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IS A SUCCESSFUL MARKET TIMER REALLY A MARKET TIMER? A NEWTEST

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Abstract

Previous literature indicates that market timing strategies are of little efficacy. The efficacy of market timing strategies in mutual funds is usually measured by the coefficients in linear regression models with dummy variables that allow for the beta coefficient in the CAPM to vary across two states of nature: bullish and bearish market excess returns, or through a quadratic regression. Managers, however, use their predicted instead of observed states of nature to define whether to carry low or high beta portfolios. Hence, these previous studies may be considering funds that do not use market timing strategies as failed market timers and, thus, underestimate the power of these strategies. The current study models market timing as a change in regime in Hamilton's Markov Switching Model. It also proposes tests for the existence and efficacy of market timing strategies using LR statistics based on the model's estimates. The proposed models are then estimated and tested using Brazilian data and the results are compared those of typical market timing strategy models. We find significant differences between the results obtained using our approach and the traditional dummy variables approach.

Contents

1 Introduction

Investors need to evaluate the quality and performance of different portfolios to assure themselves they are making the best choice. In the case of active mutual funds, a manager's ability to respond to market movements is one desirable skill. This kind of management strategy is usually called "market timing", consisting of changing the risk position of the managed portfolio according to the expectations regarding the return of the market portfolio. When anticipating a bull market, the manager increases his risk position to obtain a higher return, the risk premium provided by the higher risk position, and when anticipating a bear market, the manager reduces his risk position to minimize losses.

In the Sharpe (1964) version of CAPM, the risk-return vector of efficient portfolios can be written as linear combinations of the risk-free asset (if it exists) and the market portfolio, so long as the risk-free rate is below the expected return of the minimum variance portfolio. By managing portfolios actively, one can achieve higher returns than by using the "naive" passive strategy of just carrying a fixed combination of the market portfolio and the risk-free asset. Hence, if an investor is seeking an unconditionally efficient dynamic investment in mutual funds, it is useful to know whether a fund is managed actively and how changes in the expectation of future asset returns affect the fund's risk profile.

Obtaining information about portfolios by contacting all mutual fund managers directly could be, however, very costly to most investors. Alternatively, investors could look at all mutual funds' quarterly statements to obtain their positions. Besides being costly, this alternative does not give investors the changes in portfolio that occur in between statements, which is crucial in active mutual funds that try

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to anticipate the market on a daily basis. Additionally, as pointed out by Lakonishok et al. (1992), mutual funds' statements may be subject to "window dressing" by managers because of agency costs. Thus, a framework in which portfolio information could be inferred would be a relatively cheaper alternative that could serve this purpose. Henriksson and Merton (1981) suggest that market timing could be measured by making a slight modification in the CAPM framework. Their approach is equivalent to introducing a dummy variable in the beta coefficient, which allows for the beta coefficients to be different when market portfolio excess returns are positive (bull market) or negative (bear market). Another approach, proposed by Treynor and Mazuy (1966), is to estimate a quadratic curve and test for its convexity. Even though these simple models can work quite well in evaluating past market timing performances, they do not provide any information about whether a manager really uses these strategies or not. Moreover, they can underestimate the differences between beta coefficients, since managers choose portfolio allocation based on their predictions of asset returns that often fail. By using realized states of nature, Treynor and Mazuy's framework results in a high beta when beta is low and a low beta when beta is high for every observation in which managers' forecast fails.

The current study proposes an alternative framework to estimate betas in the presence of market timing in which the possibility of managers' forecast failure is considered by using the Markov Switching model developed by Hamilton (1989) with two regimes, in which each regime correspond to a CAPM equation with a different beta. In our study, we include a constant term to allow for the existence of active strategies other than market timing. The inclusion of a constant term to measure

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managers' abilities in beating the market was first proposed by Jensen (1969).[1] [2]

A problem that arises in the test for the existence of market timing strategies is that the LR ratio does not have the usual asymptotic chi-square distribution due to identification problems. Mazali (2001) used Garcia (1998) as an approximation for the true distribution instead, but Garcia's model is actually equivalent to a one threshold model with an unknown starting point.[3] Since, in this case, the asymptotic distribution is data-dependent, we cannot follow Garcia (1998) to obtain the asymptotic distribution of the LR test.[4] Instead, the current study uses an Empirical Distribution Function as an estimate for the LR true distribution.

We start by briefly describing the most popular models of market timing and the motivation to this work in Section 2. In Section 3, we describe the proposed Markov Switching models. In Section 4, some of the features of the hypothesis tests used are discussed. Section 5 describes the data set used and results obtained in the estimation and tests. Finally, Section 6 discusses the main conclusions and further research issues.

2 Most Used Measures of Market Timing

Before we develop our Markov Switching (MS) market timing models, we describe the most popular models used to estimate market timing and rank mutual funds according to these estimates: the dummy model; and the quadratic regression

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[1]Note that Jensen's model is different from the one we are presenting here. The interpretation of this constant term will also change a little bit from Jensen's interpretation.

[2]A previous version of the current study, Mazali (2001), did not include an intercept (or Jensen's alpha). This is equivalent to the assumption that the only way to beat the market is through market timing strategies. Yet, this may not be the case, as pointed by Fama (1972).

[3]see Garcia (1998), pp. 772.

[4]see Garcia (1998), pp.773 for details.

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model. In both models, the central idea is the same: if a manager can anticipate future returns, she will change her risk position to capture a higher risk premium when the market is bullish and reduce losses when the market is bearish. If she is successful, it will result that, if we plot the mutual fund's and market portfolio's excess returns on a scatter diagram, the points will appear to cluster around a convex curve. The two models cited above capture this effect. The next two sections describe the dummy variable and the quadratic models, based on Sharpe, Alexander, and Bailey (1991).

2.1   The Dummy Variables Approach

The dummy variable regression is an approach to the market timing problem where the sample is "split" in two: the "bull market" and the "bear market" subsamples. It then estimates two beta coefficients, one for each subsample. A successful market timer will anticipate market returns and select the high beta portfolio when the market is bullish and the low one when the market is bearish. In other words, the CAPM line slope will be greater for the bull market subsample than it will be for the bear market subsample. This model was first proposed by Merton (1981) and Henriksson and Merton (1981). Even though these studies did not state the equations in terms of dummy variables, it is straightforward to show that their model is equivalent to the dummy variables model of Sharpe, Alexander, and Bailey (1991).

Such a relationship can be estimated by slightly altering the Sharpe version of the CAPM equation. Denoting the return of fund i by R_i, the return of the market portfolio by R_m and the return of the risk-free asset by R_f, the expected returns of

mutual fund i share and the market portfolio are related in the following way:

$$E[R_i - R_f] = \beta_i E[R_m - R_f] \tag{1}$$

Thus, the empirical version of the CAPM can be written as:

$$[R_{it} - R_{ft}] = \beta_i [R_{mt} - R_{ft}] + \varepsilon_t \tag{2}$$

where the subscript t represents the time t observation for the corresponding variable, and ε_t is a disturbance term. A constant term as in Jensen (1969) and the dummy variables are now introduced:

$$[R_{it} - R_{ft}] = \alpha + \beta_{i1}.D_{1t}.[R_{mt} - R_{ft}] + \beta_{i2}.D_{2t}.[R_{mt} - R_{ft}] + \varepsilon_t \tag{3}$$

where

$$D_{1t} = \begin{cases} 1, \text{ if } R_{mt} - R_{ft} \geq 0 \\ 0, \text{ if } R_{mt} - R_{ft} < 0 \end{cases} \text{ and } D_{2t} = \begin{cases} 1, \text{ if } R_{mt} - R_{ft} < 0 \\ 0, \text{ if } R_{mt} - R_{ft} \geq 0 \end{cases}.$$

To test for the efficacy of market timing strategies, our null hypothesis is $H_0 : \beta_{i1} = \beta_{i2}$. The test can be carried out using the Student-t distribution or the asymptotic normal distribution to obtain the test's critical values. In this case, market timing efficacy is measured as the difference between the highest and the lowest beta. Throughout the current essay, we use the version of the model defined by equation (3) when talking about Dummy Timing Models. In the appendix,

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however, we show estimates using the simpler equation

$$[R_{it} - R_{ft}] = \alpha + \beta_{i1}[R_{mt} - R_{ft}] + \beta_{i2}.D_t.[R_{mt} - R_{ft}] + \varepsilon_t \tag{4}$$

where

$$D_t = \begin{cases} 1, \text{ if } R_{mt} - R_{ft} \geq 0 \\ \\ 0, \text{ if } R_{mt} - R_{ft} < 0 \end{cases}.$$

In this specification of the dummy model, the null hypothesis is $H_0 : \beta_{i2} = 0$. The test statistic has a Student-t distribution and a normal asymptotic distribution, just as in the model of equation (3). In this version of the dummy variables model, market timing efficacy is measured as the value of coefficient β_{i2} in equation (4).

2.2   The Quadratic Regression Approach

One implicit assumption of the dummy variables market timing model is that there are only two betas and the manager switches between them. However, a manager may respond differently in terms of changing betas to different values of market portfolio returns. The greater the market return, the greater the beta of a successful market timer may be. If this is the case, a quadratic regression would capture the effects of a market timing strategy much better than the dummy variables model shown in the previous subsection. This approach, used by Treynor and Mazuy (1966), fits the data on a parabola rather than on lines, as in the other approach. The equation to be estimated is then:

$$[R_{it} - R_{ft}] = \alpha + \beta_{i1}[R_{mt} - R_{ft}] + \beta_{i2}[R_{mt} - R_{ft}]^2 + \varepsilon_t \tag{5}$$

where ε_t is a disturbance term. Again, as in the dummy variables model, the equation to be estimated is linear in relation to the parameters. OLS can then be used to estimate coefficients and the Student-t tests can be applied to test for their significance. The measure of market timing in this model will be the value of the parameter β_{i2}. The null hypothesis is then $H_0 : \beta_{i2} = 0$. A positive value for this parameter indicates that market timing strategies adopted by the manager are successful. An insignificant coefficient is evidence of failure of these strategies, assuming they were employed. A negative coefficient indicates that these strategies have backfired, producing the opposite of the desired results.

2.3 Why is another approach needed?

In both the quadratic regression and dummy variable approaches, the main idea is that, in the presence of successful market timing strategies, a convex curve appears to better fit the data than a linear regression. This better fit of convex curve model specifications occur because the manager successfully predicts future market returns and, when she thinks the future market will be bullish, she changes her position to a riskier portfolio, allocating more resources to risky assets and less to the risk-free asset (i.e., a position with a higher beta), and when he anticipates a negative market return (bear market), she changes her position to a safer position, allocating more resources to the risk-free asset and away from risky assets (i.e., a position with a lower beta). Figure 1 illustrates this argument.

Figure 1 shows a scatter plot of simulated data that replicates the pair excess returns on the mutual fund versus excess returns on the market returns for a manager who is a successful market timer, and each subplot shows the fit of a different model
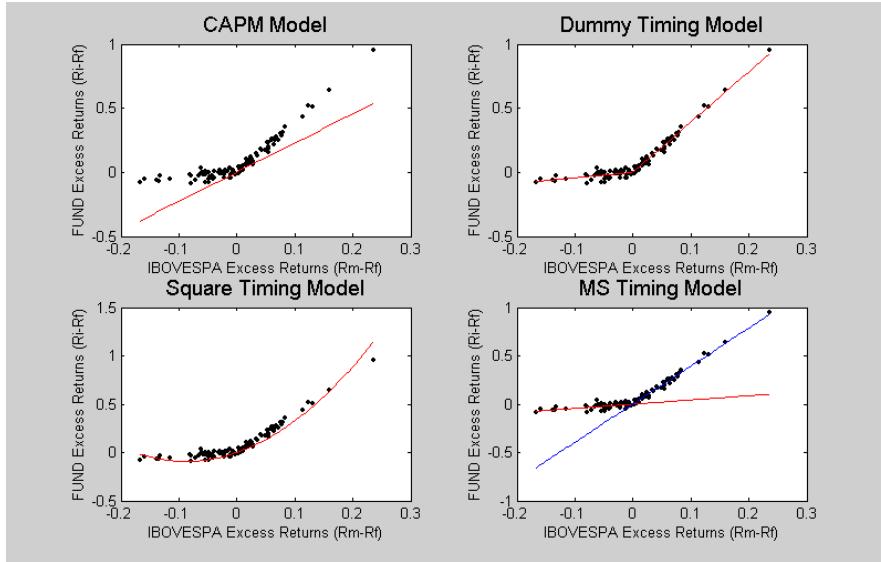
Figure 1: Successful timing

to this simulated data. The first subplot displays the CAPM regression estimated for a fund that has a successful market timer manager. The subsequent subplots represent the estimates obtained using the dummy, quadratic and the current study's Markov Switching (MS) market timing models. The non-linear approaches have a better fit than the linear model in the upper left subplot. Treynor and Mazuy (1966), Henriksson and Merton (1981), and Mazali, Simonsen and Basílio (2000) present evidence suggesting that these strategies yield a positive, but small extra return. One of the reasons for this result is that, once you accept the null hypothesis of a single beta, it is not possible to distinguish between a fund manager that employs market-timing strategies, but is not very good at it, and a manager that does not employ market-timing strategies at all. This identification problem is important, because, in analyzing the efficacy of market timing strategies, a researcher should exclude the mutual funds whose managers do not employ such strategies (or, alternatively, include them in a control group). In this case, the aforementioned studies consider as

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failures in market timing mutual funds that might not be adopting these investment strategies at all.

