allows us to decompose a mutual fund's net flows into purchases and redemptions. This decomposition enables us to more closely examine the determinants of these two separate investment decisions.

Three main findings emerge from the analysis. First, we find that media coverage affects mutual fund flows. Specifically, the stance of media coverage influences fund flows: articles with a positive (negative) tone increase (decrease) fund flows. The number of articles mentioning the fund, that proxies the extent of media coverage, is negatively related to fund flows. Since the extent of media coverage is positively related to fund size and fund flows are decreasing in fund size, we interpret the negative sign associated with the number of articles as capturing a size effect.

Second, we provide empirical evidence on the impact of advertising on fund flows. Our data set allows us to decompose net flows in purchase and redemption flows. Interestingly, fund advertising has a positive and statically significant effect on net flows, and no effect on fund purchases.

Third, economic significance analysis shows that, also controlling for fund visibility, historical performance and category fund flows are the most important drivers of fund flows.

The rest of the paper is organized as follows. Section II describes the data set. Section III discusses empirical results both in terms of statistical significance and economic significance. Conclusions are presented in Section IV.

II. DATA DESCRIPTION

The data set used in this study refers to the Italian mutual fund industry and includes four basic types of information: mutual fund flows and characteristics, mutual fund returns, advertising expenditure, and media coverage. Consequently, our master data set combines four primary data sets.

The first data set includes the following information for each fund on a monthly basis: mutual fund classification variables (fund name, ISIN code, fund category, fund-family identifier, and other cross-sectional parameters), money inflows (i.e., total euro value of fund purchases), money outflows (i.e., total euro value of fund redemptions), total net assets (i.e., total euro value of each fund's portfolio). The sample period is from January 1, 1999 to February 29, 2004. This data set has been provided by *Assogestioni* (i.e., the Italian investment companies trade association).

The second data set includes net asset values (NAVs) or the *per share* value of a funds' portfolio on a monthly basis, along with date and amount of all income distributions, for all funds in our sample. Moreover, we also gathered data on stock and bond market indices in order to construct market returns variables. All those data were collected from Thomson Financial-Datastream database for the period from January 1, 1999 to February 29, 2004.

The third data set relates to advertising effort done by investment companies in the Italian mutual fund market. One could consider straight advertising expenditures as proxies for advertising efforts. However, such values would be affected by investment company-specific market power. This implies that different investment companies with the same value of advertising expenditures could in fact have been producing different advertising efforts, due to different per unit price of advertising that they may have paid. To overcome this possible problem, as a proxy for advertising effort we consider advertising gross rating points (GRP's), instead of considering straight advertising expenditures. GRP's are the product of *reach* times *frequency*. Reach is the number of different individuals (belonging to a specific customers' target) who are exposed to an advertising message during a specified period of time. Frequency is the number of

times that an individual is exposed to an advertising message during a specified period of time. GRP's is a measure of the total amount of the advertising exposures produced by a specific media vehicle during a specific period of time. We purchased GRP's data on the Italian mutual fund market from A.C. Nielsen Company, a private data vendor specialized in the measurement of media audience and advertising. We obtained GRP's data on a monthly basis for TV, newspapers and magazines for the period from January 1, 2002 to December 31, 2003.

The fourth data set relates to media attention.[1] To measure media coverage, we search for references to each mutual fund investment company (under its current and prior names) in the period from January 1, 2002 to December 31, 2003 in the following periodicals: *Il Sole 24 Ore*, *Milano Finanza*, *Il Mondo*, *Corriere Economia* (weekly supplement to *Il Corriere della Sera*). The list of periodicals was selected on the basis of their focus on financial themes and their circulation figures in Italy. Table 1 shows the list of publication sources as well as the number of articles from each publication. We located a total of 7,232 articles.[2]

Next, we classified each of the 7,232 articles in terms of its posture toward the investment company by assigning an individual grade. Each grade has been assigned on a scale from -5 to +5 (zero included) after considering the following elements for each article: the general attitude toward the investment company mentioned in the article, the length of the article, the position within the periodical, the presence of tables, graphs or pictures. To ensure homogeneity in the evaluation policy across research assistants, we established a grading protocol at the outset. Table 2 displays the grading protocol.

[1] Two research assistants hand-collected and cross-checked all information included in this data set.

[2] Originally we found over 13,000 articles after searching for the name of each investment company. Next, we removed all articles not dealing with asset management-related themes (e.g., news related to investment company accounts and/or corporate issues).

