Mutual Fund Flow and Past Information: Is the Brazilian Investor Smart?[1]

Gyorgy Varga
varga@fce.com.br
FCE Consulting
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This article shows evidence of the Smart Money Effect in Brazil. The evidence is located in funds for qualified investors and managed by independent companies not banks. This is the first study to separate the SME among different types of money managers.

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1. Introduction

It is well know that investors pursue past performance (Sirri and Tufano 1998) and invest in funds with above average past performance. There is also a large literature trying to forecast performance based on past performance with no conclusive results. This study goes further in investigating whether or not the new investment flows indicate high future performance. High past performance induce high new flow but not all new flow goes to these funds. Therefore high future performance maybe found in funds with high inflow. Gruber (1996) has launched the Active Fund Puzzle, which asks the question on why investors put money in funds if on average their performance is below indexed funds. The answer could be some performance predictability. If it is the case then new flows goes to good future performance funds! Zheng (1999) has looked in more detail whether it is true. Gruber (1996) and Zheng(1999) have generated the term "Smart Money Effect" (SME) which attributes an abnormal return to funds that receive new money.

Others like Sawicki et alli (2002) have attributed the SME to Small Funds, Sapp and Tiwari (2004) have attributed the SME to Momentum factor. Ding et alli. (2009) have shown that SME only predicts performance on funds without share restrictions. More detailed explanations on the SME have been provided by Grinblatt et alli. (2010) based on investors IQ. Niebling et alli. (2010) explain SME based on investors wealth, age and

[1] The author the comments from seminar participants at Global finance conference 2011, Portuguese Finance Network 2012, ENANPAD 2011; and Maxim Wengert (Quantum fundos), Leonardo Garrido (Quanutm), Laura Andreu (University of Zaragoza). The whole sample used in this article is available at the author personal page www.fce.com.br/gv for download.

experience, also show that financial advices only improve fund selection if initial charges are taken in account and smart investors realizes on average an abnormal return of 127 bps per year. Vicente et alli. (2011) find that buying decisions are smarter than selling decisions. Salganik (2012) find evidence of SME in institutional and retail funds. Frazzini and Lamont (2008) find evidence of SME only in short term.

The SME has been investigated in some local markets like Australia by Gharghori et alli. (2007), they find smart money effect in Australia and it is not explained by momentum neither conditional on fund size. Keswani and Stolin (2008) find evidence of SME in UK. Vicente et alli. (2011) also find evidence investors selection ability in Spain.

This article investigates the local investor's ability to select active funds in Brazil. This a peculiar mutual fund industry with a large information disclosure[2], no distinction between mutual fund and hedge funds, mostly domestic investors and domestic assets. This investigation is based on the same analysis of Zheng (1999) to the Brazilian mutual fund industry. Due to the large information available it is possible to separate the investors in three types: qualified investors, investors in general and exclusive funds. The first one is defined as any financial company, insurance company, or pension fund with assets above BRL5 million, and any individual investor with more than BRL250,000 invested in the fund or over BRL5 million in personal financial assets. The second one is any ordinary investor. The third one, exclusive funds, where monies come from only one investor or from a restricted portion of the public, have external managers which decide on the portfolio allocation in general and they are only a vehicle with the objective of lowering transactions costs.

This is a contribution to the international literature on market efficiency because it shows evidence of the SME, furthermore it shows evidence that SME is significant on more sophisticated investors (qualified investors) and not on ordinary investors (investors in general) and the first article to separate SME among different types of fund managers.

The article is organized as following. The second section describes the performance tools used, the third section describes the Brazilian mutual industry and the sample used the forth section shows the results and the fifth and last section the conclusion.

2. Portfolio performance tools

To examine the smart money hypotheses two tests are implemented. The first one based on Grinblatt and Titman (1993) to check if investors move money to funds with future superior performance. The second is to evaluate if the new money flow could be to make abnormal returns. The latter is done testing the risk adjusted return of eight different trading strategies described in Zheng (1999).

The Grinblatt and Titman – GT article introduces a performance measure to estimate investors ability to select funds without the use of benchmark. It measures the return of a zero cost portfolio of funds.