Another problem arises if an investor wants to use beta estimates to efficiently allocate his portfolio. This happens because the difference in betas is underestimated by either the dummy variables or the quadratic regression approaches when the manager uses market timing strategies but performs poorly on them. Figure 2 displays data where we simulated data for two different values of beta, and a particular point would randomly be assigned to the high and low beta portfolios, with a probability of 1/2 of a particular simulated point coming from the high beta portfolio, and probability of 1/2 of coming from the low beta portfolio. This data set simulates the situation in which a manager that is a market timer forecasts the direction of the market correctly only half of the time, that is, her guesses are as good as the toss of a coin. These simulated data are displayed in Figure 2. As we did in Figure 1, we then estimate the four models (CAPM, Dummy Timing Model, Quadratic Regression Timing Model, and MS Timing Model) and plot the estimated lines in each of the four subplots of the graph. It is straightforward to see that the dummy and quadratic approaches fit curves that are close to a straight line with insignificant market timing coefficients, meaning that the models successfully capture the incompetence of our simulated market timer manager. However, it fails to give an accurate estimate of the two different betas actually adopted by the managers' failed attempts to anticipate the market. If a manager fails on exactly half of his forecasts, we expect to see as many high beta points above α as below in the dispersion chart, and as many low beta points below α as above it. The dummy variables and quadratic regression market timing models accept the null hypothesis
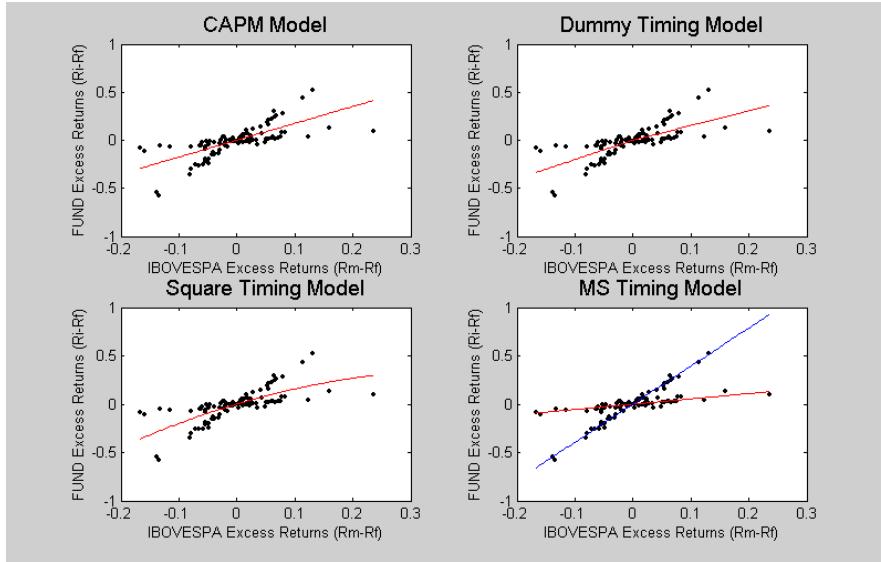
Figure 2: managers fail as often as they succeed

of only one beta, treating this fund as an incompetent market timer. Important information is, therefore, lost in these approaches. As we explain in the next section, the MS model developed here is able to distinguish between a market timer and a non-market timer. The estimates of this model for the simulated incompetent manager data are in the lower right subplot of Figure 2. The model successfully fits the two lines representing the two different betas of the dynamic portfolio picked by the simulated incompetent manager.

3   The Markov Switching Timing Model

In this section, a simple framework for estimating betas in the presence of market timing is developed using the non-observable fund manager's expectancy of market portfolio as a state variable. As in Merton (1981) and Henriksson and Merton (1981), our point of departure is the equation proposed by Jensen (1969):

$$E[R_i - R_f] = \alpha + \beta_i E[R_m - R_f] \tag{6}$$

This is just the CAPM equation added by a constant term α, the Jensen's alpha. This constant term captures the extra returns due to active management. A strongly positive α is an indication that the manager is successful in actively managing the portfolio. Since, in the model developed in this section, one particular investment strategy in active management (market timing) is modeled explicitly, the interpretation of the α coefficient changes slightly. Here, the alpha coefficient represents the extra returns obtained by active strategies other than market timing. The coefficient β_i has the usual CAPM interpretation of a measure of exposure to non-diversifiable risk.

Now time structure is introduced to the model. Let S_t denote the regime variable, representing the manager's expectancy of future market behavior. If he is pessimistic and expects that the market portfolio return will be low, then $S_t = 1$, and if he is optimistic, $S_t = 2$. When the manager is optimistic, she picks a portfolio with high beta to receive the premium for bearing higher risk. When he is pessimistic, she picks a conservative portfolio to avoid high losses. Therefore, each manager chooses two risk exposure positions and switches between them according to her expectation regarding the next period returns. The regime variable, S_t, is assumed to follow a first order Markov chain with a 2×2 matrix of transition probabilities $\mathbf{P}$. With this structure, equation (6) becomes:

$$E[R_{it} - R_{ft}] = \alpha + \beta_{iS_t} E[R_{mt} - R_{ft}] \tag{7}$$

where $S_t = 1, 2$. By assuming that the error in the prediction of fund excess returns are independent and identically distributed, following a centralized normal distribution, the equation representing the empirical model is now given by:

$$[R_{it} - R_{ft}] = \alpha + \beta_{iS_t}[R_{mt} - R_{ft}] + \varepsilon_t \qquad (8)$$

where $\varepsilon_t \sim N(0, \sigma^2)$.

Formally, we can include the state variable in the equation. Define variables

$$\xi_{1t} = \begin{cases} 1, \text{ if } S_t = 1 \\ 0, \text{ if } S_t = 2 \end{cases}, \xi_{2t} = \begin{cases} 0, \text{ if } S_t = 1 \\ 1, \text{ if } S_t = 2 \end{cases} \text{ and } \boldsymbol{\xi}_t = \begin{bmatrix} \xi_{1t} & \xi_{2t} \end{bmatrix}'.$$

Thus, equation (8) becomes:

$$[R_{it} - R_{ft}] = \alpha + \langle \boldsymbol{\beta}_i, \boldsymbol{\xi}_t \rangle [R_{mt} - R_{ft}] + \varepsilon_t \qquad (9)$$

where $\boldsymbol{\beta}_i = \begin{bmatrix} \beta_{i1} & \beta_{i2} \end{bmatrix}$, and

$$\boldsymbol{\xi}_t = \mathbf{P}.\boldsymbol{\xi}_{t-1} + \mathbf{v}_t \qquad (10)$$

where $\mathbf{v}_t \equiv \boldsymbol{\xi}_t - E(\boldsymbol{\xi}_t | \boldsymbol{\xi}_{t-1}, \boldsymbol{\xi}_{t-2}, \boldsymbol{\xi}_{t-3}, ...)$.[5] In this model, each coordinate of $\boldsymbol{\beta}_i$ represents a risk position that corresponds to the expectation of the fund manager. When she is optimistic, she will pick the high beta portfolio, and when she is pessimistic she will carry the low beta portfolio. The α coefficient, here, corresponds to the extra returns a manager is able to obtain by actively managing the portfolio using

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[5]If a process $\boldsymbol{\xi}_t$ has the Markov Property, then we have $E(\boldsymbol{\xi}_t | \boldsymbol{\xi}_{t-1}, \boldsymbol{\xi}_{t-2}, \boldsymbol{\xi}_{t-3}, ...) = \mathbf{P}.\boldsymbol{\xi}_t$. Defining $\mathbf{v}_t \equiv \boldsymbol{\xi}_t - E(\boldsymbol{\xi}_t | \boldsymbol{\xi}_{t-1}, \boldsymbol{\xi}_{t-2}, \boldsymbol{\xi}_{t-3}, ...)$, equation (10) follows immediately. For details, see Hamilton (1989,1994).

strategies other than market timing.[6] Note that a mutual fund can be successful in its active management but fail in using market timing strategies. In this case, we would find a high value for α, reject the null hypothesis for one beta in the MS model but accept it for either the quadratic or the dummy variables models. Note that the MS model proposed here does not substitute for the dummy or quadratic model coefficient tests. It just provides information that the other tests do not. In the next subsection, we show that, with a slight change in the model just described, we will be able to test for the performance of market timers, just as the dummy variable and quadratic regression approaches do.

3.1 Measuring market timing performance using MS

The model just described provides a way to unbiasedly estimate betas of a mutual fund that has its portfolio actively managed using market timing strategies. It also allows an investor to test the hypothesis that such strategies are adopted by the fund manager, as we show in the current and following sections. Yet, investors may want not only to estimate betas and carry out hypothesis tests correctly, but also compare fund performances and rank mutual funds according to how well each fund manager has been doing as market timers. For this purpose, the model developed at the beginning of the current section adds no information. In this section, the basic model is modified so that both tests can be completed within the same framework. We thus replace the MS model with fixed probabilities shown in the beginning of this section with a MS model with changing transition probabilities, using the framework

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[6]We are assuming that these other strategies are not correlated with the market timing strategies. However, it could be the case that other strategies such as selectivity could produce the same dispersion chart as market timing. In this case, we shold model these other strategies explicitly to identify the effects of each strategy.

developed by Diebold et al (1994).

This approach differs from Hamilton's in that transition probabilities may change over time. These changes happen because the probability of occurrence of a state of nature depends on variables that may be changing over time. For example, a meteorologist may have two states of nature, let us say sunny and rainy weather, for which she may have to make daily predictions. Applying Hamilton's model, the meteorologist may then obtain transition probability estimates that will enable her to forecast the probability of rain on a given day conditioning only the weather the previous day. But the probability of rainy weather may not depend only on what the weather was like on the previous day, but also on variables such as air humidity and wind speed. Thus, if one states transition probabilities as functions of these variables, she may aggregate important information that can substantially improve her predictions about the probability of rain each day.

In our model, managers decide about what position to take (high or low beta) conditioned on their expectations about market portfolio future returns. If they are successful, they adopt high beta positions when the return of the market portfolio is high and low beta positions when this variable is low. Therefore, if we state transition probabilities as functions of market portfolio returns, what one observes is that probabilities of adopting riskier positions are strongly and positively correlated to market portfolio returns whereas the probabilities of adopting low risk positions have a strong negative relationship to market portfolio returns. On the other hand, the reverse relationship is found for funds managed by people that systematically make wrong market return predictions.[7]

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[7]As time t portfolio is formed at time $t-1$, expectations of the manager about future returns will constitute her expectations about time t returns.

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This effect is captured by stating transition probabilities as functions of market returns in logit equations, following Diebold et al. (1994). Our model becomes, then:

$$[R_{it} - R_{ft}] = \alpha + \beta_{iS_t}[R_{mt} - R_{ft}] + \varepsilon_t \tag{11}$$

where $\varepsilon_t \sim N(0, \sigma^2)$.

Formally, we can include the state variable in the equation. Define variables

$$\xi_{1t} = \begin{cases} 1, \text{ if } S_t = 1 \\ 0, \text{ if } S_t = 2 \end{cases}, \xi_{2t} = \begin{cases} 0, \text{ if } S_t = 1 \\ 1, \text{ if } S_t = 2 \end{cases} \text{ and } \boldsymbol{\xi}_t = \begin{bmatrix} \xi_{1t} & \xi_{2t} \end{bmatrix}'.$$

Equation (11) becomes then:

$$[R_{it} - R_{ft}] = \alpha + \langle \boldsymbol{\beta}_i, \boldsymbol{\xi}_t \rangle [R_{mt} - R_{ft}] + \varepsilon_t \tag{12}$$

where $\boldsymbol{\beta}_i = \begin{bmatrix} \beta_{i1} & \beta_{i2} \end{bmatrix}'$, and

$$\boldsymbol{\xi}_t = \mathbf{P}_t.\boldsymbol{\xi}_{t-1} + \mathbf{v}_t \tag{13}$$

where $\mathbf{v}_t = \boldsymbol{\xi}_t - E(\boldsymbol{\xi}_t | \boldsymbol{\xi}_{t-1}, \boldsymbol{\xi}_{t-2}, \boldsymbol{\xi}_{t-3}, ...)$. Note that the transition probability matrix may now vary over time, and will do so following the logit equations stated below:

$$\mathbf{P}_t = \begin{bmatrix} p_t^{11} & p_t^{12} \\ p_t^{21} & p_t^{22} \end{bmatrix} = \begin{bmatrix} \frac{\exp(\mathbf{x}_t.\boldsymbol{\theta}_1)}{1+\exp(\mathbf{x}_t.\boldsymbol{\theta}_1)} & 1 - \frac{\exp(\mathbf{x}_t.\boldsymbol{\theta}_2)}{1+\exp(\mathbf{x}_t.\boldsymbol{\theta}_2)} \\ 1 - \frac{\exp(\mathbf{x}_t.\boldsymbol{\theta}_1)}{1+\exp(\mathbf{x}_t.\boldsymbol{\theta}_1)} & \frac{\exp(\mathbf{x}_t.\boldsymbol{\theta}_2)}{1+\exp(\mathbf{x}_t.\boldsymbol{\theta}_2)} \end{bmatrix} \tag{14}$$

where $\mathbf{x}_t = \begin{pmatrix} 1 & R_{mt} \end{pmatrix}$ is a 1×2 vector of the probability explaining variables and

$\boldsymbol{\theta}_i$, $i = 1, 2$ are 2×1 parameter vectors. Once we have estimated the parameters of the model, we can then create a measure of performance based on these estimates. Before proceeding, it is worthwhile spending some time discussing the interprétations for the parameters $\boldsymbol{\theta}_i$.

3.1.1 The transition probability parameters

Note that the elements of the main diagonal of $\mathbf{P}_t$ represent the probability of staying in the current position, while the other elements of the matrix represent the probability of switching to the other state. As a result, the equations for p_t^{ii} can be restated as:

$$\ln \left(\frac{p_t^{ii}}{1 - p_t^{ii}} \right) = \mathbf{x}_t . \boldsymbol{\theta}_i \tag{15}$$

Then we have that:

$$\boldsymbol{\theta}_i = \frac{d}{d\mathbf{x}_t} \left[\ln \left(\frac{p_t^{ii}}{1 - p_t^{ii}} \right) \right] = \frac{d\left[\ln p_t^{ii} \right]}{d\mathbf{x}_t} - \frac{d\left[\ln \left(1 - p_t^{ii} \right) \right]}{d\mathbf{x}_t} \tag{16}$$

Equation (16) tells us that the parameter vectors $\boldsymbol{\theta}_i$, $i = 1, 2$ are the difference between the gradients of the logarithms of the probability of staying in the current position and the probability of changing it. In other words, the second coordinates of $\boldsymbol{\theta}_i = \left(\begin{array}{cc} \theta_i^0 & \theta_i^1 \end{array} \right)$ represent the difference between the change in the probability of staying in the current position and the change in the probability of moving to the other position, both caused by a small variation in market returns. This interpretation of $\boldsymbol{\theta}_i$ makes $\theta_i^1, i = 1, 2$ natural candidates for measures of market timing, except for the fact that variations in probability values are in percentage terms (because of the logs). By accepting these coefficients as measures of market timing, one will

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rank a fund that, in the presence of an increase on the market returns, changes its probability of adopting the riskier position from 0.0001 to 0.01 (a 9999% change) as a better fund than another that, on the same situation, changes this probability from 0.25 to 0.50 (a 100% change). Clearly, the change on the second fund probabilities is much more significant than the one in the first fund (look at the absolute changes). Therefore, the coefficients θ_i^1 are not good measures of market timing performance. Consequently, we need a measure that gives us information about absolute changes in the probability values instead of relative ones.