III. EMPIRICAL ANALYSES

A. Univariate Analysis: The Flows-Performance Relation

Figure 1 shows the relation between relative returns and mutual fund flows. As in Sirri and Tufano (1998), for each month and objective category, funds are ranked into one of twenty bins on the basis of their realized one-year return. The graph plots the average fund flow for the month following the one-year period for the funds that comprise each of the twenty performance groups (vintiles). The results are striking. There is a clear positive relation between realized returns and fund flows. Moreover, there is a market bonus for high realized returns: the performance-flow relation is very strong for funds whose historical performances place them in the top two deciles. By contrast, there is no similarly pronounced penalty for extremely poorly performing funds. This is evidence of an asymmetric (or nonlinear) flow-performance relation.

This evidence is entirely consistent with that presented in previous studies on the U.S. mutual fund market. A general positive relation between performance and flows has been shown in past research. More precisely, a number of studies report a positive *nonlinear* performance-flow relation (Ippolito, 1992; Chevalier and Ellison, 1997; Sirri and Tufano, 1998; Barber, Odean, and Zheng, 2002; Nanda, Wang, and Zheng, 2004).

The interpretation of this univariate plot may be misleading. Best performing funds could also be less costly funds: assuming that fees drive fund flows, what is this plot telling us? Fund investors are attracted by strong relative performance or lower costs? These concerns naturally lead us to use multivariate analysis to disentangle these effects.

B. Multivariate Analysis

B.1 Dependent Variables

Since we are able to directly observe mutual fund inflows and outflows we compute three measures of mutual fund flows.

First, for sake of comparability with other studies, we compute net fund flows in percentage of fund total net assets (relative net flows, *RNF*) as:

$$RNF_{i,t} = 100 \cdot \frac{IF_{i,t} - OF_{i,t}}{TNA_{i,t-1}} \qquad [1]$$

where $TNA_{i,t}$ is the fund *i*'s total net assets at the end of month *t*, $IF_{i,t}$ is the money inflow (purchases) for fund *i* in month *t*, $OF_{i,t}$ is the money outflow (redemptions) for fund *i* in month *t*.

Second, we compute fund purchases in percentage of fund total net assets (relative inflows, *RIF*) as:

$$RIF_{i,t} = 100 \cdot \frac{IF_{i,t}}{TNA_{i,t-1}} \qquad [2]$$

Third, we compute fund redemptions in percentage of fund total net assets (relative outflows, *ROF*) as:

$$ROF_{i,t} = 100 \cdot \frac{OF_{i,t}}{TNA_{i,t-1}} \qquad [3]$$

Tables 3, 4, and 5 report summary statistics for, respectively, the *RNF*, *RIF*, and *ROF* variables.

B.2 Explanatory Variables

In examining the determinants of mutual fund flows we consider the following factors: fund performance, past fund flows, fund category flows, size of the fund, media coverage, advertising.

Mutual fund flows are sensitive to historical returns. As a measure of return, we use each fund's raw return ranking relative to other funds within the same investment objective. Fund ranking information are commonly reported in the financial press and, therefore, are easily available for fund investors. Moreover, as shown in Kempf and Ruenzi (2004), ordinal measures of performance (i.e., ranks) are able to explain mutual fund flows much better than cardinal measures (i.e., return figures).

We compute fund ranking as follows. First, we construct a raw monthly return series for each mutual fund. Then, we calculate cumulative returns for each fund over a one-year historical horizon. For each month and each investment category, these returns are ordered, and each fund is assigned a rank ranging from 0 (poorest performance) to 1 (best performance). Since we are interested in detecting asymmetric responses to high and low performance, we construct dummy variables based on performance quintiles, which allows us to separately calculate the sensitivity of fund flows to fund performance in each performance quintiles.

Funds might benefit from positive spillover effects if there are other funds in the same family that show a top performance (Nanda, Wang, and Zheng, 2004). To control for this effect, we add a dummy variable ($STAR$) to our model. The dummy equals one if at least *a fund* in its family belongs to the top performers quintile. This star-identifying scheme implies that, when a fund belongs to the top performers quintile, the total marginal effect on fund flows derive from the sum of the star dummy coefficient and the performance quintile coefficient. When a fund is not a star itself but is affiliated with a star family, the dummy coefficient measures the marginal effect on fund flows of being in a star family.