[2] All funds are obliged to register and provide full information on daily quotes mark to market, portfolio holdings, type of investor, etc…

$$GT_t = \sum_{j=1}^{N} R_{j,t+1}\left(w_{j,t} - w_{j,t-1}\right) \tag{1}$$

where $w_{j,t}$ is the portfolio weight on fund j at time t and $R_{j,t}$ is the fund j return on time t.

Under the null hypothesis that investors do not have superior ability GT converges to zero. This measure is equivalent to the covariance between current portfolio holding and future performance:

$$\operatorname{cov}\left(w_j, R_j\right) = \sum_{j=1}^{N}\left(E\left[w_j R_j\right] - E\left[w_j\right]E\left[R_j\right]\right) = \sum_{j=1}^{N} E\left[\left(w_j - E\left[w_j\right]\right)R_j\right]$$

The sample covariance is:

$$\operatorname{scov}\left(w_j, R_j\right) = \sum_{t=1}^{T}\frac{\left(w_{j,t} - \overline{w}_j\right)R_{j,t}}{T} \tag{2}$$

To avoid unbiased estimates in small samples that come from contrarian strategies (see GT pag 51) the returns and weights shouldn't be contemporaneous. Therefore GT uses current returns and past weights. Under the null hypothesis of no superior ability it converges to zero.

Summing over all funds the GT performance measure is:

$$GT = \sum_{j=1}^{N}\sum_{t=1}^{T}\frac{\left(w_{j,t} - w_{j,t-1}\right)R_{j,t}}{T} \tag{3}$$

The GT measure does not allow a direct profitable strategy, but Zheng (1999) proposes eight different strategies that allow an easy and straightforward implementation for any investor. The strategies consist in arranging portfolios of available funds with long positions only. The eight trading strategies are:

1. Equally distributed in all available funds.
2. In all available funds and weighted by AUM.
3. Equally in all available funds with positive new flow.
4. Equally in all available funds with negative new flow.
5. In all available funds with positive new flow and weighted by the fund's new money.

6. In all available funds with negative new flow and weighted by the fund's new money.
7. Equally in all available funds with above median new flow.
8. Equally in all available funds with below median new flow.

The new flow is defined based on:

$$NF_{i,t} = \frac{AUM_{i,t} - AUM_{i,t-1}\left(1 + R_{i,t}\right)}{AUM_{i,t-1}} \tag{4}$$

The portfolios are constructed at beginning of each month and rebalanced monthly according to the preceding new information. If a fund is created, it only enters in the sample in the next month. For each portfolio it is calculated their excess returns and its risk adjusted returns based on two Brazilian broad market indices.

To evaluate the risk adjusted returns of each strategy the Jensen's alpha is calculated based on one risk factor (5a) and a 4-factor models (5b) like in Carhart (1997):

$$R_{pt} - R_{ft} = \alpha_p + \beta_1\left(R_{mt} - R_{ft}\right) + e_{pt} \tag{5a}$$

$$R_{pt} - R_{ft} = \alpha_p + \beta_1\left(R_{mt} - R_{ft}\right) + \beta_2 R_{SMB,t} + \beta_3 R_{HML,t} + \beta_4 R_{MOM,t} + e_{pt} \tag{5b}$$

Where:
$R_{p,t}$ is the portfolio return on time *t*,
$R_{f,t}$ is the risk free rate on time *t*,
$R_{m,t}$ is the market return on time *t*,
$R_{SMB,t}$ is the return of the factor Small Minus Big on time *t*,
$R_{HML,t}$ is the return of the factor High Minus Low on time *t*,
$R_{MOM,t}$ is the return of the factor momentum on time *t*.