Recall from equation (14) that, once parameter estimates are at hand, the only variable needed to calculate transition probabilities is the market portfolio return. For a given value of R_{mt}, one can compute the transition probabilities, high and low return values can be chosen and the transition probabilities associated with these values can be computed. How big the changes in these probabilities are (caused by changes from the chosen low to the chosen high value in the market portfolio returns) can be measured by:

$$TM = \left(p^{22}\left(R_m^H\right) - p^{22}\left(R_m^L\right)\right) + \left(p^{12}\left(R_m^H\right) - p^{12}\left(R_m^L\right)\right) \qquad (17)$$

or, equivalently:

$$TM = \left(p^{11}\left(R_m^L\right) - p^{11}\left(R_m^H\right)\right) + \left(p^{21}\left(R_m^L\right) - p^{21}\left(R_m^H\right)\right)$$

where R_m^H and R_m^L correspond to the high and low market portfolio returns, respectively. TM stands for "Timing Measure". The chosen low (L) and high (H) values of the market portfolio return were $R_m^L = \overline{R}_m - 2s(R_m)$ and $R_m^H = \overline{R}_m + 2s(R_m)$,

respectively, where $s(R_m)$ is the standard deviation of market portfolio returns, because two standard deviations constitute a clear departure from the mean, as approximately 95% of a normal distribution is between these two values. The "Timing Measure" calculates how much the probability of going to or staying in the riskier position changes when market return changes from low to high values, or, from another point of view, how the probability of going to or staying in the safer position changes when market returns are reduced from high to low values.

Once we have defined a measure of market timing performance, mutual funds can be compared and ranked according to this criterion. In a later section, this formula is applied to Brazilian mutual fund data and the results are compared with other measures of market timing performance.

4   Tests of Hypothesis

This section discusses some of the features of hypotheses tests regarding the existence and performance of market timing strategies using the MS models just described. These are the tests that could be of interest for an investor. The existence test would allow us to separate those funds managed by market timers from those not managed by market timers. Furthermore, the performance (or efficacy) test allows the investor to separate good from bad market timers. In our context, it is also useful to be able to separate funds that are market timers from the non-market timers.

4.1   Testing whether a fund is managed by a market timer

In this subsection, we discuss the hypothesis test used to separate market timers from non-market timers, that is, to test whether a particular mutual fund manager uses market timer strategies. Recall from Section 3 the model defined by equations (9) and (10), in the case of fixed probabilities, and (12) and (13), in the case of changing probabilities. In this subsection, just the fixed probabilities model will be considered, since all the analysis for the changing probabilities model is analogous. If a fund manager is not a market timer, she will keep the same risk position regardless of her future returns expectations. In other words, the non-diversifiable risk measure must be the same when she is optimistic as when she is pessimistic. Turning back to the model defined by equations (9) and (10), this means that the two coordinates of the vector β_i in equation (9) are the same. Thus, the null hypothesis is $H_0 : \beta_{i1} = \beta_{i2}$. We can then perform the likelihood ratio (LR) test. Rejection of the null hypothesis is an indication that the fund manager is indeed a market timer, since she frequently switches her risk position. Accepting the null hypothesis indicates that the manager does not qualify as a user of market timing strategies. Note that it does not mean that the fund is not active, just that its manager does not use market timing strategies to beat the naive passive strategy (a convex combination of the market portfolio and the risk-free asset that is constant over time).

Unfortunately, in MS models, the LR statistic does not have the usual asymptotic χ^2 distribution. Under the null hypothesis that $\beta_{i1} = \beta_{i2}$, the transition probability parameters are not identified. Furthermore, under the null hypothesis, there are identical null score matrices. These problems were first reported by Davies (1977). Hansen (1996) proposes a simulation method to approximate the asymptotic dis-

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tributions and applies it to the threshold model. Hansen (1992) proposes another approach for the specific case of MS models: he considers the likelihood function as a function of unknown parameters and uses empirical process theory to bound the asymptotic distribution of a standardized LR statistic. Hansen's method provides a bound for the LR statistic, not a critical value, implying that the tests that use this method may be conservative. Garcia (1998) provides approximations for the asymptotic distributions of LR statistics for the most popular MS models. He avoids Hansen's problems by treating the transition probability parameters as nuisance parameters and stating the null hypothesis solely in terms of the parameters governed by the Markov variable (mean, variance and/or autoregressive coefficients). Unfortunately, the model with changing probabilities used here is not among those for which Garcia provides an asymptotic table. Moreover, the asymptotic distribution of the LR statistic is data-dependent. Thus, in order to obtain a critical value for the LR test, we simulated 1,000 series of 104 observations under the null hypothesis in order to use the Empirical Distribution Function to obtain the critical values. Since the asymptotic distribution of the LR statistic is data-dependent, the actual IBOVESPA data used in the estimations shown in the next section were used to generate the fund series. Then, for each of the 1,000 series, we estimate the model under both the null and alternative hypotheses to obtain the LR statistics for each of the simulated data sets. The values of the parameters that we used were $\alpha = 0$, $\beta = 0.89$, $\sigma^2 = 0.025$. These values correspond to the average across funds obtained in the estimation process described in Section 5. The next step was to compute the

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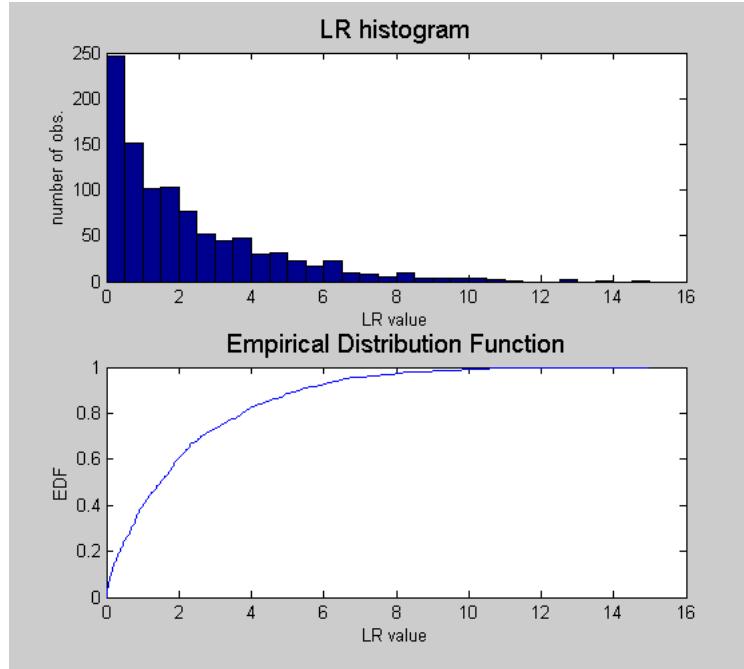
Figure 3: LR Empirical Distribution Function

empirical distribution, given by:

$$F_{1000}(\omega) = \frac{1}{1,000} \sum_{j=1}^{1,000} 1\left(LR_j \leq \omega\right)$$

where $1\left(LR_j \leq \omega\right)$ is the indicator function. The results obtained are displayed in Figure 3 and Table 1:

Table 1: LR EDF left tail percentiles

prob.	percentile	prob.	percentile	prob.	percentile	prob.	percentile
0.5%	0.0024	10%	0.1322	50%	1.5079	95%	6.6948
1%	0.0033	15%	0.2294	75%	3.1900	97.5%	8.1568
2.5%	0.0189	25%	0.5126	85%	4.4323	99%	10.0429
5%	0.0532	35%	0.8376	90%	5.3338	99.5%	11.0023

Table 1 and Figure 3 show that the LR distribution is strongly skewed to the left. Some of the percentiles observed have values close to those of the χ^2 distribution with two degrees of freedom. This, however, is a coincidence, since the (asymptotic) distribution of the LR statistic for the models in this study is data-dependent. Therefore, for other market portfolio data sets, a completely different EDF for the LR statistic will be observed.

A practical problem regarding the empirical distribution of the LR statistic is that, due to the occurrence of local maxima in the maximum likelihood estimation procedure, this distribution may be actually "overskewed" to the right. This happens because, under the alternative, the number of local maxima is likely to be greater than under the null, since there are more parameters to estimate. To avoid this situation, ten different initial values were set in the estimation procedure. By doing so, we did not obtain any negative value for the LR statistics. However, the large number of LR values close to zero (almost 250 are in the first bin of the histogram in Figure 3 suggests that we are obtaining local maxima in the numerical maximization procedure.

4.2 Testing the efficacy of market timing strategies

Once market timers were separated from the rest, the next question to be answered is whether market timing strategies are fruitful. For these tests, we could, in principle, perform any of the tests for the models described in Section 2. However, it is convenient to perform both tests, of existence and efficacy of market timing strategies, using the same framework. This could be done with Diebold et al.'s (1994) MS model with changing probabilities described by equations (12) and (13). The

parameter of interest in this case is $\boldsymbol{\theta}_i, i = 1, 2$. Recall from Section 3 that these parameters are the coefficients of market returns in the logit equation for transition probabilities. For a successful market timer, strong and positive relations between the probabilities of high beta positions and market portfolio returns will occur, as well as low risk position probabilities will have strong negative relations to market portfolio returns. On the other hand, the reverse relations will be found for mutual funds whose managers make systematic mistakes in their predictions about market portfolio returns. It could also be the case that a manager is successful just in anticipating positive returns and a complete failure in anticipating negative returns (or vice-versa). In this case, one can use the Timing Measure described on the previous section to see which one prevails. Our null hypothesis is then $H_0 : \theta_1^1, \theta_2^1 = 0$. Not rejecting the null hypothesis implies that market portfolio returns do not help explain the variations in transition probabilities, and thus the manager's forecasts are neither a success nor a failure. To reject H_0 means that returns help explain managers' decisions regarding risk positions. If success prevails ($TM > 0$), then the test qualifies the manager as a successful market timer. If failure prevails ($TM < 0$), then the manager is an unsuccessful market timer. To carry out the hypothesis test, one can use, as before, the likelihood ratio (LR) test. Since no identification problems are present in this case, the LR statistic has the usual asymptotic χ^2 distribution.

5   Estimation Procedures and Results

Before showing the results obtained, a few estimation issues must be discussed. For both fixed and changing probability models, parameters were estimated using maximum likelihood. Since the ε_t's are assumed to be normally distributed, the

likelihood function is known for all states of nature. For the model with fixed probabilities defined by (9) and (10), smoothed probabilities were constructed in order to obtain a maximum likelihood function that weighs states of nature according to their probabilities of occurrence given observed returns. The likelihood function is then numerically maximized using the *EM* algorithm developed by Dempster, Laird and Rubin (1977) as described by Hamilton (1994). We estimate the parameters for ten different initial values under both the null and the alternative hypotheses. We then use the LR test for the null hypothesis $H_0 : \beta_{i1} = \beta_{i2}$, using the numbers in Table 1 to obtain the critical values.

Estimation of the parameters for the changing probabilities model is then performed. Once again, ε_t is normally distributed and the parameters are estimated by maximum likelihood numerically. This numerical routine uses the Nelder and Mead (1965) Multidimensional Unconstrained Non-Linear Minimization method to minimize the symmetric of the likelihood function, and estimates the parameters for ten different initial values under both the null and the alternative hypotheses. We then perform hypothesis tests for the significance of the future market portfolio variable on the logit equations. The results obtained are then displayed and the "Timing Measure" as defined in equation (17) is calculated.

5.1   Data

We used weekly returns from Friday to Friday for 104 weeks from 06/05/1998 to 05/26/2000 for 206 Brazilian mutual stock funds, whose share values were taken from the SI-ANBID database. The funds chosen were all stock mutual funds whose net worth was at least R\$ 5 million on 05/26/2000, for which a complete series of

weekly returns is available for the period of analysis. The Brazilian stock index IBOVESPA closing value was taken as the market portfolio proxy. IBOVESPA data were treated the same way as fund data. The proxy used for the risk-free asset used is the Brazilian Interbank Depositary Certificate (*Certificado de Depósito Interbancário* - CDI) weekly return, treated the same way as IBOVESPA and mutual fund data. The IBOVESPA and CDI data were taken from the Economatica database.

5.2   Results

This subsection displays the estimates obtained for the MS models with both fixed and changing probabilities using Brazilian data. The data set is the one described in Subsection 5.1. These parameters will be used to calculate the timing measures (TM) as given by equation (17). These TM values will then be used to rank the funds in our database. The same procedure is carried out using the traditional market timing measures discussed in Section 2. The rankings obtained using these methods are then compared.

5.2.1   Estimates for the Fixed Probabilities Model

As stated before, for the model with fixed probabilities defined by equations (9) and (10), constructed smoothed probabilities in order to obtain a maximum likelihood function that weighs states of nature to the probability of their occurrence given the value of observation. The likelihood function is then numerically maximized using the *EM* algorithm developed by Dempster, Laird and Rubin (1977), as described by Hamilton (1994). We estimate the parameters for ten different initial values under both the null and the alternative hypotheses. The results obtained for the ten largest

Brazilian stock funds are displayed in Table 2. The complete set of results is shown in the statistical appendix.