We expect current fund flows to be (auto)correlated with previous period fund flows due to the possible presence of arrangements such as regular contributions to retirement accounts or personal contribution plans. We control for this effect with a lagged flow variable.

We also expect current fund flows to be affected by the aggregate level of money flows to the fund objective category. We control for this effect with a variable measuring the aggregate value of money flows to all funds belonging to the fund objective category.

The size of the fund is also expected to affect mutual fund flows. Larger funds reasonably grow at a lower rate than smaller funds. In our specification we include the natural log of the total net assets of the fund in the previous month as a control factor.

Fund expenses could also affect fund flows. Therefore, we also consider fund total fees, measured by fund total expense ratio (TER), in our regression specifications.

The impact of media coverage on fund flows will be tested with the inclusion of two explanatory variables in our model. First, we consider the number of news articles mentioning the name of the investment company as an indicator of media attention. Second, we consider the average grade on those articles as a proxy of media attitude toward the investment company.

If fund advertising reduces search costs and influences investors learning about a fund, we expect mutual fund flows to be affected by fund advertising. To assess the effect of advertising on fund flows we include the previous month GRPs in our empirical specification.

B.3 Regression Results

Table 6 reports OLS estimates for three model specifications of the relative net flows (RNF) variable. Estimation results, both in terms of signs and statistical significance, are highly consistent with previous studies.

We find evidence for a positive and asymmetric influence of past performance on mutual fund flows. Investors chase past winners, and do not sell past losers at the same rate.

The impact of the aggregate flow to the fund category is positive and statistically significant. This implies that individual fund flows are strongly related to sectoral flows. The coefficient on the lagged variable shows a positive, albeit weak, persistence in flows: individual fund flows tend to be positively autocorrelated.

Investors do not seem to be fee-sensitive: the fund fee parameter is not statistically significant. This is consistent with the evidence presented by Barber, Odean, and Zheng (2002). Fund investors seem blinded by exceptional historical performance and 'other factors', and pay minor attention to fund fees. In this paper we try to understand if the 'other factors' driving investors attention are media coverage and advertising.

To control for fund size, which is expected to be related to be negatively related to fund flows, model (A) include a lagged fund total net assets variable. The estimated parameter is negative and statistically significant. In model (B) we add the previous month number of articles as explanatory variable. With this specification we find no statistically significant relation between the extent of media coverage and fund flows. However, this result is mainly driven by the fact that media coverage is positively related to fund size, which is already included in the estimated model. When we remove the fund size variable in model (C), the parameter on media coverage extent becomes negative and statistically significant. We interpret the negative sign associated with the number of articles as capturing a size effect.

Table 7 reports OLS estimates for three additional model specifications of the relative net flows (RNF) variable. In Table 7 we include media coverage and advertising variables, along with a star dummy to test for spillover effects within star families.

Model (A) include both the extent of media coverage and the average grade on the news articles appeared in the previous month. The extent of media coverage still has a negative sign, whereas the average grade parameter is positive and statistically significant. In model (B) we consider both media coverage and advertising variables: the effect of advertising is positive and statistically significant, while media coverage proxies are unaffected by the inclusion of this additional variable.In model (C) we add the star dummy. Consistent with Nanda, Wang, and Zheng (2002) we find that funds belonging to star families receive higher net flows. Signs, magnitude and significance of all other parameters are unaffected.

Table 8 reports OLS estimates for three model specifications of the relative purchase flows or inflows (RNF) variable. Estimation results, both in terms of signs and statistical significance, are highly consistent with previous results on net flows. There is one important difference: the advertising factor is no more statistically significant. All other parameters show the same sign and statistical significance, across all three models, as in Tables 6 and 7.

B.4 Economic Significance Analysis

Please refer to Table 9.

Comments: to be done.

IV. SUMMARY AND CONCLUSIONS

In this study we examine the relation between visibility and mutual fund flows. Previous research shows that past fund performance, return volatility, fees and other non-performance-related fund characteristics influence mutual fund flows. The impact of fund visibility on flows is a relatively unexplored issue. The only exceptions we are aware of are Sirri and Tufano (1998), Jain and Wu (2000), Gallaher, Kaniel, and Starks (2004), and Kaniel, Starks, and Vasudevan (2004). They separately look at the impact of media coverage *or* advertising on fund flows. In this paper we jointly consider both factors.