The SMB factor measures the return difference between a portfolio of small caps and a portfolio of big companies. The company size is measure by the market value (MV) and all stocks are separated in two groups according to their median MV. For each group a portfolio is weighted by their individual MV.

$$SMB_t = \mathbf{W}_a{}' \mathbf{R}_t \tag{6}$$

where

$$\mathbf{W}_a = \begin{bmatrix} w_{a,1} & w_{a,2} & \cdots & w_{a,n} \end{bmatrix}$$

$$w_{a,i} = \begin{cases} -MV_{a-1,i} \Big/ \sum_{i \varepsilon G_a} MV_{a-1,i} & se\ i \varepsilon G_a \quad ou \\ MV_{a-1,i} \Big/ \sum_{i \varepsilon P_a} MV_{a-1,i} & se\ i \varepsilon P_a \end{cases}$$

$$G_a = \left(i / MV_{a-1,i} > mediana\left\{MV_{a-1,i}\right\}\right)$$
$$P_a = \left(i / MV_{a-1,i} < mediana\left\{MV_{a-1,i}\right\}\right)$$

The MV of each company at each period *t* is based on the last Day of previous year.

The HML factor measures the difference between portfolios of companies with high book value/market value - BV/MV (BM) versus a portfolio with low BM. Again all stocks are ordered based on BM. The top 30% constitute the high portfólio and the low 30% the low portfólio.

$$HML_t = \mathbf{W}_a' \mathbf{R}_t \tag{7}$$

Where

$$\mathbf{W}_a = \left\lfloor w_{a,1} \;\; w_{a,2} \;\; \cdots \;\; w_{a,n} \right\rfloor$$

$$w_{a,i} = \begin{cases} -BM_{a-1,i} \Big/ \sum_{i \varepsilon G_a} BM_{a-1,i} & se\ i \varepsilon G_a \quad ou \\ BM_{a-1,i} \Big/ \sum_{i \varepsilon P_a} BM_{a-1,i} & se\ i \varepsilon P_a \end{cases}$$

$$G_a = \left(i / BM_{a-1,i} > mediana\left\{PM_{a-1,i}\right\}\right)$$
$$P_a = \left(i / BM_{a-1,i} < mediana\left\{PM_{a-1,i}\right\}\right)$$

The MV and BV of each company at each period *t* are based on the last day of previous year.

The MOM is the Momentum factor that measures the difference between a portfolio of past winning stocks minus a portfolio of past loser stocks. All stocks are ordered based on their previous year return. The top 30% constitute the winner portfolio and the low 30% the loser portfolio. The stocks on each portfolio are equally weighted.

$$MOM_t = \mathbf{W}_a' \mathbf{R}_t \tag{8}$$

Where

$$\mathbf{W}_a = \lfloor w_{a,1} \;\; w_{a,2} \;\; \cdots \;\; w_{a,n} \rfloor$$

$$w_{a,i} = \begin{cases} -\dfrac{1_i}{\sum_{i \varepsilon G_a} 1_i} & se\ i \varepsilon G_a \quad ou \\ \dfrac{1_i}{\sum_{i \varepsilon P_a} 1_i} & se\ i \varepsilon P_a \end{cases}$$

$$G_a = \left(i \,/\, Return_{t-1,i} > minimum\left(TOP30\%\left\{Return_{t-1,i}\right\}\right)\right)$$
$$P_a = \left(i \,/\, Return_{t-1,i} < maximum\left(Low30\%\left\{Return_{t-1,i}\right\}\right)\right)$$

3. Data and Brazilian Mutual Fund Industry

The sample in this study includes all actively managed equity funds in Brazil that started after April 2000 until Mai 2012. The returns are on a Monthly basis and net of all fees. The whole sample represents 7.4% of the total AUM of the mutual fund industry, 43.9% of the equity mutual industry's AUM at the end of December 2011, the other 56.1% of the AUM are indexed, private equity and sectorial funds. There are 995 funds a live, and 772 dead funds totaling 1,772 funds. The sample has all funds offered in Brazil and is free from survivorship bias. The data were provided by Quantum[3]. Table 1 shows a summary of this data.

	no. of live funds	AUM (BRL Billions)	no. of management companies
type of investor			
Qualified investor	200	16	168
Investors in general	320	14	173
Exclusive	475	59	102
Total	995	89	443
Industry total	11,715	2,748	463
% of industry	8.5%	3.2%	95.7%

Table 1. Summary of the sample on Brazilian active Brazilian equity funds. Source Quantum, as of December, 2011.