Table 2 - Estimates for the MS Model with Fixed Probabilities

Funds	Equity	p11	p12	p21	p22	Alpha	Beta1	Beta2	Sigma	logL	LR	
BB-ACOES CARTEIRA LIVRE 1	3820.17	0.99	0.01	0.49	0.51	-0.004	0.157	1.08	0.01	377.65	49.55	*
BB CARTEIRA ATIVA	1906.47	0.00	1.00	0.02	0.98	-0.003	-1.021	-0.01	0.00	394.60	86.37	*
DYNAMO PUMA	485.64	0.00	1.00	0.00	1.00	0.002	-0.862	0.29	0.02	277.54	8.25	
OPPORTUNITY LOGICA II FIA	449.47	0.98	0.02	0.41	0.59	0.003	0.775	2.64	0.04	190.19	30.62	*
BB-ACOES PRICE	357.75	1.00	0.00	1.00	0.00	-0.004	-0.005	0.07	0.00	546.55	8.05	
BB-GUANABARA	306.68	0.53	0.47	0.01	0.99	0.003	4.968	1.02	0.04	188.65	22.39	*
ITAUACOES - FIA	272.45	0.94	0.06	0.73	0.27	0.000	0.685	1.48	0.02	257.59	20.61	*
BRASIL PRIVATE EQUITY	234.24	0.00	1.00	0.01	0.99	-0.004	-7.634	0.13	0.01	289.53	161.65	*
CITIACOES	191.47	0.99	0.01	0.54	0.46	0.000	1.021	2.65	0.02	262.72	13.58	*
BRADESCO FIA	170.93	0.08	0.92	0.08	0.92	-0.002	1.299	0.76	0.02	246.60	4.22	

*significant at 99% confidence level according to the distribution in Table 1 (H0: beta1=beta2)

Seven out of these ten funds are considered market timers. The funds for which there is no evidence of market timing are BRADESCO FIA, DYNAMO PUMA and BB-AÇÕES PRICE. The analysis of the coefficient values also shows that these funds are not actually market timers, since for these three funds, the probability of going to state 2 whatever is your current state is, sufficiently close to one. We accept the null hypothesis that the number of states is one, (i.e., there is only one beta), for seven of the ten greatest Brazilian stock funds. In the appendix, we show the complete analysis for all stock funds in our database. Out of 206 funds, we find evidence that 122 funds make use of market timing strategies. This number is higher than expected, since many of these funds are passive and thus must follow a pre-established benchmark closely and, thus, are not managed by market timers. This false fund classification may occur because the fund might be, in reality, a passive fund with a benchmark other than IBOVESPA. In this case, if the portfolio of this benchmark for some reason (for example: stocks entering or leaving portfolios of either the benchmark or IBOVESPA in their periodical rebalances) behaves as if it were a market timer, all passive funds that use this benchmark as their own

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will present market timing behavior. In fact, some of these 122 stock funds are officially classified by ANBID as indexed funds, with stock market indices such as the IBA, IBX, FGV-100, as benchmarks (see appendix). Therefore, to obtain a more accurate test, one can assign to each fund in the database the corresponding benchmark, and then perform the test for each fund each fund substituting the return on the IBOVESPA with the return on the index the fund uses as its relevant benchmark.

5.2.2   Estimates for the Changing Probabilities Model

The second model for which we estimated parameters is the MS with changing probabilities. This model differs from the previous one because transition probabilities are not fixed, but instead vary with the expectations of future returns. If this expectation is often fulfilled, the probabilities of changing and not changing positions are related to future values of market portfolio returns. The model states these probabilities as logit functions of market portfolio returns, so that any market timing is captured by the parameters of these logit equations. Thus, if the test rejects the null hypothesis that return coefficients are null, along with the expected signs of these coefficients, then it provides evidence of successful market timing. We estimate the parameters of our model for the 206 mutual stock funds in our database. The results for the complete database are shown in the appendix. Table 3 shows the results obtained for the ten largest funds:

Table 3 - Estimates for the MS model with Changing Probabilities

Funds	Equity	theta01	theta11	theta02	theta12	Alpha	Beta1	Beta2	Sigma	logL	LR
BB-ACOES CARTEIRA LIVRE 1	3820.17	13.45	4.86	-10.87	-1.3	-0.004	1.08	0.16	0.006	377.74	0.18
BB CARTEIRA ATIVA	1906.47	-4399.46	3.74	0.60	-789.87	-0.003	-1.02	-0.01	0.005	394.60	0.01
DYNAMO PUMA	485.64	-980.2	691.7	74.26	-4999.2	0.002	-0.86	0.29	0.017	278.58	2.08
OPPORTUNITY LOGICA II FIA	449.47	48.48	4.43	-10.41	3.9	0.003	2.64	0.78	0.037	190.74	1.11
BB-ACOES PRICE	357.75	-933	609	-626.80	376.4	-0.004	0.07	0.00	0.001	546.78	0.45
BB-GUANABARA	306.68	13.87	4.77	-9.90	-117.8	0.002	4.97	1.02	0.037	189.20	1.11
ITAUACOES - FIA	272.45	11.01	322.07	-2403.20	-482.00	0.000	1.46	0.69	0.019	262.43	9.69 *
BRASIL PRIVATE EQUITY	234.24	-4399.39	4.62	5.85	-824.19	-0.004	-7.64	0.13	0.014	289.78	0.51
CITIACOES	191.47	16.70	322.1	-2402.95	912.77	0.000	1.38	0.96	0.018	268.46	11.49 *
BRADESCO FIA	170.93	37.65	322.04	-2403.34	165.21	-0.003	1.32	0.76	0.021	251.35	9.51 *

*significant at 99% confidence level according to the chi-square distribution (H0: theta11=theta12=0)

For three out of the ten funds in Table 3, market returns are significant in explaining changes in transition probabilities. Since BRADESCO FIA was among those not considered as market timers, two funds remain as successful market timer candidates: ITAUAÇÕES-FIA and CITIAÇÕES. The Timing Measures for these two funds are, respectively, 0.50 and 0.4870 (see appendix). Since they are both positive, it follows that both funds can be considered as successful market timers. When analyzing all the funds, while 59 out of 206 funds had market returns helping to explain changes in transition probabilities; 28 out of these 59 funds were considered market timers in the test described in the previous section. Positive Timing Measures were obtained for 23 out of these 28 funds. Therefore, out of 122 market timers, 23 were successful according to our timing measure, that is, about one-sixth of the total of market timers. Thus, it is possible to "beat the market" using market timing strategies. However, in practice, only a few mutual fund managers can time the market successfully. Thus, ignoring non-market timers did not substantially increase the proportion of successful funds, which leads to the conclusion that the payoff of market timing strategies is not very high. This evidence is consistent with Henriksson and Merton (1981), Merton (1981) and Treynor and Mazuy (1966), who obtained positive and statistically significant, yet small extra returns generated by

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market timing strategies.

5.2.3 Comparing Timing Measures

One may wonder whether these results are robust to the models and measures used. Mazali, Simonsen and Basílio (2000) estimate the models of Section 2 for the same funds in our database, obtaining similar results. How similar are the estimates obtained with the MS models to the ones obtained with the models in Section 2? In this subsection, we compare the timing measure developed here with the ones described in Section 2. To make this comparison, the fund sample was partitioned into subsamples according to their positions in the distribution of timing measures. We perform two different partitions of the database. In the first partition, we calculated the quartiles of the dummy, quadratic, and MS timing measures: we then separated the funds into boxes according to their positions in the dummy and MS timing measures. If a fund is at the top quartile in both measures, it will be placed in the box corresponding to top MS-top dummy quartile subsample, and similarly for every combination of quartiles possible. The results are in the top panel in Table 4. We performed similar procedures for quadratic versus MS timing measures and displayed the results in the top panel in Table 5. We then made a similar split of the sample, now splitting the sample into above and below medians instead of quartiles, displaying the results in the bottom panels of Tables 4 and 5. We ended up with two matrices relating each fund to its quartile and above/below median positions on both the MS and one of the traditional market timing measures. The number on the i-th row and j-th column of this matrix represent the number of funds that are simultaneously at the i-th quartile on the traditional timing measure distribution

and j-th quartile on the MS timing measure distribution.

Table 4: MS and Dummy Timing Measures

MS Timing

Dummy Timing	1	2	3	4	Total
1	13	12	17	10	52
2	11	21	10	9	51
3	13	9	17	12	51
4	15	9	15	13	52
Total	52	51	59	44	206

	1	2	Total
1	57	46	103
2	46	57	103
Total	103	103	206

Table 5: MS and Square Timing Measures

MS Timing

Square Timing	1	2	3	4	Total
1	15	13	15	9	52
2	11	18	13	9	51
3	11	13	16	11	51
4	15	7	15	15	52
Total	52	51	59	44	206

	1	2	Total
1	57	46	103
2	46	57	103
Total	103	103	206

It is expected that, if the two measures rank funds similarly, the numbers on the main diagonal will be considerably higher than if the funds were spread equally along the matrix. The farther a cell is from the main diagonal, the lower is its expected value. On the quartile matrices, the value at each cell would be 12.5 if the numbers at each cell were all the same. Table 4 shows high numbers at the whole main diagonal: 13, 21, 17 and 13. Outside the main diagonal, the numbers are lower. Summing the elements of the main diagonal, the number obtained is 64, a value considerably higher than the expected 51.5. Let us now analyze the matrix of the above/below median split. Table 4 shows that a fund that is above the median according to the dummy approach is slightly more likely to be above the median according to the MS approach than below it. These results suggest that the rankings obtained by the two approaches are somewhat similar. The same results are obtained when comparing the rankings obtained using MS and quadratic approaches. The sum of the main diagonal of the quartile split matrix is greater than 51.5 (it sums 64). The above/below median matrix is the same for the quadratic case as it is for the dummy approach. Therefore, the median split market timing

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rankings obtained using the MS and Squared Regressors approaches are far from equal but show some resemblance.

The reasons for the differences in the MS and traditional rankings for market timing have already been discussed in earlier sections. The MS timing measure is based solely on probabilities, while the traditional ones are based on funds' betas. The MS measure developed here indicates which managers were the best forecasters of future returns. The traditional ones show which managers have taken advantage of their opportunities the most.

6   Conclusion

For mutual funds investors, it is important to have information about how the funds in which they might invest are managed. Some are managed passively and some actively. One way mutual funds are actively managed is through market timing strategies, the practice of switching the portfolio betas according to the manager's expectations of future market returns. The models commonly used to determine how well the manager is able to time the market underestimates the beta differences by taking the observed behavior of the market instead of the unobserved manager's market returns expectation. We propose an alternative approach to estimate market timing betas by using Markov Switching framework with a CAPM model, with coefficients estimated using maximum likelihood numerical methods. This approach allows us to test for the existence of market timing strategies in a fund's management. The problem with this test is that the asymptotic distribution of the LR statistic is not the same as in the usual LR test. Since this asymptotic distribution is data-dependent, it is impossible to derive a distribution that can be used with

any database. Therefore, in order to perform the hypothesis test, we simulate 1,000 series under the null hypothesis and compute the Empirical Distribution Function, from where we obtain the critical values for the LR statistic.

Despite having many qualities, the MS fixed probabilities model described in Section 2 is not able to find which funds are the most successful in market timing strategies. We thus propose a MS model with changing probabilities in which transition probabilities are functions of market portfolio returns. The idea is that, if managers can correctly anticipate future states of nature, the transition probabilities will then be correlated with future returns. Based on parameter estimates of this model, we construct a timing measure and, with the resulting information plus a traditional LR test, we are able to say whether the manager is a successful market timer or not.

The estimates obtained for the Brazilian mutual funds data lead to the conclusion that about half of the stock fund industry is made up by market timers. Despite the fact that some of these managers are quite successful in their attempts to anticipate market returns, this is not a general rule for the industry, and most managers are not able to get any additional returns by using market timing strategies. The evidence obtained in the current study is consistent with the results of Merton (1981), Henriksson and Merton (1981) and Mazali, Simonsen and Basílio (2000). Thus, eliminating the funds that are not managed by market timers from the analysis did not lead to the conclusion that market timing strategies are strongly efficient, and therefore, in that regard, the findings of the current study are qualitatively similar to the aforementioned studies. This result might be weakened by the fact that the returns of the IBOVESPA were used as the benchmark for the entire

industry. To obtain more accurate estimates, one can run similar models replacing IBOVESPA with more appropriate benchmarks for each fund. Comparing rankings according to the MS model and traditional ones using real world data, we observe important differences. Mutual funds that are classified as above median using the MS timing measures developed in the current study are not always classified as above the median using one of the traditional market timing measures. Only 57 out of the 103 funds that are above the median according to the MS timing measure are above the median according to either the dummy or the quadratic timing measures. These differences are expected since the interpretations of traditional and MS timing measures are not the same. The results, however, show that the rankings using traditional and MS measures show some resemblance, with most mutual funds ranked as above median according to the MS timing measure being also ranked as above the median according to one of the traditional timing measures, as can be seen on Tables 4 and 5.