We construct a hand-collected database of news articles. We collected and analyzed over 7,000 news articles appeared on daily and weekly periodicals. For each article the attitude toward the investment company has been evaluated according to a pre-specified grading protocol.

Our results confirm previously documented evidence and add new insights on the explanation of mutual fund investors behavior. We find that media coverage affects mutual fund flows. Specifically, the stance of media coverage influences fund flows: articles with a positive (negative) tone increase (decrease) fund flows. The number of articles mentioning the fund, that proxies the extent of media coverage, is negatively related to fund flows. Since the extent of media coverage is positively related to fund size and fund flows are decreasing in fund size, we interpret the negative sign associated with the number of articles as capturing a size effect.

Our data set allows us to decompose net flows in purchase and redemption flows. Interestingly, fund advertising has a positive and statically significant effect on net flows, and no effect on fund purchases. This could imply that the positive effect on fund flows derives from discouraging fund investors to sell fund shares, more than encouraging them to purchase fund shares. Further investigation on this point is needed.

The empirical analysis also controls for variables that have been previously found to be associated with mutual fund flows, such as historical performance, fund category flows, fund size, and fund fees. The impact of the control variables is

highly consistent with previous studies both in terms of direction and statistical significance. Specifically, we confirm previous results on the performance-flows relation. We document an asymmetric response of fund investors to historical fund performance. The addition of media coverage and advertising to the empirical specification does not affect the performance-flow relation.

Economic significance analysis shows that, also controlling for fund visibility, historical performance and category fund flows are the most important drivers of fund flows. This implies that, although investors learn about funds on the media, fund performance ranking and sectoral flows still play the most important role to foster individual mutual fund flows.

REFERENCES

Barber, B.M., Odean, T., Zheng, L. (2002), Out of Sight, Out of Mind: The Effects of Expenses on Mutual Fund Flows, Working Paper University of California at Davis, Davis (CA).

Chevalier, J., Ellison, G. (1997), Risk Taking by Mutual Funds as a Response to Incentives, *Journal of Political Economy* **105**, 1167-1200.

Gallaher, S., Kaniel, R., Starks, L. (2004), Madison Avenue Meets Wall Street: Mutual Fund Families, Competition and Advertising, Working Paper University of Texas, Austin (TX).

Gruber, M.J. (1996), Another Puzzle: The Growth in Actively Managed Mutual Funds, *Journal of Finance* **51**, 783-810.

Huang, J., Wei, K.D., Yan, H. (2004), Volatility of Performance and Mutual Fund Flows, Working Paper University of Texas, Austin (TX).

Ippolito, R.A. (1992), Consumer Reaction to Measures of Poor Quality: Evidence from the Mutual Fund Industry, *Journal of Law and Economics* **35**, 45-70.

Jain, P.C., Wu, J.S. (2000), Truth in Mutual Fund Advertising: Evidence on Future Performance and Fund Flows, *Journal of Finance* **55**, 937-958.

Kaniel, R., Starks, L., Vasudevan, V. (2004), Headlines and Bottom Lines: Media Coverage and Mutual Funds, Working Paper Fuqua School of Business, Duke University, Durham (NC).

Kempf, A., Ruenzi, S. (2004), Family Matters: The Performance Flow Relationship in the Mutual Fund Industry, Working Paper University of Cologne, Koeln.

Nanda, V., Wang, Z., Zheng, L. (2004), Family Values and the Star Phenomenon: Strategies of Mutual Fund Families, *Review of Financial Studies* **17**, 667-698.

Sirri, E., Tufano, P. (1998), Costly Search and Mutual Fund Flows, *Journal of Finance* **53**, 1589-1622.

Figure 1 – Performance and Fund Flows

For each month and each investment category, funds are ranked into one of twenty bins on the basis of their realized one-year return ('Historical performance ranking' on the *x* axis). For each of these 20 groups, the fund mean net flows in percentage of fund total net assets is calculated ('Net flows' on the *y* axis).