[3] The largest vendor of mutual fund data in Brazil, see www.quantumfundos.com.br.

The whole objective of this sample is to measure the fund flow resulting from the investor's decision. Therefore the sample should be clean of flows that come from fund closing, mergers or any other decision that does not come from the investor. The fund closing problem that generates survivorship bias is solved adding the dead funds.

To investigate further fake flows a filter based on AUM variation and daily return was implemented to detect any exaggerated variation. A total of 15 funds were withdrawn from the sample due to extremely high return (more than 100%), these funds accounted for 25% of the sample AUM and were mostly exclusive funds.

Besides the fund ownership another fund category has been included, fund of funds that are called FICs in Brazil. Their portfolio of equity funds are grouped per fund at each month as if one investor (the FIC) where the sole owner of the portfolio. All other assets of the portfolio are dismissed, because the only relevant information are the sales and purchases of equity funds.

Another relevant characteristic is the type of fund manager, according to Varga and Wengert (2010) the main mutual fund managers in Brazil are Commercial Banks (CB) and Independent Managers (IM). The latter one is pretty close to the *modus operandi* of international hedge funds.

Fund characteristics like small caps, growth, value, etc, are extremely difficult to distinguish because most of equity fund portfolios have a large portion of derivatives, which makes virtually impossible to determine the exact fund strategy.

Characteristics like the type of fund manager, CB and IM, may lead to different results with regards the SME, because the distribution channels and announced trading strategies are quite different, affecting the type of investor available to purchase the fund.

Three different risk models are used to evaluate performance. The first two, with only one factor (market) and the third one with the traditional Carhart's 4-factor model. The market factor used was the return on two stock market index: (1) the IBOVESPA which is a liquidity weighted index and (2) IBX which is weighted by market capitalization and therefore a less concentrated index. The market factor in the 4-Factor was the Ibovespa. Table 2, shows some statistics on factors.

Factor	Monthly mean	AnnualSTD
HML	0.03%	18%
SMB	0.52%	15%
Momentum	-0.17%	19%
Excess return_Ibovespa	-0.01%	27%
Excess return_IBX	0.37%	24%

Table 2. Average return and standard deviation of the factors.

These results are similar to Jordão and Moura (2011) for Brazil. The HML has high volatility and positive return, the SMB has the highest return and lowest volatility and momentum a negative return and the highest volatility.

4. Results

The first result is based on the investigation of all fund separated by the type of investor. The result in table 3, shows a positive and significant GT measure qualified investors and investors in general.

	No. Of Months	GT Measure	GT Measure %p.a.	t-Test Statistic
Investors in general	144	0.011%	0.126%	2.7
Qualified investor	144	0.021%	0.253%	3.3
Exclusive	144	0.032%	0.381%	0.9

Table 3. Performance measure for all type of investors and managers. Source: Quantum fundos.

The results in table 3 do allow the rejection of a null hypothesis of no superior performance based on GT performance measure.

A more realistic analysis of the SME is done with eight different trading strategies with the performance evaluation based on three different risk models.

Portfolios Strategy	Full sample Excess Return	Alpha1	Alpha2	Alpha3
1 equally distributed	0.0019	0.0019	-0.0017	0.0015
	nd	(1.64)	(-1.41)	(1.32)
	[0.09]			
2 all funds and weighted by AUM	0.0025	0.0024	-0.0009	0.0022
	(0.08)	(1.64)	(-0.71)	(1.46)
	[0.09]			
3 equally in all funds with positive new flow	0.0026	0.0026	-0.0009	**0.0024**
	(0.26)	(2.13)	(-0.76)	(1.96)
	[0.12]			
4 equally in all funds with negative new flow	0.0010	0.0009	-0.0026	0.0008
	(-0.3)	(0.84)	(-2.18)	(0.68)
	[0.05]			
5 all funds with positive new flow and weighted by AUM	0.0029	0.0028	-0.0004	0.0027
	(0.06)	(1.34)	(-0.24)	(1.27)
	[0.09]			
6 all funds with negative new flow and weighted by AUM	0.0018	0.0018	-0.0014	0.0016
	(0.01)	(0.95)	(-0.82)	(0.83)
	[0.06]			
7 equally in all funds with above median new flow	0.0025	0.0025	-0.0010	0.0022
	(0.25)	(2.07)	(-0.86)	(1.89)
	[0.12]			
8 equally in all funds with below median new flow	0.0009	0.0009	-0.0027	0.0007
	(-0.26)	(0.81)	(-2.17)	(0.65)
	[0.05]			