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STATISTICAL APPENDIX

	Funds	MS MARKET TIMING MODEL WITH FIXED PROBABILITIES								LR TEST ESTIMATES: BETA1=BETA2					
	Name	p11	p21	p12	p22	Alpha	Beta1	Beta2	Sigma	logLikelihood	Alpha	Beta	Sigma	logLikelihood	LR	
1	BB-ACOES CARTEIRA LIVRE 1	98,9%	1,1%	49,3%	50,7%	-0,39%	0,16	1,08	0,60%	377,65	-0,35%	0,17	0,81%	352,87	49,55	*
2	BB CARTEIRA ATIVA	0,0%	100,0%	2,4%	97,6%	-0,34%	-1,02	-0,01	0,50%	394,60	-0,39%	-0,02	0,82%	351,42	86,37	*
3	DYNAMO PUMA	0,0%	100,0%	0,0%	100,0%	0,17%	-0,86	0,29	1,66%	277,54	0,12%	0,29	1,75%	273,42	8,25	
4	OPPORTUNITY LOGICA II FIA	98,0%	2,0%	41,2%	58,8%	0,28%	0,78	2,64	3,66%	190,19	0,61%	0,87	4,50%	174,88	30,62	*
5	BB-ACOES PRICE	100,0%	0,0%	100,0%	0,0%	-0,42%	0,00	0,07	0,13%	546,55	-0,42%	0,00	0,13%	542,53	8,05	
6	BB-GUANABARA	53,0%	47,0%	1,1%	98,9%	0,25%	4,97	1,02	3,71%	188,65	0,43%	1,05	4,39%	177,45	22,39	*
7	ITAUACOES - FIA	93,9%	6,1%	72,9%	27,1%	-0,04%	0,69	1,48	1,81%	257,59	0,09%	0,74	2,24%	247,28	20,61	*
8	BRASIL PRIVATE EQUITY	0,0%	100,0%	1,0%	99,0%	-0,38%	-7,63	0,13	1,41%	289,53	-0,09%	0,11	3,25%	208,70	161,65	*
9	CITIACOES	98,6%	1,4%	53,7%	46,3%	-0,02%	1,02	2,65	1,82%	262,72	0,06%	1,04	2,07%	255,93	13,58	*
10	BRADESCO FIA	8,4%	91,6%	7,9%	92,1%	-0,25%	1,30	0,76	2,13%	246,60	-0,20%	0,80	2,31%	244,49	4,22	
11	ITAU CARTEIRA LIVRE FIA	22,9%	77,1%	19,9%	80,1%	-0,04%	1,30	1,02	2,14%	246,44	0,00%	1,09	2,29%	245,39	2,11	
12	BB-ACOES INDICE	97,1%	2,9%	71,8%	28,2%	-0,06%	1,00	2,69	1,84%	256,64	-0,11%	1,04	2,49%	236,61	40,06	*
13	FATOR SINERGIA CL	52,5%	47,5%	52,2%	47,8%	-0,31%	0,59	0,20	2,67%	220,19	-0,36%	0,38	2,94%	219,20	1,99	
14	CAIXA ACOES	45,6%	54,4%	1,4%	98,6%	-0,15%	2,81	1,05	1,76%	265,68	-0,06%	1,06	2,06%	256,33	18,69	*
15	ITAU GALAXIA FIA	39,6%	60,4%	37,3%	62,7%	0,47%	0,55	0,80	2,16%	245,52	0,52%	0,69	2,30%	244,61	1,82	
16	PORTFOLIO ACOES	98,7%	1,3%	53,6%	46,4%	0,09%	1,05	2,74	1,84%	261,65	0,17%	1,06	2,10%	254,21	14,88	*
17	BOSTON IBOVESPA SELECT	90,4%	9,6%	73,1%	26,9%	-0,13%	0,99	1,43	1,69%	267,00	-0,02%	1,08	2,03%	257,63	18,74	*
18	CAIXA PREMIUM BLUE IBOVESPA FIA	89,2%	10,8%	73,0%	27,0%	-0,14%	0,87	1,35	1,65%	266,65	-0,07%	0,98	2,10%	254,17	24,96	*
19	UNIBANCO ACOES BLUE	98,2%	1,8%	60,6%	39,4%	-0,28%	0,94	2,78	1,57%	276,38	-0,18%	0,96	1,94%	262,72	27,33	*
20	BB FUNDO DE ACOES	29,8%	70,2%	2,8%	97,2%	-0,27%	2,35	0,81	1,65%	267,84	-0,32%	0,85	2,24%	247,50	40,67	*
21	BOSTON PRIV. IBOVESPA PLUS	98,8%	1,2%	52,0%	48,0%	-0,06%	1,01	2,63	1,31%	296,32	0,01%	1,03	1,63%	280,54	31,56	*
22	OPPORTUNITY INSTITUCIONAL FIA	0,0%	100,0%	0,0%	100,0%	0,21%	0,61	1,00	2,83%	223,07	0,20%	1,00	2,84%	222,95	0,25	
23	UNIBANCO STRATEGY - CL	44,8%	55,2%	1,3%	98,7%	-0,24%	2,56	0,98	1,78%	265,04	-0,16%	1,00	2,02%	258,48	13,12	*
24	BRADESCO LIVRE FACIL FIA	23,8%	76,2%	7,9%	92,1%	-0,23%	1,58	0,97	1,87%	253,99	-0,17%	1,09	2,42%	239,41	29,16	*
25	BOSTON IBOVESPA PLUS	98,7%	1,3%	52,8%	47,2%	-0,13%	1,01	2,55	1,30%	297,55	-0,06%	1,03	1,59%	283,12	28,87	*
26	PRIVATE INDICE ACOES PLUS FIA	98,7%	1,3%	54,0%	46,0%	-0,09%	1,08	3,22	1,55%	279,07	0,02%	1,09	2,01%	258,56	41,01	*
27	UNIBANCO GALILEU - CL	98,3%	1,7%	58,7%	41,3%	-0,24%	0,90	2,43	2,05%	250,11	-0,16%	0,91	2,25%	246,87	6,47	
28	CART.LIVRE -FFS	98,7%	1,3%	100,0%	0,0%	0,03%	0,03	3,46	1,96%	255,52	0,11%	0,03	2,12%	253,13	4,79	
29	BRADESCO LIVRE FIA	21,6%	78,4%	9,9%	90,1%	-0,17%	1,46	0,99	1,82%	259,19	-0,11%	1,08	2,18%	250,55	17,28	*
30	CITIFOCUS ACOES	98,7%	1,3%	53,7%	46,3%	-0,03%	1,05	2,74	1,84%	261,41	0,06%	1,06	2,10%	254,28	14,25	*
31	DYNAMO COUGAR	13,3%	86,7%	2,0%	98,0%	0,22%	-0,98	0,46	2,42%	234,28	0,31%	0,43	2,71%	227,63	13,30	*
32	IP PARTICIPACOES FIA	93,8%	6,2%	69,6%	30,4%	0,57%	0,34	1,33	2,87%	209,19	0,33%	0,46	3,55%	199,57	19,23	*
33	ITAU INSTITUCIONAL TELECOM FIA	90,7%	9,3%	78,7%	21,3%	-0,08%	1,03	1,64	2,05%	245,15	0,05%	1,15	2,55%	233,87	22,55	*
34	CHASE EQUITIES	98,5%	1,5%	56,8%	43,2%	-0,04%	0,88	2,74	1,74%	266,52	0,06%	0,89	2,08%	255,44	22,16	*
35	ALFA INDEX - FITVM	98,6%	1,4%	53,7%	46,3%	-0,09%	1,02	2,70	1,67%	270,98	-0,01%	1,04	1,95%	261,67	18,64	*
36	BOSTON TELECOM	45,0%	55,0%	45,0%	55,0%	0,21%	1,07	1,07	2,28%	245,55	0,21%	1,07	2,28%	245,55	0,00	
37	CCF-ACOES	24,0%	76,0%	19,2%	80,8%	-0,09%	1,36	0,99	2,08%	246,31	-0,04%	1,09	2,34%	243,08	6,47	
38	CCF INSTITUCIONAL	24,0%	76,0%	3,2%	96,8%	-0,04%	2,01	0,92	1,99%	250,66	-0,04%	0,95	2,24%	247,72	5,89	
39	ACOES HSBC ACUMULACAO	98,8%	1,2%	50,8%	49,2%	-0,06%	0,83	2,58	1,52%	281,48	0,03%	0,85	1,84%	267,91	27,14	*
40	CCF TOP EX 157	98,7%	1,3%	53,2%	46,8%	-0,11%	1,03	2,86	1,54%	278,11	-0,02%	1,04	1,90%	264,82	26,58	*
41	CITIACOES RENDA MISTA	72,6%	27,4%	71,0%	29,0%	-0,02%	0,57	0,75	1,15%	309,84	-0,01%	0,62	1,27%	306,57	6,53	
42	SAFRA PRIVATE	98,4%	1,6%	58,1%	41,9%	0,04%	1,05	3,19	2,76%	219,36	0,15%	1,07	3,05%	215,40	7,92	
43	SIGMA	89,6%	10,4%	85,9%	14,1%	-0,04%	0,81	1,14	1,57%	278,49	-0,06%	0,84	1,67%	277,87	1,25	
44	ICATU INSTITUCIONAL BSP FIA	98,8%	1,2%	49,3%	50,7%	-0,05%	1,06	2,99	1,74%	266,94	0,04%	1,07	2,08%	254,96	23,96	*
45	BB-ACOES MASTER	27,7%	72,3%	3,0%	97,0%	-0,14%	2,53	1,00	1,88%	254,93	-0,19%	1,04	2,41%	239,97	29,93	*
46	CSAM GARANTIA S	98,5%	1,5%	55,0%	45,0%	-0,08%	0,95	3,30	1,87%	259,22	0,04%	0,97	2,34%	242,87	32,70	*
47	OPPORTUNITY I FIA	58,0%	42,0%	56,4%	43,6%	0,35%	0,92	1,15	2,49%	232,66	0,41%	1,03	2,60%	232,06	1,19	
48	PACTUAL TALITHA	98,2%	1,8%	57,8%	42,2%	-0,08%	0,93	2,57	1,81%	262,76	-0,01%	0,94	2,08%	255,43	14,67	*
49	ALFA SPECIAL - FITVM	96,3%	3,7%	75,1%	24,9%	0,01%	0,96	2,26	1,89%	253,94	0,00%	0,99	2,27%	246,14	15,60	*
50	BB ACOES TELEBRASIL	96,7%	3,3%	81,8%	18,2%	-0,19%	1,04	2,65	1,95%	251,91	-0,24%	1,08	2,51%	235,52	32,78	*

#	Name															
51	ABN AMRO TELECOM FIA	98,8%	1,2%	100,0%	0,0%	0,00%	1,06	5,13	2,40%	234,91	0,23%	1,09	3,38%	204,78	60,26	*
52	FINASA INDICE EXCLUSIVO	90,7%	9,3%	77,5%	22,5%	-0,04%	0,89	1,34	1,64%	269,36	0,02%	0,98	2,00%	259,26	20,19	*
53	CARTEIRA LIVRE BSA	98,3%	1,7%	99,7%	0,3%	0,95%	0,25	8,39	6,76%	126,50	1,51%	0,34	8,61%	107,49	38,01	*
54	BBA CAP CL - GEMINI	98,7%	1,3%	52,7%	47,3%	-0,14%	1,02	3,28	1,80%	263,72	-0,03%	1,04	2,25%	246,99	33,47	*
55	CCF BLUE CHIP	20,3%	79,7%	7,4%	92,6%	-0,02%	1,57	0,95	2,02%	247,90	0,05%	1,06	2,55%	234,15	27,49	*
56	SAFRA ACOES	88,8%	11,2%	79,5%	20,5%	-0,05%	0,94	1,36	2,17%	242,87	0,01%	1,02	2,43%	238,85	8,04	
57	PLURAL INSTITUCIONAL FIA	88,1%	11,9%	74,6%	25,4%	-0,10%	0,82	1,47	2,52%	223,92	-0,02%	0,96	3,03%	215,98	15,89	*
58	BOREAL ACOES III	60,4%	39,6%	59,0%	41,0%	-0,27%	0,71	0,92	2,41%	236,29	-0,23%	0,81	2,51%	235,84	0,90	
59	BMG ACOES	83,5%	16,5%	76,5%	23,5%	0,23%	0,89	1,21	2,09%	248,29	0,32%	0,97	2,27%	246,08	4,42	
60	PRIVATE FOCUS	83,6%	16,4%	79,5%	20,5%	0,07%	0,98	1,34	1,86%	258,07	0,09%	1,06	2,10%	254,19	7,77	
61	BRADESCO II FIA	65,0%	35,0%	63,6%	36,4%	0,25%	0,88	1,15	2,77%	221,19	0,31%	0,99	2,90%	220,77	0,84	
62	SUDAMERIS ACOES	97,8%	2,2%	77,2%	22,8%	-0,13%	0,80	1,86	1,55%	279,40	-0,06%	0,81	1,68%	277,41	3,99	
63	TELECOMUNICACOES	82,1%	17,9%	73,8%	26,2%	0,13%	0,99	1,38	2,10%	245,55	0,22%	1,09	2,37%	241,69	7,71	
64	CITITELECOM	82,2%	17,8%	73,7%	26,3%	0,05%	0,99	1,39	2,10%	245,74	0,14%	1,09	2,37%	241,66	8,17	
65	HSBC ACOES INDICES	47,5%	52,5%	1,3%	98,7%	-0,11%	2,91	1,05	1,56%	278,24	-0,02%	1,06	1,92%	263,46	29,55	*
66	BANESPA - FBA	98,8%	1,2%	50,1%	49,9%	-0,37%	0,80	2,95	1,59%	276,85	-0,27%	0,82	2,04%	257,31	39,09	*
67	CSAM GARANTIA A	98,0%	2,0%	63,5%	36,5%	-0,13%	1,02	3,24	1,73%	266,22	0,00%	1,04	2,20%	249,41	33,62	*
68	PREVIDENCIA C - CL	15,7%	84,3%	15,7%	84,3%	-0,23%	-0,01	0,56	4,79%	164,39	-0,42%	0,42	5,04%	163,18	2,41	
69	SUDAMERIS LUCE CL	95,1%	4,9%	96,1%	3,9%	-0,10%	0,74	0,38	1,64%	275,20	-0,08%	0,71	1,74%	273,90	2,59	
70	ITAU PERSONNALITE MARCHE FICFIA	84,4%	15,6%	78,1%	21,9%	-0,09%	0,98	1,28	1,84%	261,37	-0,04%	1,05	2,01%	258,76	5,22	
71	CCF LIBRIUM	98,9%	1,1%	100,0%	0,0%	-0,02%	0,87	9,08	1,66%	272,65	-0,10%	0,87	1,86%	266,82	11,67	*
72	ITAU LUXOR FIA	98,2%	1,8%	63,2%	36,8%	0,03%	0,79	1,80	1,45%	286,31	0,08%	0,80	1,58%	283,50	5,62	
73	BCN ALLIANCE SUPERACAO TELECOM	51,1%	48,9%	47,9%	52,1%	-0,05%	0,85	1,23	2,50%	227,66	-0,02%	1,05	2,78%	225,01	5,31	
74	CITI INSTITUCIONAL ACOES	84,8%	15,2%	77,9%	22,1%	0,08%	0,97	1,30	2,06%	248,68	0,13%	1,05	2,26%	246,53	4,31	
75	ITAU INDICE ACOES FIC FIA	98,7%	1,3%	52,9%	47,1%	-0,11%	1,05	2,99	1,67%	271,02	-0,02%	1,07	2,04%	257,47	27,11	*
76	ITAU CART. INSTITUCIONAL FIA	98,2%	1,8%	60,0%	40,0%	0,02%	1,01	2,98	1,90%	257,05	0,13%	1,03	2,25%	246,96	20,18	*
77	PLURAL FIA LIVRE	87,4%	12,6%	76,9%	23,1%	-0,12%	0,82	1,44	2,70%	218,34	-0,06%	0,96	3,16%	211,87	12,95	*
78	ITAU PERSONNALITE TECHNIQUE FIA	96,2%	3,8%	50,5%	49,5%	0,02%	1,09	2,03	1,85%	256,06	0,05%	1,28	3,05%	215,56	81,00	*
79	BOREAL ACOES V	96,7%	3,3%	97,7%	2,3%	0,14%	0,78	1,81	2,93%	214,82	0,09%	0,80	3,09%	214,12	1,41	
80	ABN AMRO ACOES	22,4%	77,6%	3,7%	96,3%	0,03%	2,26	0,94	1,80%	258,50	0,19%	0,96	2,12%	253,08	10,85	*
81	SUDAMERIS ACOES C.L.	23,6%	76,4%	4,3%	95,7%	-0,10%	0,26	0,88	2,33%	237,66	-0,18%	0,84	2,49%	236,35	2,62	
82	BANERJ ACOES FICFIA	98,7%	1,3%	53,8%	46,2%	-0,04%	0,94	2,57	1,95%	254,78	0,04%	0,95	2,19%	250,08	9,40	
83	SANTANDER ACOES	70,7%	29,3%	65,8%	34,2%	0,01%	0,87	1,15	1,81%	261,98	0,08%	0,97	2,00%	259,23	5,49	
84	PACTUAL ANDROMEDA	98,8%	1,2%	100,0%	0,0%	-0,11%	0,95	9,29	2,07%	249,33	0,17%	0,98	3,62%	197,60	103,45	*
85	ITAU AVANTAGE FIA	20,5%	79,5%	16,7%	83,3%	0,00%	1,31	0,95	1,78%	261,47	0,02%	1,04	2,05%	256,89	9,16	
86	MULTIPLY VARIABLE CARTEIRA LIVRE	96,3%	3,7%	79,2%	20,8%	0,07%	0,76	1,98	1,30%	292,57	0,23%	0,78	1,67%	278,32	28,52	*
87	SAO FRANCISCO	98,8%	1,2%	52,6%	47,4%	-0,27%	0,88	3,49	2,31%	237,93	-0,14%	0,90	2,78%	224,85	26,16	*
88	SAFRA INDICIAL	31,7%	68,3%	2,4%	97,6%	-0,17%	2,99	1,02	1,70%	265,05	-0,03%	1,04	2,11%	253,77	22,56	*
89	SUDAMERIS FBFREE CL	98,4%	1,6%	57,2%	42,8%	-0,26%	0,94	2,57	1,99%	253,01	-0,17%	0,95	2,22%	248,26	9,51	
90	PACTUAL ADARA	94,7%	5,3%	72,2%	27,8%	-0,12%	0,91	1,59	2,14%	245,33	0,01%	0,95	2,37%	241,80	7,05	
91	BOZANO SEGURIDADE	25,9%	74,1%	7,0%	93,0%	-0,06%	1,49	0,95	1,92%	253,97	0,01%	1,05	2,34%	242,92	22,11	*
92	CSAM GARANTIA IBX-ECO	68,0%	32,0%	61,1%	38,9%	-0,22%	0,26	0,80	2,24%	231,39	-0,24%	0,42	2,74%	226,68	9,42	
93	ITAUVEST - FIA	98,5%	1,5%	54,5%	45,5%	-0,08%	0,93	2,80	1,76%	265,50	0,02%	0,95	2,09%	254,51	21,99	*
94	BFII SUDAMERIS CL	95,9%	4,1%	79,3%	20,7%	-0,10%	0,72	2,13	1,62%	268,51	0,08%	0,75	2,02%	258,19	20,64	*
95	BOZANO PORT. LIVRE	89,0%	11,0%	78,7%	21,3%	-0,03%	0,95	1,41	1,95%	252,33	0,02%	1,04	2,28%	245,58	13,50	*
96	ALFA - FIC DE FITVM	0,0%	100,0%	1,1%	98,9%	-0,26%	-2,30	0,54	1,68%	271,99	-0,42%	0,52	2,36%	242,11	59,75	*
97	CCF GOLD	86,9%	13,1%	75,6%	24,4%	-0,07%	0,82	1,28	1,80%	259,23	0,01%	0,93	2,19%	249,77	18,92	*
98	LLOYDS SHARE - FITVM	20,0%	80,0%	14,2%	85,8%	-0,08%	1,18	0,89	1,77%	265,23	-0,05%	0,95	1,93%	262,88	4,69	
99	FLEMING GRAPHUS ENERGIA FMIA-CL	11,5%	88,5%	3,3%	96,7%	-0,05%	1,95	0,98	1,81%	260,83	-0,07%	1,00	2,05%	256,85	7,96	
100	FINASA ACOES I	25,2%	74,8%	3,1%	96,9%	-0,23%	1,74	0,88	1,60%	274,28	-0,23%	0,90	1,77%	271,74	5,09	
101	FDO QUALIFIED - CL	98,6%	1,4%	54,5%	45,5%	-0,12%	0,77	2,39	1,50%	282,26	-0,04%	0,78	1,79%	270,61	23,30	*
102	CARTEIRA LIVRE - PR	85,2%	14,8%	74,7%	25,3%	-0,15%	0,88	1,26	1,80%	259,86	-0,08%	0,98	2,10%	254,17	11,38	*
103	BOSTON ENERGY - FIA	98,7%	1,3%	54,0%	46,0%	-0,23%	1,00	3,52	3,94%	183,32	-0,13%	1,02	4,20%	182,22	2,20	