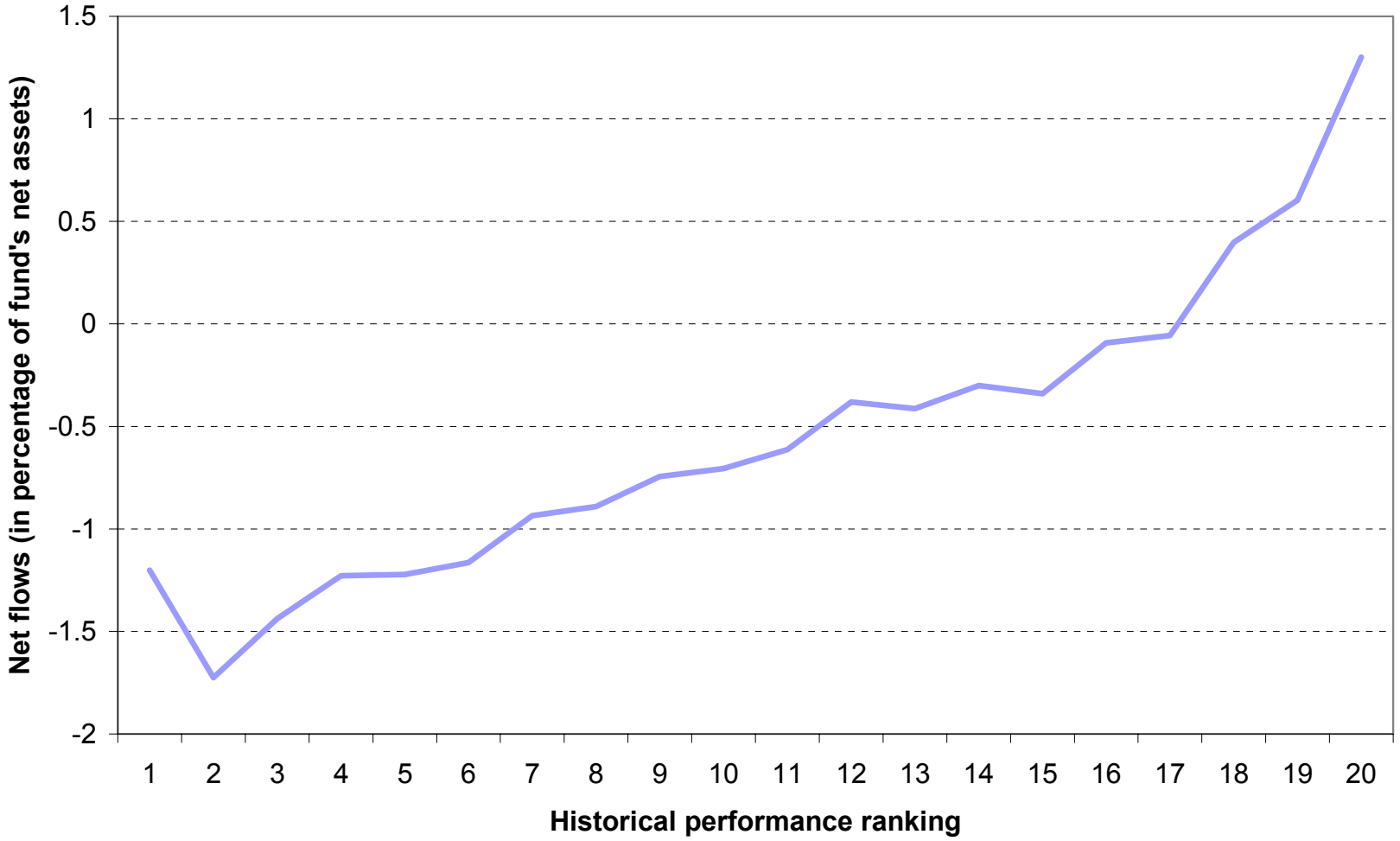

Table 1 – Descriptive Statistics for News Articles

This table reports the list of periodicals included in the media coverage analysis, along with the absolute and relative frequency of articles *per* periodical.

Periodical (frequency of publication)	# of articles	%
Il Sole 24 Ore (daily)	4,014	55.5
Milano Finanza (weekly)	1,069	14.8
Il Mondo (weekly)	1,351	18.7
Corriere Economia (weekly)	798	11.0
Total News Articles	7,232	100.0

Table 2 – Grading Protocol

This table summarizes the criteria used in grading the news articles.