Table 4. Performance of trading strategies for the full sample. In the columns 2 to 5, the results are based on fund purchased by investors in general. In the second column there is the monthly average excess return against the market index, the third column is risk adjusted return using Ibovespa as market risk, the fourth column is the risk adjusted return using IBX as market risk and fifth column the 4-factor model. Bold numbers are significant at 5%.

According to table 4, the only statistically significant strategy was to invest equally in all funds with net positive flow. The performance is positive with an alpha of 24 basis points per year.

Portfolios	Investors in general				Qualified investor				Exclusive			
Strategy	Excess Return	Alpha1	Alpha2	Alpha3	Excess Return	Alpha1	Alpha2	Alpha3	Excess Return	Alpha1	Alpha2	Alpha3
1 equally distributed	0.0006	0.0006	**-0.0033**	0.0005	0.0039	**0.0039**	0.0004	0.0033	0.0018	0.0018	-0.0014	0.0016
	nd	(0.53)	(-2.73)	(0.43)	nd	(2.95)	(0.26)	(2.62)	nd	(1.39)	(-1.22)	(1.29)
	[0.04]				[0.18]				[0.07]			
2 all funds and weighted by AUM	0.0009	0.0009	**-0.0030**	0.0009	0.0036	0.0035	0.0002	0.0030	0.0022	0.0022	-0.0008	0.0019
	(0.07)	(0.76)	(-2.45)	(0.73)	(-0.04)	(2.26)	(0.12)	(1.94)	(0.02)	(1.18)	(-0.48)	(1.02)
	[0.05]				[0.14]				[0.06]			
3 equally in all funds with positive new flow	0.0026	**0.0025**	-0.0013	**0.0023**	0.0047	0.0047	0.0013	0.0041	0.0019	0.0018	-0.0015	0.0017
	(0.52)	(2.16)	(-1.05)	(1.99)	(0.16)	(3.17)	(0.85)	(2.85)	(0)	(1.28)	(-1.15)	(1.21)
	[0.15]				[0.19]				[0.07]			
4 equally in all funds with negative new flow	-0.0009	-0.0009	**-0.0048**	-0.0010	0.0031	0.0031	-0.0005	0.0027	0.0017	0.0017	-0.0015	0.0015
	(-0.58)	(-0.88)	(-3.97)	(-0.92)	(-0.15)	(2.51)	(-0.33)	(2.2)	(-0.01)	(1.23)	(-1.11)	(1.1)
	[-0.06]				[0.15]				[0.06]			
5 all funds with positive new flow and weighted by AUM	0.0033	**0.0033**	-0.0006	0.0032	0.0072	**0.0072**	0.0039	0.0067	0.0017	0.0017	-0.0015	0.0015
	(0.29)	(2.22)	(-0.38)	(2.1)	(0.22)	(3.91)	(2.3)	(3.67)	(-0.01)	(1.23)	(-1.11)	(1.1)
	[0.17]				[0.24]				[0.06]			
6 all funds with negative new flow and weighted by AUM	0.0009	0.0009	**-0.0030**	0.0007	0.0032	**0.0032**	-0.0002	0.0028	0.0017	0.0017	-0.0012	0.0018
	(0.03)	(0.66)	(-2.02)	(0.53)	(-0.05)	(2.08)	(-0.14)	(1.85)	(0)	(0.57)	(-0.44)	(0.6)
	[0.05]				[0.13]				[0.04]			
7 equally in all funds with above median new flow	0.0016	0.0016	-0.0022	0.0014	0.0046	**0.0046**	**0.0012**	**0.0040**	0.0025	0.0025	-0.0009	0.0024
	(0.39)	(1.41)	(-1.84)	(1.26)	(0.14)	(3.11)	(0.76)	(2.78)	(0.09)	(1.68)	(-0.66)	(1.64)
	[0.1]				[0.19]				[0.1]			
8 equally in all funds with below median new flow	-0.0005	-0.0005	**-0.0044**	-0.0005	0.0032	0.0032	-0.0004	0.0027	0.0012	0.0012	-0.0020	0.0009
	(-0.4)	(-0.45)	(-3.52)	(-0.51)	(-0.14)	(2.53)	(-0.29)	(2.22)	(-0.08)	(0.83)	(-1.47)	(0.67)
	[-0.03]				[0.15]				[0.04]			