104	ICATU INSTITUCIONAL BX FIA	27,9%	72,1%	2,8%	97,2%	0,04%	2,20	1,01	1,90%	254,57	0,01%	1,04	2,23%	248,04	13,07	*
105	SUDAMERIS ACOES PRIVATE CL	97,7%	2,3%	64,8%	35,2%	0,00%	0,81	2,80	1,93%	253,83	0,13%	0,83	2,30%	244,78	18,08	*
106	CCF-FRANCIAL ACOES	98,5%	1,5%	53,2%	46,8%	-0,15%	0,91	2,39	2,01%	252,24	-0,08%	0,92	2,20%	249,37	5,74	
107	BCN ALLIANCE SEGURIDADE	24,5%	75,5%	5,1%	94,9%	-0,12%	1,38	0,91	1,72%	268,65	-0,06%	0,94	1,87%	266,04	5,21	
108	CHASE INVESTOR	98,7%	1,3%	51,8%	48,2%	-0,22%	0,88	2,55	1,78%	264,94	-0,14%	0,90	2,04%	257,21	15,45	*
109	PLURAL FIA	40,5%	59,5%	17,7%	82,3%	-0,08%	1,30	0,74	2,10%	238,36	-0,09%	0,90	2,67%	229,18	18,35	*
110	BBA CAP CL TARGET	8,7%	91,3%	4,1%	95,9%	0,00%	2,12	0,99	1,90%	254,08	0,00%	1,02	2,23%	248,19	11,79	*
111	LLOYDS EQUINOX SOURCE - FITVM	23,9%	76,1%	3,7%	96,3%	0,10%	1,86	0,82	1,82%	258,94	0,06%	0,85	2,12%	253,16	11,55	*
112	HEDGING-GRIFFO FCL II	51,7%	48,3%	1,2%	98,8%	-0,09%	2,69	1,01	1,69%	270,55	-0,02%	1,03	1,96%	261,36	18,37	*
113	PREVIDENCIA A - CL	95,0%	5,0%	92,8%	7,2%	-0,13%	0,76	1,36	1,63%	272,56	-0,16%	0,79	1,81%	269,45	6,23	
114	UNIBANCO PREVIDENCIA - CL	40,1%	59,9%	1,7%	98,3%	-0,28%	2,74	0,94	1,64%	272,04	-0,18%	0,95	1,98%	260,58	22,92	*
115	SIGMA	96,8%	3,2%	98,9%	1,1%	-0,12%	0,64	2,49	2,01%	247,72	0,01%	0,66	2,43%	239,10	17,23	*
116	LIFE	0,0%	100,0%	2,8%	97,2%	-0,01%	0,16	0,00	0,07%	595,14	-0,02%	0,00	0,08%	591,91	6,46	
117	FLEMING GRAPHUS EXCLUSIVE SUL FMIA-CL	96,6%	3,4%	89,9%	10,1%	-0,01%	0,99	1,94	1,85%	258,93	-0,03%	1,01	2,07%	255,61	6,64	
118	BANESPA F.B.L.	1,2%	98,8%	1,5%	98,5%	-0,19%	2,01	0,79	1,26%	301,62	-0,12%	0,80	1,45%	292,46	18,32	*
119	BBM HIGH YIELD 1	84,7%	15,3%	49,2%	50,8%	0,23%	0,43	1,18	2,30%	229,06	0,03%	0,70	3,24%	209,06	40,00	*
120	MATRIX ACOES	20,4%	79,6%	3,0%	97,0%	0,08%	-0,24	0,83	2,26%	240,08	0,16%	0,80	2,53%	234,65	10,87	*
121	ALFA MAIS - FIC DE FITVM	87,4%	12,6%	79,2%	20,8%	-0,29%	0,95	1,37	2,09%	246,10	-0,22%	1,04	2,36%	242,23	7,75	
122	LLOYDS EQUITY - FITVM	86,4%	13,6%	81,4%	18,6%	-0,33%	0,99	1,32	2,08%	249,12	-0,27%	1,06	2,25%	247,17	3,88	
123	BOSTON SMALL CAP VALUATION - FIA	38,5%	61,5%	32,6%	67,4%	0,16%	1,23	0,76	2,96%	209,26	0,31%	0,97	3,31%	206,78	4,96	
124	ICATU BV FIA	98,8%	1,2%	49,7%	50,3%	-0,08%	1,07	3,10	1,80%	263,80	0,01%	1,09	2,17%	250,81	25,99	*
125	BBM ACOES	88,3%	11,7%	84,5%	15,5%	0,11%	0,79	1,18	1,58%	273,76	0,10%	0,83	1,76%	272,50	2,51	
126	PRIVATE ACOES	47,2%	52,8%	1,4%	98,6%	-0,12%	2,89	1,00	1,86%	259,83	-0,03%	1,01	2,19%	250,50	19,61	*
127	UNIBANCO CRED. INDEX	99,0%	1,0%	100,0%	0,0%	0,05%	1,03	9,31	1,64%	274,62	-0,03%	1,03	1,84%	268,12	13,00	*
128	ALFA INDICE - FIC DE FITVM	98,6%	1,4%	53,6%	46,4%	-0,17%	1,02	2,70	1,68%	270,67	-0,09%	1,04	1,96%	261,51	18,33	*
129	FIB	98,4%	1,6%	56,3%	43,7%	-0,06%	0,98	2,71	1,73%	266,85	0,03%	0,99	2,03%	257,99	17,71	*
130	BOZANO FIB	99,0%	1,0%	100,0%	0,0%	0,12%	1,02	11,91	1,85%	261,83	0,01%	1,02	2,15%	251,81	20,03	*
131	MAXIMA ACCESS	99,0%	1,0%	99,0%	1,0%	0,03%	0,71	0,65	3,68%	195,73	0,03%	0,71	3,68%	195,73	0,00	
132	CCF TELECOM	89,4%	10,6%	78,1%	21,9%	0,04%	1,02	1,59	2,03%	245,76	0,17%	1,13	2,50%	236,14	19,25	*
133	SANTA FE AQUARIUS FIA	86,2%	13,8%	64,8%	35,2%	0,07%	0,24	0,67	1,28%	289,21	0,10%	0,38	1,82%	268,81	40,80	*
134	CCF FIB	96,5%	3,5%	80,5%	19,5%	-0,06%	0,86	1,78	1,65%	268,80	-0,08%	0,89	1,89%	265,32	6,94	
135	SAFRA SETORIAL TELECOM	0,0%	100,0%	1,2%	98,8%	-0,09%	6,72	1,05	2,62%	225,61	0,23%	1,10	4,22%	181,61	88,00	*
136	MERIDIONAL ACOES	23,9%	76,1%	18,4%	81,6%	-0,10%	1,34	0,92	2,05%	247,27	-0,07%	1,03	2,36%	242,03	10,48	*
137	BBA CAP CL TIMING	98,8%	1,2%	51,0%	49,0%	-0,01%	1,02	3,21	1,65%	272,70	0,09%	1,04	2,11%	253,93	37,54	*
138	AMERICA DO SUL ACOES	98,3%	1,7%	58,6%	41,4%	-0,17%	0,83	2,38	1,89%	257,65	-0,09%	0,84	2,12%	253,28	8,73	
139	PACTUAL ANTARES	60,5%	39,5%	59,3%	40,7%	0,02%	0,88	1,07	1,96%	257,57	0,04%	0,94	2,04%	256,99	1,16	
140	XINGU FDO ACOES	96,3%	3,7%	98,7%	1,3%	-0,07%	0,41	1,80	1,76%	262,96	-0,23%	0,48	2,61%	231,58	62,75	*
141	LLOYDS EXPLORER EXTRA - FITVM	98,9%	1,1%	49,6%	50,4%	-0,06%	1,01	4,85	1,57%	277,42	0,12%	1,04	2,78%	225,17	104,49	*
142	BB - ACOES ELETROBRASIL	71,5%	28,5%	70,8%	29,2%	-0,29%	0,83	1,28	4,30%	175,49	-0,15%	0,98	4,51%	174,78	1,41	
143	LLOYDS MERCURY - FITVM	98,0%	2,0%	62,9%	37,1%	-0,16%	0,86	2,08	1,38%	290,48	-0,09%	0,87	1,57%	284,32	12,32	*
144	ITAU PERSONNALITE ACOES FICFIA	98,5%	1,5%	58,0%	42,0%	-0,14%	0,91	2,21	2,09%	249,29	-0,08%	0,92	2,23%	248,09	2,39	
145	DREYFUS BRASCAN CAPIBARIBE FIA	82,3%	17,7%	82,9%	17,1%	0,05%	0,66	0,41	1,41%	288,76	0,03%	0,59	1,58%	283,53	10,45	*
146	FI BANDEIRANTES ACOES	98,5%	1,5%	58,1%	41,9%	-0,25%	0,92	2,50	1,59%	276,20	-0,17%	0,94	1,85%	267,23	17,94	*
147	MAGLIANO	94,0%	6,0%	53,7%	46,3%	-0,18%	0,90	1,64	1,92%	252,41	-0,16%	1,06	2,70%	227,97	48,87	*
148	ALPHA	16,4%	83,6%	9,6%	90,4%	-0,05%	1,21	0,80	1,69%	268,75	-0,12%	0,83	1,86%	266,82	3,86	
149	ALFA INDICE II - FIC DE FTVM	98,1%	1,9%	61,4%	38,6%	-0,29%	0,75	1,91	1,23%	302,30	-0,23%	0,76	1,42%	294,59	15,42	*
150	SANTANDER POWER	87,8%	12,2%	74,4%	25,6%	0,08%	0,87	1,45	1,94%	250,90	0,33%	1,00	2,48%	236,97	27,86	*
151	AVANCO CL	97,3%	2,7%	73,9%	26,1%	-0,01%	0,77	1,96	1,54%	277,65	0,06%	0,78	1,73%	274,49	6,32	
152	SUDAMERIS INDEX C. LIVRE	98,5%	1,5%	58,4%	41,6%	0,06%	0,98	2,39	1,59%	276,87	0,13%	0,99	1,80%	270,02	13,71	*
153	BCN ALLIANCE BLUE CHIP	98,1%	1,9%	70,3%	29,7%	-0,12%	0,87	1,97	1,70%	270,09	-0,06%	0,88	1,83%	268,43	3,32	
154	FITVM GUARARAPES	0,0%	100,0%	0,0%	100,0%	-0,15%	0,00	0,66	1,45%	292,99	-0,18%	0,66	1,48%	290,60	4,78	
155	CSAM GARANTIA INDEX	98,8%	1,2%	50,0%	50,0%	-0,09%	1,02	2,71	1,55%	279,58	-0,01%	1,03	1,85%	267,49	24,19	*
156	BBV ACOES INDEX	24,0%	76,0%	11,8%	88,2%	-0,26%	1,45	1,00	1,86%	257,49	-0,21%	1,10	2,20%	249,20	16,58	*