Attitude toward the investment company	Typical content of the article	Grade
Very positive	Articles praising asset management capabilities	From +3 to +5
Positive	Articles featuring mutual funds rankings or interviews to asset managers	From +1 to +2
Neutral	Articles mentioning the investment company with no particular attitude	0
Negative	Articles citing the investment company for funds underperformance	From -1 to -2
Very negative	Articles mentioning the investment company for mismanagement or strong underperformance	From -3 to -5

Table 3 - Descriptive Statistics for Net Flows

This table reports summary statistics for the relative net flows (RNF) variable computed according to equation [1] in the body of the text. Statistics in Panel A refers to the full sample, in Panel B to the sample partitioned by category, in Panel C to the sample partitioned by Assogestioni's subcategory.

Variable: RNF	# of funds	Mean	Std Dev	Median	Min	Max
Panel A: Full Sample						
All funds	643	-0.86	2.84	-0.74	-13.75	8.44
Panel B: Sample by category						
Equity funds	361	-0.54	2.72	-0.47	-13.75	7.98
Fixed income funds	243	-1.70	2.80	-1.67	-11.42	6.90
Money market funds	39	1.34	2.48	1.38	-4.61	8.44
Panel C: Sample by Assogestioni's subcategory						
US equity funds	52	0.25	2.59	0.65	-13.75	4.81
Euro area equity funds	19	-0.30	1.37	-0.53	-3.57	2.28
European equity funds	71	-1.06	3.62	-0.64	-13.40	6.88
International equity funds	85	-0.41	2.31	-0.30	-7.22	7.98
Italian equity funds	79	-0.84	2.15	-0.59	-12.88	4.85
Japanese equity funds	7	-0.50	1.64	-1.18	-1.99	2.16
Pacific ex Japan equity funds	48	-0.45	3.17	-0.85	-13.75	7.69
Short term euro gov bond funds	87	-0.51	2.70	-0.46	-9.36	6.24
Intermediate-long euro gov bond funds	89	-2.24	3.00	-2.09	-11.13	6.90
International gov bond funds	67	-2.53	2.06	-2.40	-11.42	1.38
Money market funds	39	1.34	2.48	1.38	-4.61	8.44

Table 4 - Descriptive Statistics for Purchase Flows

This table reports summary statistics for the relative purchase flows or relative inflows (RIF) variable computed according to equation [2] in the body of the text. Statistics in Panel A refers to the full sample, in Panel B to the sample partitioned by category, in Panel C to the sample partitioned by Assogestioni's subcategory.

Variable: RIF	# of funds	Mean	Std Dev	Median	Min	Max
Panel A: Full Sample						
All funds	643	4.28	3.09	3.57	0.00	28.53
Panel B: Sample by category						
Equity funds	361	3.73	2.64	3.14	0.00	28.53
Fixed income funds	243	4.23	2.66	3.71	0.05	14.66
Money market funds	39	9.74	4.12	9.72	3.08	20.28
Panel C: Sample by Assogestioni's subcategory						
US equity funds	52	4.64	2.05	4.71	0.23	9.52
Euro area equity funds	19	3.90	1.85	3.94	1.26	9.21
European equity funds	71	3.36	2.24	2.77	0.00	10.61
International equity funds	85	3.16	2.18	2.62	0.14	10.52
Italian equity funds	79	3.50	3.32	3.00	0.27	28.53
Japanese equity funds	7	6.73	1.78	6.14	4.62	8.94
Pacific ex Japan equity funds	48	4.15	3.10	3.33	0.37	12.39
Short term euro gov bond funds	87	5.62	2.73	5.12	0.07	12.28
Intermediate-long euro gov bond funds	89	3.73	2.25	3.65	0.05	11.85
International gov bond funds	67	3.09	2.31	2.79	0.08	14.66
Money market funds	39	9.74	4.12	9.72	3.08	20.28

Table 5 - Descriptive Statistics for Redemption Flows

This table reports summary statistics for the relative redemption flows or relative outflows (ROF) variable computed according to equation [3] in the body of the text. Statistics in Panel A refers to the full sample, in Panel B to the sample partitioned by category, in Panel C to the sample partitioned by Assogestioni's subcategory.