Table 5. Performance of trading strategies for different types of investors. In the columns 2 to 5, the results are based on fund purchased by investors in general but by three different types of managers. In the second column there is the monthly average excess return against the market index, the third column is risk adjusted return using Ibovespa as market risk, the fourth column is the risk adjusted return using IBX as market risk and the fifth column risk adjusted by the 4-factor. The following columns the same results are shown to funds purchased by qualified investors, exclusive investors and fund of funds. Below the coefficients there are the *t*-statistics. Bold number is significant at 5%.

The table 5, shows all the strategies but split in three types of investors. The excess return is significant different than zero from investors in general with strategies 3 and 5. The risk adjusted return is positive and significant in all risk models only for qualified investors and strategy 7, equally distributed in all funds with above median net flow. The risk adjusted return is approximately 4.8% per annum. The results support SME for qualified investors but not for ordinary investors neither the exclusive funds.

A further investigation is done with fund managed only by **independent managers** IM). The GT performance measure is no longer significant and similar to whole sample.

	No. Of Months	GT Measure	GT Measure %p.a.	t-Test Statistic
Investors in general	144	0.009%	0.103%	1.3
Qualified investor	144	0.011%	0.136%	1.3
Exclusive	144	-0.033%	-0.394%	-1.1

Table 6. Performance measure for all type of investors and managers. Source: Quantum fundos.

The results of the trading strategies presented at table 7, also have a performance similar to the whole sample. Again only qualified investors show significant and positive results but now for strategies 3 and 5 as well. Interestingly, they are all based on positive new flow and have a pretty big alpha, reaching 12% per year for strategy 5.