#	Name															
157	ITAU SELECTED - FIA	94,2%	5,8%	71,4%	28,6%	-0,13%	0,96	1,64	2,10%	244,50	-0,01%	1,08	2,65%	230,18	28,64	*
158	PORTO SEGURO F.I.A	92,8%	7,2%	69,1%	30,9%	-0,23%	0,81	1,51	2,21%	238,48	-0,19%	0,95	2,85%	222,28	32,41	*
159	LAM FEB - FITVM	72,0%	28,0%	69,5%	30,5%	-0,07%	0,77	0,98	1,45%	285,19	-0,05%	0,84	1,58%	283,74	2,90	
160	ABN AMRO ATIVO I	88,8%	11,2%	80,6%	19,4%	0,03%	0,88	1,44	2,00%	247,08	0,11%	0,99	2,45%	238,14	17,88	*
161	IP PARTICIPACOES LIVRE FIA	0,2%	99,8%	1,3%	98,7%	0,22%	-3,49	0,61	3,52%	195,02	0,43%	0,58	4,13%	183,97	22,10	*
162	ICATU INSTITUCIONAL BA FIA	32,2%	67,8%	23,9%	76,1%	-0,15%	1,24	0,89	2,02%	248,34	-0,04%	1,01	2,29%	245,26	6,16	
163	DREYFUS BRASCAN INDEX FIA	21,1%	78,9%	11,3%	88,7%	-0,06%	1,36	0,99	1,74%	264,83	-0,01%	1,07	1,98%	260,21	9,24	
164	ALFA I FITVM	85,5%	14,5%	80,1%	19,9%	-0,28%	0,94	1,34	2,07%	247,16	-0,19%	1,04	2,35%	242,55	9,23	
165	BOAVISTA GALES	86,8%	13,2%	82,3%	17,7%	-0,13%	0,95	1,24	1,87%	260,66	-0,07%	1,01	2,01%	258,76	3,81	
166	SUL AMERICA MOMENTUM FMIA-CL	20,9%	79,1%	19,9%	80,1%	0,03%	0,81	1,02	2,09%	251,82	0,03%	0,98	2,15%	251,66	0,32	
167	NUMBER ONE	7,2%	92,8%	3,7%	96,3%	-0,17%	1,67	0,86	1,70%	268,04	-0,20%	0,88	1,88%	265,70	4,68	
168	TRIADE SENIOR	94,2%	5,8%	97,1%	2,9%	0,27%	0,44	1,20	2,37%	233,22	0,29%	0,49	2,66%	229,49	7,46	
169	SUDAMERIS INSTITUCIONAL CL	28,0%	72,0%	17,2%	82,8%	-0,07%	1,32	0,79	2,25%	235,14	-0,02%	0,93	2,70%	227,93	14,43	*
170	FLEMING GRAPHUS EQUITY FMIA-CL	13,4%	86,6%	3,6%	96,4%	0,02%	1,95	1,00	1,70%	267,07	0,01%	1,02	1,94%	262,29	9,55	
171	SARDEGNA CL	98,8%	1,2%	100,0%	0,0%	0,46%	0,60	8,69	7,85%	111,20	0,04%	0,66	8,91%	103,96	14,48	*
172	BOAVISTA INDEX	18,7%	81,4%	11,6%	88,4%	-0,15%	1,33	1,01	1,90%	258,09	-0,08%	1,07	2,07%	255,61	4,95	
173	SAM MOMENTUM FIQ FIA	80,0%	20,0%	78,9%	21,1%	-0,05%	1,02	0,80	2,08%	252,10	-0,05%	0,98	2,15%	251,93	0,33	
174	PACTUAL CYGNUS	97,6%	2,4%	75,3%	24,7%	0,02%	0,86	2,02	1,90%	258,49	0,08%	0,88	2,05%	256,85	3,28	
175	UNIBANCO PREVIDENCIA FMIA	49,1%	50,9%	1,2%	98,8%	-0,19%	2,74	0,90	1,62%	274,35	-0,10%	0,91	1,96%	261,29	26,12	*
176	BANESTADO ACOES	92,4%	7,6%	92,3%	7,7%	-0,05%	0,85	0,50	1,81%	265,93	-0,07%	0,83	1,88%	265,51	0,84	
177	FI ACOES BANDEIRANTES IBOVESPA	98,7%	1,3%	53,3%	46,7%	-0,14%	1,02	2,90	1,60%	275,70	-0,05%	1,04	1,96%	261,38	28,63	*
178	GERACAO F.I.A.	98,7%	1,3%	100,0%	0,0%	-0,22%	0,74	4,66	2,55%	227,80	0,00%	0,77	3,43%	203,04	49,51	*
179	PILLAINVEST ACOES	41,2%	58,9%	1,7%	98,3%	-0,29%	2,06	0,67	1,77%	265,13	-0,22%	0,68	1,96%	261,43	7,39	
180	ARUS ACOES 2	31,0%	69,0%	12,5%	87,5%	-0,19%	1,35	0,90	1,79%	258,72	-0,15%	1,03	2,22%	248,44	20,56	*
181	FMIA CCF BANKING	100,0%	0,0%	100,0%	0,0%	0,12%	0,76	-0,41	3,70%	195,16	0,07%	0,76	3,74%	194,15	2,02	
182	ALFA TELECOM - FITVM	31,8%	68,2%	21,1%	78,9%	-0,17%	1,33	0,89	2,20%	238,62	-0,09%	1,02	2,54%	234,38	8,47	
183	BBV ACOES	97,9%	2,1%	99,7%	0,3%	-0,37%	0,97	-0,32	2,27%	240,73	-0,18%	0,91	2,84%	222,76	35,94	*
184	ITAU PRIVATE ACOES I FIC FIA	93,6%	6,4%	70,2%	29,8%	0,59%	0,33	1,30	2,90%	208,29	0,34%	0,45	3,56%	199,40	17,77	*
185	ITAU PRIVATE ACOES M FIC FITVM	19,8%	80,2%	3,2%	96,8%	0,08%	-0,23	0,83	2,24%	240,45	0,15%	0,80	2,53%	234,91	11,09	*
186	BANRISUL INDICE	97,5%	2,5%	65,0%	35,0%	0,02%	1,05	2,78	2,04%	247,37	0,14%	1,06	2,32%	243,84	7,08	
187	ALFA DINAMICO - FIC DE FITVM	23,8%	76,2%	3,7%	96,3%	-0,12%	2,13	0,95	1,84%	257,26	-0,14%	0,98	2,17%	250,96	12,60	*
188	LLOYDS EQUINOX EXTRA - FIQFITVM	96,4%	3,6%	76,1%	23,9%	0,00%	0,82	1,87	1,82%	258,99	-0,04%	0,85	2,12%	253,24	11,52	*
189	ALFA INVEST - FIC DE FITVM	48,6%	51,4%	46,8%	53,2%	-0,40%	0,61	0,96	1,98%	249,16	-0,46%	0,77	2,27%	246,19	5,95	
190	UNIBANCO PRIVATE GOLD	98,7%	1,3%	55,1%	44,9%	-0,08%	0,98	2,73	1,82%	262,58	0,01%	1,00	2,10%	254,11	16,93	*
191	FIA PLURAL JAGUAR	99,0%	1,0%	100,0%	0,0%	0,01%	0,89	12,15	2,36%	236,20	-0,10%	0,89	2,62%	231,13	10,14	*
192	LLOYDS INSTITUCIONAL - FITVM	98,8%	1,2%	50,5%	49,5%	-0,31%	1,04	2,92	1,94%	255,84	-0,22%	1,06	2,24%	247,42	16,85	*
193	SAFRA CARTEIRA MISTA - CL	50,8%	49,2%	1,1%	98,9%	-0,05%	2,23	0,75	1,26%	301,12	0,02%	0,77	1,53%	287,00	28,24	*
194	ICATU INDEX BV FIA	98,7%	1,3%	52,4%	47,6%	-0,13%	1,03	2,75	1,69%	269,91	-0,05%	1,04	1,98%	260,15	19,51	*
195	PACTUAL TOTAL INDEX	98,8%	1,2%	47,6%	52,4%	-0,07%	1,04	2,76	1,56%	278,55	0,01%	1,05	1,87%	266,16	24,78	*
196	CARTEIRA SAFRA RENDA MISTA	98,9%	1,1%	49,4%	50,6%	-0,12%	0,72	2,12	1,19%	307,03	-0,05%	0,74	1,45%	292,75	28,55	*
197	TITULO F.I.A	33,9%	66,1%	24,9%	75,1%	0,26%	1,30	0,63	4,13%	174,88	0,22%	0,87	4,62%	172,22	5,31	
198	CIDADE STRATEGY	98,3%	1,7%	59,3%	40,7%	-0,08%	1,01	2,54	1,69%	269,94	0,00%	1,03	1,93%	263,08	13,73	*
199	IP GAP IBOVESPA PLUS FIA	98,9%	1,1%	47,1%	52,9%	-0,07%	1,03	4,68	1,77%	265,51	0,09%	1,07	2,80%	224,41	82,20	*
200	CHASE PERFORMANCE	92,0%	8,0%	92,3%	7,7%	-0,05%	0,85	1,45	1,69%	267,03	-0,12%	0,88	1,93%	262,91	8,23	
201	BCN ALLIANCE FOCUS	82,0%	18,0%	76,7%	23,3%	-0,08%	0,81	1,22	1,73%	263,05	0,00%	0,87	1,98%	260,48	5,14	
202	PAVARINI F.I.A.	0,0%	100,0%	0,0%	100,0%	0,00%	0,32	0,83	2,16%	239,68	-0,02%	0,83	2,43%	239,16	1,05	
203	LIBERAL N FIA	58,6%	41,4%	57,0%	43,0%	0,20%	1,08	0,71	1,96%	249,47	0,28%	0,90	2,30%	244,87	9,20	
204	BANEB CARTEIRA LIVRE	21,0%	79,0%	9,8%	90,2%	-0,13%	1,42	0,89	2,58%	225,60	-0,04%	0,99	2,91%	220,22	10,74	*
205	PACTUAL ANDROMEDA N	98,9%	1,1%	100,0%	0,0%	-0,11%	0,95	12,67	2,15%	245,94	0,29%	0,98	4,67%	171,15	149,58	*
206	SANTA FE SCORPIUS FIA	87,9%	12,1%	67,4%	32,6%	-0,01%	1,01	1,58	1,90%	251,49	0,03%	1,17	2,52%	235,29	32,39	*