Variable: ROF	# of funds	Mean	Std Dev	Median	Min	Max
Panel A: Full Sample						
All funds	643	5.14	3.10	4.65	0.25	28.66
Panel B: Sample by category						
Equity funds	361	4.26	2.86	3.80	0.25	28.66
Fixed income funds	243	5.93	2.69	5.46	0.50	16.58
Money market funds	39	8.39	4.09	7.64	1.98	19.15
Panel C: Sample by Assogestioni's subcategory						
US equity funds	52	4.39	2.61	4.50	0.33	15.70
Euro area equity funds	19	4.19	1.44	4.74	1.14	6.93
European equity funds	71	4.42	3.04	3.68	0.51	14.86
International equity funds	85	3.56	2.13	2.99	0.77	10.01
Italian equity funds	79	4.34	3.41	3.94	0.89	28.66
Japanese equity funds	7	7.23	2.51	6.26	3.98	10.86
Pacific ex Japan equity funds	48	4.58	3.20	4.00	0.25	15.22
Short term euro gov bond funds	87	6.13	2.73	5.73	1.29	16.58
Intermediate-long euro gov bond funds	89	5.97	2.67	5.46	0.50	16.12
International gov bond funds	67	5.63	2.70	5.32	0.66	15.78
Money market funds	39	8.39	4.09	7.64	1.98	19.15

Table 6 - Determinants of Mutual Fund Net Flows (part I)

This table reports OLS estimates from pooled regressions of the relative net flows (RNF) as dependent variable. Refer to the body of the text for the definition of the explanatory variables. The frequency of observations is monthly.

		(A)	(B)	(C)
Dependent Variable:		RNF	RNF	RNF
Indipendent Variables:				
Intercept	Par	0.95	1.33	0.13
	T-stat	5.63	5.82	0.86
	P-value	0.00	0.00	0.39
RNF (t-1)	Par	0.00	0.01	0.01
	T-stat	2.19	7.33	7.34
	P-value	0.03	0.00	0.00
Flows to fund category [x 10^4]	Par	0.37	0.48	0.45
	T-stat	21.87	22.10	21.14
	P-value	0.00	0.00	0.00
Lagged fund total net assets	Par	-0.22	-0.22	
	T-stat	-9.15	-7.01	
	P-value	0.00	0.00	
Total fees	Par	0.43	-1.47	0.12
	T-stat	0.84	-1.94	0.17
	P-value	0.40	0.05	0.87
Performance quintile 1	Par	-1.71	-1.40	-1.39
	T-stat	-14.22	-9.28	-9.20
	P-value	0.00	0.00	0.00
Performance quintile 2	Par	-1.11	-1.02	-1.07
	T-stat	-9.55	-7.62	-8.01
	P-value	0.00	0.00	0.00
Performance quintile 4	Par	0.03	0.29	0.24
	T-stat	0.23	1.99	1.68
	P-value	0.82	0.05	0.09
Performance quintile 5	Par	1.07	1.93	1.79
	T-stat	8.68	8.28	7.70
	P-value	0.00	0.00	0.00
Media coverage: lagged # of articles	Par		0.00	-0.02
	T-stat		-0.57	-2.19
	P-value		0.57	0.03
	F-test	126.61	89.58	94.26
	Prob > F	0.00	0.00	0.00
	Adj R^2	0.04	0.06	0.06
	# of obs	21,589	11,611	11,611

Table 7 - Determinants of Mutual Fund Net Flows (part II)

This table reports OLS estimates from pooled regressions of the relative net flows (RNF) as dependent variable. Refer to the body of the text for the definition of the explanatory variables. The frequency of observations is monthly.

		(A)	(B)	(C)
Dependent Variable:		RNF	RNF	RNF
Indipendent Variables:				
Intercept	Par	-0.10	-0.05	-0.11
	T-stat	-0.65	-0.28	-0.69
	P-value	0.52	0.78	0.49
RNF (t-1)	Par	0.01	0.01	0.01
	T-stat	7.08	7.09	7.13
	P-value	0.00	0.00	0.00
Flows to fund category [x 10^{4}]	Par	0.45	0.45	0.45
	T-stat	20.90	20.98	20.74
	P-value	0.00	0.00	0.00
Total fees	Par	0.40	0.59	0.30
	T-stat	0.54	0.81	0.41
	P-value	0.59	0.42	0.68
Performance quintile 1	Par	-1.35	-1.37	-1.45
	T-stat	-8.77	-8.89	-9.32
	P-value	0.00	0.00	0.00
Performance quintile 2	Par	-1.06	-1.06	-1.06
	T-stat	-7.80	-7.86	-7.83
	P-value	0.00	0.00	0.00
Performance quintile 4	Par	0.24	0.24	0.23
	T-stat	1.64	1.68	1.61
	P-value	0.10	0.09	0.11
Performance quintile 5	Par	1.83	1.86	1.59
	T-stat	7.74	7.85	6.42
	P-value	0.00	0.00	0.00
Star dummy	Par			0.40
	T-stat			3.64
	P-value			0.00
Media coverage: lagged # of articles	Par	-0.01	-0.03	-0.04
	T-stat	-1.83	-3.48	-4.08
	P-value	0.07	0.00	0.00
Media coverage: lagged avg grade	Par	0.25	0.25	0.25
	T-stat	3.30	3.22	3.29
	P-value	0.00	0.00	0.00
Advertising: lagged GRPs [x 10^{2}]	Par		0.40	0.40
	T-stat		3.46	3.47
	P-value		0.00	0.00
	F-test	81.51	74.63	69.12
	Prob > F	0.00	0.00	0.00
	Adj R^2	0.06	0.06	0.06
	# of obs	11,025	11,025	11,025