Portfolios	Investors in general				Qualified investor				Exclusive			
Strategy	Excess Return	Alpha1	Alpha2	Alpha3	Excess Return	Alpha1	Alpha2	Alpha3	Excess Return	Alpha1	Alpha2	Alpha3
1 equally distributed	0.0013	0.0013	-0.0024	0.0009	0.0065	**0.0065**	0.0034	**0.0054**	0.0037	**0.0037**	0.0007	0.0030
	nd	(0.93)	(-1.64)	(0.64)	nd	(3.67)	(1.89)	(3.33)	nd	(2.04)	(0.42)	(1.74)
	[0.06]				[0.21]				[0.11]			
2 all funds and weighted by AUM	0.0026	0.0026	-0.0012	0.0023	0.0064	**0.0063**	0.0034	**0.0053**	0.0055	**0.0054**	0.0027	**0.0046**
	(0.16)	(1.88)	(-0.82)	(1.69)	(-0.02)	(3.34)	(1.88)	(2.99)	(0.11)	(3.02)	(1.74)	(2.69)
	[0.13]				[0.18]				[0.15]			
3 equally in all funds with positive new flow	0.0036	**0.0036**	-0.0001	**0.0032**	0.0085	**0.0085**	**0.0056**	**0.0074**	0.0025	0.0025	-0.0006	0.0018
	(0.33)	(2.59)	(-0.09)	(2.36)	(0.24)	(4.35)	(2.89)	(4.05)	(-0.08)	(1.37)	(-0.37)	(1.04)
	[0.18]				[0.25]				[0.08]			
4 equally in all funds with negative new flow	-0.0010	-0.0010	**-0.0047**	-0.0015	0.0048	**0.0048**	0.0016	0.0038	0.0054	**0.0054**	0.0025	**0.0049**
	(-0.36)	(-0.67)	(-2.81)	(-0.97)	(-0.21)	(2.71)	(0.86)	(2.3)	(0.12)	(2.18)	(1.05)	(1.99)
	[-0.05]				[0.16]				[0.14]			
5 all funds with positive new flow and weighted by AUM	0.0037	**0.0037**	0.0000	**0.0034**	0.0109	**0.0109**	**0.0082**	**0.0100**	0.0041	0.0041	0.0007	0.0037
	(0.17)	(2.33)	(0.02)	(2.13)	(0.2)	(4.57)	(3.62)	(4.27)	(0.02)	(1.55)	(0.3)	(1.4)
	[0.16]				[0.26]				[0.11]			
6 all funds with negative new flow and weighted by AUM	0.0033	**0.0033**	-0.0003	0.0029	0.0059	**0.0059**	0.0030	**0.0049**	0.0034	0.0033	0.0006	0.0025
	(0.15)	(1.98)	(-0.19)	(1.75)	(-0.03)	(2.76)	(1.28)	(2.39)	(-0.01)	(1.01)	(0.18)	(0.78)
	[0.14]				[0.16]				[0.07]			
7 equally in all funds with above median new flow	0.0031	**0.0031**	-0.0006	0.0027	0.0082	**0.0081**	**0.0052**	**0.0069**	0.0026	0.0026	-0.0005	0.0019
	(0.32)	(2.18)	(-0.41)	(1.93)	(0.21)	(4.21)	(2.7)	(3.91)	(-0.07)	(1.49)	(-0.32)	(1.16)
	[0.15]				[0.23]				[0.08]			
8 equally in all funds with below median new flow	-0.0004	-0.0004	**-0.0041**	-0.0009	0.0047	**0.0047**	0.0015	**0.0038**	0.0047	0.0046	0.0019	0.0039
	(-0.31)	(-0.29)	(-2.57)	(-0.58)	(-0.21)	(2.67)	(0.79)	(2.27)	(0.07)	(1.82)	(0.75)	(1.58)
	[-0.02]				[0.16]				[0.11]			

Table 7. Performance of trading strategies for different types of investors with fund manages by independent managers only. In the columns 2 to 5, the results are based on fund purchased by investors in general. In the second column there is the monthly average excess return against the market index, the third column is risk adjusted return using Ibovespa as market risk , the fourth column is the risk adjusted return using IBX as market risk and the fifth column risk adjusted by the 4-factor. The following columns the same results are shown to funds purchased by qualified investors, exclusive investors and fund of funds. Below the coefficients there are the *t*-statistics. Bold numbers are significant at 5%.

In table 8, the investigation is done with fund managed by **commercial banks**, which are the main (in AUM terms) fund managers in Brazil. The GT performance measure is positive in all cases and significant for qualified investors and investors in general.

	No. Of Months	GT Measure	GT Measure %p.a.	t-Test Statistic
Investors in general	144	0.009%	0.107%	2.0
Qualified investor	144	0.021%	0.255%	2.5
Exclusive	144	0.055%	0.656%	1.2

Table 8. Performance measure for all type of investors and managers. Source: Quantum fundos.

The results of the trading strategies are in table 9. There is no strategy with significant (positive or negative) performance in all three risk models.

In all cases the performance analysis based on GT measure is not significant in any case, but the trading strategies based on all funds with above median new flow does lead to a positive and significant result for qualified investors with funds managed by independent companies.

The SME effect is present in Brazil, in funds aimed at qualified investors.

5. Conclusion

This article shows evidence of the Smart Money Effect in Brazil. The evidence is located only in funds for qualified investors which are certainly more sophisticated than ordinary investors, which confirm the results in Niebling et alli. (2010) and Zheng (1999). This result is driven by independent managers which present a high alpha of 12% per year.

Portfolios	Investors in general				Qualified investor				Exclusive			
Strategy	Excess Return	Alpha1	Alpha2	Alpha3	Excess Return	Alpha1	Alpha2	Alpha3	Excess Return	Alpha1	Alpha2	Alpha3
1 equally distributed	-0.0001	-0.0001	**-0.0040**	-0.0001	0.0019	0.0019	-0.0019	0.0019	0.0011	0.0011	**-0.0025**	0.0013
	nd	(-0.1)	(-3.42)	(-0.07)	nd	(1.71)	(-1.69)	(1.72)	nd	(0.94)	(-2.25)	(1.14)
	[-0.01]				[0.11]				[0.05]			
2 all funds and weighted by AUM	0.0000	0.0000	**-0.0039**	0.0001	0.0016	0.0016	-0.0023	0.0015	-0.0006	-0.0006	-0.0038	-0.0006
	(0.01)	(-0.03)	(-3.26)	(0.05)	(-0.03)	(1.06)	(-1.58)	(1.03)	(-0.07)	(-0.25)	(-1.69)	(-0.23)
	[0]				[0.08]				[-0.02]			
3 equally in all funds with positive new flow	0.0021	0.0021	-0.0018	0.0020	0.0020	0.0020	-0.0017	0.0020	0.0006	0.0006	**-0.0030**	0.0006
	(0.38)	(1.69)	(-1.38)	(1.56)	(0.02)	(1.39)	(-1.25)	(1.41)	(-0.09)	(0.47)	(-2.62)	(0.55)
	[0.12]				[0.1]				[0.03]			
4 equally in all funds with negative new flow	-0.0013	-0.0013	**-0.0053**	-0.0012	0.0019	0.0019	-0.0020	0.0019	0.0006	0.0006	**-0.0030**	0.0006
	(-0.46)	(-1.43)	(-4.44)	(-1.3)	(-0.01)	(1.79)	(-1.77)	(1.78)	(-0.09)	(0.47)	(-2.62)	(0.55)
	[-0.1]				[0.12]				[0.03]			
5 all funds with positive new flow and weighted by AUM	0.0027	0.0027	-0.0011	0.0027	0.0045	0.0045	0.0006	0.0046	0.0037	0.0037	0.0000	0.0039
	(0.19)	(1.46)	(-0.65)	(1.44)	(0.21)	(2.74)	(0.45)	(2.8)	(0.11)	(1.58)	(-0.01)	(1.64)
	[0.11]				[0.21]				[0.12]			
6 all funds with negative new flow and weighted by AUM	-0.0011	-0.0011	**-0.0050**	-0.0012	0.0009	0.0009	**-0.0031**	0.0007	0.0006	0.0005	-0.0030	0.0012
	(-0.15)	(-0.92)	(-3.65)	(-0.97)	(-0.1)	(0.63)	(-2.31)	(0.5)	(-0.02)	(0.24)	(-1.43)	(0.52)
	[-0.07]				[0.05]				[0.02]			
7 equally in all funds with above median new flow	0.0008	0.0008	**-0.0031**	0.0008	0.0020	0.0019	-0.0018	0.0021	0.0008	0.0008	**-0.0028**	0.0009
	(0.28)	(0.74)	(-2.69)	(0.71)	(0.01)	(1.56)	(-1.5)	(1.64)	(-0.05)	(0.66)	(-2.48)	(0.75)
	[0.05]				[0.11]				[0.04]			
8 equally in all funds with below median new flow	-0.0009	-0.0010	**-0.0049**	-0.0009	0.0018	0.0018	-0.0020	0.0018	0.0014	0.0014	-0.0021	0.0017
	(-0.28)	(-0.98)	(-3.94)	(-0.89)	(-0.01)	(1.64)	(-1.67)	(1.59)	(0.05)	(1.02)	(-1.64)	(1.28)
	[-0.07]				[0.11]				[0.06]			

Table 9. Performance of trading strategies for different types of investors with fund managed by commercial banks. In the columns 2 to 5, the results are based on fund purchased by investors in general. In the second column there is the monthly average excess return against the market index, the third column is risk adjusted return using Ibovespa as market , the fourth column is the risk adjusted return using IBX as market risk and the fifth column risk adjusted by the 4-factor. The following columns the same results are shown to funds purchased by qualified investors, exclusive investors and fund of funds. Below the coefficients there are the t-statistics. Bold numbers are significant at 5%.

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