Table 8 - Determinants of Mutual Fund Purchase Flows

This table reports OLS estimates from pooled regressions of the relative purchase flows or inflows (RIF) as dependent variable. Refer to the body of the text for the definition of the explanatory variables. The frequency of observations is monthly.

		(A)	(B)	(C)
Dependent Variable:		RIF	RIF	RIF
Indipendent Variables:				
Intercept	Par	4.87	4.87	4.84
	T-stat	31.82	31.72	31.38
	P-value	0.00	0.00	0.00
RIF (t-1)	Par	0.01	0.01	0.01
	T-stat	10.09	10.09	10.10
	P-value	0.00	0.00	0.00
Flows to fund category [x 10^{a}]	Par	0.43	0.43	0.43
	T-stat	14.59	14.59	14.45
	P-value	0.00	0.00	0.00
Total fees	Par	-0.15	-0.18	-0.36
	T-stat	-0.16	-0.19	-0.38
	P-value	0.87	0.85	0.70
Performance quintile 1	Par	-1.20	-1.20	-1.23
	T-stat	-8.87	-8.86	-9.02
	P-value	0.00	0.00	0.00
Performance quintile 2	Par	-1.00	-1.00	-0.99
	T-stat	-8.42	-8.42	-8.40
	P-value	0.00	0.00	0.00
Performance quintile 4	Par	0.02	0.02	0.01
	T-stat	0.15	0.15	0.11
	P-value	0.88	0.88	0.91
Performance quintile 5	Par	1.56	1.56	1.45
	T-stat	7.51	7.51	6.67
	P-value	0.00	0.00	0.00
Star dummy	Par			0.17
	T-stat			1.76
	P-value			0.08
Media coverage: lagged # of articles	Par	-0.04	-0.04	-0.04
	T-stat	-6.74	-5.39	-5.62
	P-value	0.00	0.00	0.00
Media coverage: lagged avg grade	Par	0.35	0.35	0.36
	T-stat	5.32	5.32	5.35
	P-value	0.00	0.00	0.00
Advertising: lagged GRPs [x 10^{c}]	Par		-0.03	-0.03
	T-stat		-0.25	-0.25
	P-value		0.80	0.80
	F-test	139.81	128.15	118.55
	Prob > F	0.00	0.00	0.00
	Adj R^2	0.12	0.12	0.12
	# of obs	11,025	11,025	11,025

Table 9 - Economic Significance Analysis for Purchase Flows Determinants

This table reports the economic significance analysis for purchase flows determinants. Only statistically significant variables, at conventional levels, have been considered.

					Marginal effect of	
	Parameter	P-value	Avg	Std Dev	+1 Std Dev	dummy=1
Indipendent Variables:						
RIF (t-1)	0.01	0.00	5.44	33.15	0.43	
Flows to fund category	0.000043	0.00	-538.31	23882.29	1.02	
Total fees	-0.36	0.70	-	-		
Performance quintile 1	-1.23	0.00	-	-		-1.23
Performance quintile 2	-0.99	0.00	-	-		-0.99
Performance quintile 4	0.01	0.91	-	-		0.01
Performance quintile 5	1.45	0.00	-	-		1.45
Star dummy	0.17	0.08	-	-		0.17
Media coverage: lagged # of articles	-0.04	0.00	7.87	6.99	-0.31	
Media coverage: lagged avg grade	0.36	0.00	0.55	0.67	0.24	
Advertising: lagged GRPs	-0.0003	0.80	-	-		