	Funds	MS MARKET TIMING MODEL WITH CHANGING PROBABILITIES								LR TEST ESTIMATES: BETA1=BETA2		
	Name	cte1	ibovespa*1	cte2	ibovespa*2	Alpha	Beta1	Beta2	Sigma	logLikelihood	logLikelihood (rest.)	LR
1	BB-ACOES CARTEIRA LIVRE 1	13,45	4,86	-10,87	-1,34	-0,39%	1,08	0,16	0,60%	377,74	377,65	0,18
2	BB CARTEIRA ATIVA	-4399,46	3,74	0,60	-789,87	-0,34%	-1,02	-0,01	0,50%	394,60	394,60	0,01
3	DYNAMO PUMA	-980,22	691,75	74,26	-4999,18	0,17%	-0,86	0,29	1,66%	278,58	277,54	2,08
4	OPPORTUNITY LOGICA II FIA	48,48	4,43	-10,41	3,91	0,25%	2,64	0,78	3,66%	190,74	190,19	1,11
5	BB-ACOES PRICE	-933,10	608,66	-626,80	376,44	-0,42%	0,07	0,00	0,13%	546,78	546,55	0,45
6	BB-GUANABARA	13,87	4,77	-9,90	-117,79	0,25%	4,97	1,02	3,71%	189,20	188,65	1,11
7	ITAUACOES - FIA	11,01	322,07	-2403,20	-482,00	0,04%	1,46	0,69	1,88%	262,43	257,59	9,69 *
8	BRASIL PRIVATE EQUITY	-4399,39	4,62	5,85	-824,19	-0,38%	-7,64	0,13	1,41%	289,78	289,53	0,51
9	CITIACOES	16,70	322,11	-2402,95	912,77	-0,02%	1,38	0,96	1,80%	268,46	262,72	11,49 *
10	BRADESCO FIA	37,65	322,04	-2403,34	165,21	-0,25%	1,32	0,76	2,11%	251,35	246,60	9,51 *
11	ITAU CARTEIRA LIVRE FIA	15,04	4,58	-10,99	896,78	-0,10%	3,01	1,07	1,96%	255,14	246,44	17,40 *
12	BB-ACOES INDICE	13,65	322,16	-2402,62	879272,97	-0,02%	2,53	0,99	1,91%	261,42	256,64	9,58 *
13	FATOR SINERGIA CL	10,61	-4,68	-75,96	1630,41	-0,28%	0,61	0,16	2,56%	223,63	220,19	6,89
14	CAIXA ACOES	15,92	322,31	-2401,71	-15746,15	-0,14%	1,38	0,99	1,83%	267,18	265,68	2,99
15	ITAU GALAXIA FIA	-11,85	1,24	12,66	-100,58	0,38%	0,53	0,82	2,11%	247,16	245,52	3,28
16	PORTFOLIO ACOES	15,68	322,10	-2403,00	-61448,29	0,11%	1,39	1,00	1,88%	264,11	261,65	4,91
17	BOSTON IBOVESPA SELECT	15,24	322,11	-2402,92	745,55	-0,12%	1,45	0,99	1,68%	275,14	267,00	16,30 *
18	CAIXA PREMIUM BLUE IBOVESPA FIA	2922,43	322,22	-2402,28	359,83	-0,22%	1,33	0,89	1,77%	271,17	266,65	9,05
19	UNIBANCO ACOES BLUE	18,22	4,30	-11,20	66,67	-0,29%	2,78	0,94	1,56%	277,29	276,38	1,82
20	BB FUNDO DE ACOES	14,77	5,50	-29,61	-28,19	-0,27%	2,33	0,81	1,66%	271,79	267,84	7,90
21	BOSTON PRIV. IBOVESPA PLUS	14,80	4,66	-10,89	-0,89	-0,07%	2,62	1,01	1,31%	296,73	296,32	0,83
22	OPPORTUNITY INSTITUCIONAL FIA	-4399,33	238,25	-1997,15	-2765,94	0,15%	1,54	0,94	2,62%	230,77	223,07	15,39 *
23	UNIBANCO STRATEGY - CL	2922,43	252,64	-1883,27	15213,36	-0,26%	1,23	0,94	1,87%	265,89	265,04	1,71
24	BRADESCO LIVRE FACIL FIA	16,94	322,13	-2402,82	3836,25	-0,27%	1,62	0,99	1,92%	261,14	253,99	14,31 *
25	BOSTON IBOVESPA PLUS	15,17	4,62	-10,95	-1,79	-0,14%	2,54	1,01	1,29%	297,95	297,55	0,79
26	PRIVATE INDICE ACOES PLUS FIA	15,23	4,59	-11,17	-2,90	-0,09%	3,21	1,07	1,54%	279,64	279,07	1,15
27	UNIBANCO GALILEU - CL	1976,37	120,50	2426,37	-355,52	-0,25%	0,79	0,98	2,18%	250,45	250,11	0,67
28	CART.LIVRE -FFS	20,65	4,52	-0,24	5,15	0,19%	-2,12	0,05	1,73%	266,46	255,52	21,88 *
29	BRADESCO LIVRE FIA	15,71	322,11	-2402,93	525,63	-0,19%	1,50	1,00	1,82%	266,79	259,19	15,19 *
30	CITIFOCUS ACOES	15,82	322,10	-2403,00	-2157,83	-0,01%	1,38	0,99	1,89%	263,87	261,41	4,93
31	DYNAMO COUGAR	239,84	4,74	14,82	36,82	0,14%	-0,97	0,46	2,41%	235,00	234,28	1,44
32	IP PARTICIPACOES FIA	9,31	3,05	2,85	-232,14	0,58%	1,33	0,34	2,87%	209,61	209,19	0,85
33	ITAU INSTITUCIONAL TELECOM FIA	-998,16	224,47	-3008,17	72521,72	-0,08%	1,60	1,03	2,08%	254,06	245,15	17,82 *
34	CHASE EQUITIES	14,75	4,55	-10,36	-13,57	-0,04%	2,73	0,88	1,74%	267,33	266,52	1,61
35	ALFA INDEX - FITVM	13,69	322,15	-2402,72	-9807,40	0,05%	1,93	1,01	1,71%	273,29	270,98	4,62
36	BOSTON TELECOM	-50,37	-77,72	3242,53	1032,04	0,25%	1,03	1,16	2,25%	246,87	245,55	2,65
37	CCF-ACOES	15,21	4,49	-10,86	83,94	-0,12%	2,72	1,07	2,11%	247,41	246,31	2,19
38	CCF INSTITUCIONAL	2922,42	148,77	-1108,69	-353,16	-0,16%	1,21	0,88	2,06%	255,83	250,66	10,34 *
39	ACOES HSBC ACUMULACAO	13,41	4,80	-10,90	-631,03	-0,06%	2,57	0,83	1,52%	282,08	281,48	1,21
40	CCF TOP EX 157	15,10	4,62	-10,61	1,00	-0,12%	2,86	1,03	1,54%	280,14	278,11	4,06
41	CITIACOES RENDA MISTA	45,04	0,85	-8,74	21,48	-0,06%	0,74	0,55	1,12%	312,64	309,84	5,62
42	SAFRA PRIVATE	3,09	268,08	-2564,48	4410,59	0,06%	1,47	0,97	2,76%	222,50	219,36	6,27
43	SIGMA	-3,45	-314,66	4218,11	141962,82	-0,01%	0,79	1,00	1,57%	280,66	278,49	4,33
44	ICATU INSTITUCIONAL BSP FIA	13,64	322,15	-2402,68	12519,25	0,10%	2,13	1,05	1,76%	269,77	266,94	5,65
45	BB-ACOES MASTER	19,96	6,04	-41,06	82,43	-0,11%	2,47	1,00	1,87%	259,07	254,93	8,28
46	CSAM GARANTIA S	15,23	4,43	-7,44	593,36	-0,08%	3,30	0,95	1,87%	259,61	259,22	0,79
47	OPPORTUNITY I FIA	2922,40	90,73	-600,95	65277,21	0,38%	1,30	0,98	2,49%	236,41	232,66	7,50
48	PACTUAL TALITHA	14,41	4,44	-7,90	-134,13	-0,09%	2,58	0,93	1,82%	263,39	262,76	1,25
49	ALFA SPECIAL - FITVM	23,66	5,77	-43,04	75,13	0,05%	2,19	0,95	1,85%	258,13	253,94	8,37
50	BB ACOES TELEBRASIL	-4399,37	8,12	-49,61	-6433,21	-0,21%	2,63	1,04	1,98%	254,77	251,91	5,72

#	Name												
51	ABN AMRO TELECOM FIA	516,21	280,07	1769,33	4426,32	0,00%	5,14	1,06	2,40%	239,96	234,91	10,11	*
52	FINASA INDICE EXCLUSIVO	15,39	322,11	-2402,91	1072,17	-0,06%	1,38	0,90	1,66%	276,15	269,36	13,58	*
53	CARTEIRA LIVRE BSA	-114,80	4,43	11,46	-1180,82	0,97%	8,42	0,26	6,78%	126,83	126,50	0,66	
54	BBA CAP CL - GEMINI	15,23	4,63	-10,99	-236,06	-0,15%	3,27	1,02	1,79%	264,40	263,72	1,35	
55	CCF BLUE CHIP	12,38	322,12	-2402,87	6715,94	-0,06%	1,60	0,96	2,05%	253,89	247,90	11,98	*
56	SAFRA ACOES	17,83	322,07	-2403,17	-428,08	-0,07%	1,40	0,94	2,18%	248,40	242,87	11,06	*
57	PLURAL INSTITUCIONAL FIA	12,26	322,08	-2403,13	-32822,83	-0,14%	1,51	0,84	2,55%	229,61	223,92	11,38	*
58	BOREAL ACOES III	839,54	0,42	5,64	257,45	-0,21%	0,66	0,91	2,38%	237,93	236,29	3,28	
59	BMG ACOES	106,46	322,09	-2403,08	19227,17	0,21%	1,25	0,90	2,07%	254,64	248,29	12,70	*
60	PRIVATE FOCUS	15,75	322,12	-2402,86	2439,86	0,03%	1,39	1,00	1,88%	263,93	258,07	11,72	*
61	BRADESCO II FIA	-986,67	246,42	-2872,07	-18180,46	0,18%	1,33	0,90	2,68%	228,40	221,19	14,42	*
62	SUDAMERIS ACOES	13,59	322,12	-2402,86	46,71	-0,03%	1,40	0,79	1,56%	282,90	279,40	6,99	
63	TELECOMUNICACOES	70,03	120,14	2427,75	62152,89	0,12%	0,93	1,18	2,25%	246,12	245,55	1,15	
64	CITITELECOM	-997,31	223,81	-3012,23	-123766,86	0,03%	1,44	1,00	2,07%	254,51	245,74	17,53	*
65	HSBC ACOES INDICES	15,18	4,61	-10,11	-37,49	-0,12%	2,90	1,05	1,56%	278,85	278,24	1,22	
66	BANESPA - FBA	13,77	4,76	-10,77	358,20	-0,38%	2,95	0,80	1,59%	277,34	276,85	0,97	
67	CSAM GARANTIA A	15,17	4,20	-8,36	-727,84	-0,13%	3,23	1,02	1,73%	266,61	266,22	0,80	
68	PREVIDENCIA C - CL	2922,31	137,58	-1344,37	17049,45	-0,17%	0,04	0,57	4,81%	167,75	164,39	6,72	
69	SUDAMERIS LUCE CL	-949,00	5,67	29,82	7055,32	-0,16%	0,44	0,74	1,65%	276,53	275,20	2,67	
70	ITAU PERSONNALITE MARCHE FICFIA	-994,16	242,28	-2897,74	-683,67	-0,12%	1,32	0,99	1,83%	267,73	261,37	12,72	*
71	CCF LIBRIUM	2922,44	215,59	-1426,22	7291,31	-0,12%	1,12	0,83	1,74%	273,18	272,65	1,06	
72	ITAU LUXOR FIA	-4399,23	241,97	-2899,70	0,16	0,07%	1,13	0,78	1,49%	289,08	286,31	5,54	
73	BCN ALLIANCE SUPERACAO TELECOM	33,21	-55,70	-12,38	-0,44	0,18%	1,16	0,78	2,56%	229,68	227,66	4,03	
74	CITI INSTITUCIONAL ACOES	-11,39	-0,98	38,65	108,61	0,12%	0,95	1,19	2,13%	249,09	248,68	0,80	
75	ITAU INDICE ACOES FIC FIA	15,06	4,63	-10,88	-16,44	-0,12%	2,98	1,05	1,67%	271,45	271,02	0,86	
76	ITAU CART. INSTITUCIONAL FIA	15,20	322,13	-2402,81	-4477,61	0,06%	1,45	0,95	1,92%	260,98	257,05	7,86	
77	PLURAL FIA LIVRE	20,72	2,89	16,98	-58,84	-0,01%	1,39	0,79	2,64%	220,55	218,34	4,42	
78	ITAU PERSONNALITE TECHNIQUE FIA	19,73	322,14	-2402,75	-4011,71	-0,09%	2,12	1,12	1,97%	258,96	256,06	5,81	
79	BOREAL ACOES V	66,30	339,37	-2262,19	-74,20	0,22%	1,90	0,78	2,93%	217,92	214,82	6,18	
80	ABN AMRO ACOES	1616,87	21,65	2833,38	-17723,91	0,15%	0,83	1,08	1,98%	260,14	258,50	3,27	
81	SUDAMERIS ACOES C.L.	-4,49	4,21	-11,46	-30,38	-0,11%	0,25	0,88	2,32%	238,69	237,66	2,07	
82	BANERJ ACOES FICFIA	13,64	322,11	-2402,91	446,60	0,10%	1,95	0,93	1,91%	261,80	254,78	14,05	*
83	SANTANDER ACOES	42,38	232,27	-2959,82	-13839,96	-0,10%	1,18	0,88	1,81%	267,66	261,98	11,37	*
84	PACTUAL ANDROMEDA	-4399,36	4,68	-10,21	-1425,87	-0,10%	9,28	0,95	2,07%	249,58	249,33	0,50	
85	ITAU AVANTAGE FIA	-1072,20	242,03	-2899,30	-26515,39	-0,08%	1,35	0,97	1,81%	268,55	261,47	14,17	*
86	MULTIPLY VARIABLE CARTEIRA LIVRE	27,52	3,88	15,13	22,38	0,09%	2,00	0,76	1,30%	293,42	292,57	1,69	
87	SAO FRANCISCO	13,72	4,75	-11,26	38,39	-0,27%	3,48	0,88	2,31%	238,52	237,93	1,17	
88	SAFRA INDICIAL	19,25	4,22	-12,90	-145,56	-0,17%	2,98	1,02	1,70%	266,27	265,05	2,46	
89	SUDAMERIS FBFREE CL	13,52	322,14	-2402,74	-866,13	-0,12%	1,86	0,93	2,00%	256,17	253,01	6,32	
90	PACTUAL ADARA	-3,84	241,76	-2901,00	1657,45	-0,12%	1,34	0,89	2,14%	249,15	245,33	7,65	
91	BOZANO SEGURIDADE	16,67	322,09	-2402,99	1458466,51	-0,07%	1,53	0,96	1,92%	260,89	253,97	13,84	*
92	CSAM GARANTIA IBX-ECO	2,67	1,20	-1,19	-3,36	-0,22%	0,82	0,26	2,19%	232,58	231,39	2,39	
93	ITAUVEST - FIA	19,82	6,25	-45,21	-66,78	0,08%	2,09	0,92	1,70%	268,77	265,54	6,53	
94	BFII SUDAMERIS CL	29,91	3,66	14,54	433,31	-0,09%	2,15	0,73	1,62%	268,72	268,51	0,42	
95	BOZANO PORT. LIVRE	14,79	322,10	-2402,98	14990,90	-0,05%	1,46	0,96	1,95%	259,24	252,33	13,81	*
96	ALFA - FIC DE FITVM	2077,47	280,07	1769,33	1038,61	-0,26%	-2,31	0,54	1,68%	277,34	271,99	10,72	*
97	CCF GOLD	2922,43	142,85	-1064,85	3574,19	-0,15%	1,29	0,84	1,87%	265,71	259,23	12,95	*
98	LLOYDS SHARE - FITVM	21,73	322,10	-2402,97	-4448,09	-0,11%	1,24	0,89	1,74%	272,34	265,23	14,23	*
99	FLEMING GRAPHUS ENERGIA FMIA-CL	-21,72	322,09	-2403,04	-333,47	-0,18%	1,26	0,92	1,82%	267,98	260,83	14,30	*
100	FINASA ACOES I	-270,50	322,00	-2403,62	133350,78	-0,30%	1,09	0,85	1,66%	277,79	274,28	7,01	
101	FDO QUALIFIED - CL	15,44	4,53	-9,58	-2,79	-0,12%	2,39	0,77	1,50%	282,29	282,26	0,06	
102	CARTEIRA LIVRE - PR	2922,43	320,46	-2388,72	-4191,42	-0,20%	1,25	0,90	1,89%	264,78	259,86	9,85	*
103	BOSTON ENERGY - FIA	-95,15	308,80	-2485,07	20136,78	-0,26%	1,66	0,94	3,91%	188,25	183,32	9,86	*

104	ICATU INSTITUCIONAL BX FIA	-35,76	322,07	-2403,18	-2531,92	-0,13%	1,36	0,94	1,92%	262,13	254,57	15,12	*
105	SUDAMERIS ACOES PRIVATE CL	21,79	3,93	-7,14	-83,25	-0,01%	2,81	0,81	1,92%	254,64	253,83	1,63	
106	CCF-FRANCIAL ACOES	13,64	322,11	-2402,92	12232,52	-0,03%	1,73	0,90	2,03%	255,28	252,24	6,08	
107	BCN ALLIANCE SEGURIDADE	-0,65	322,11	-2402,91	41,27	-0,09%	1,42	0,91	1,69%	274,05	268,65	10,80	*
108	CHASE INVESTOR	14,36	4,64	-9,63	-379,84	-0,22%	2,54	0,88	1,78%	265,47	264,94	1,06	
109	PLURAL FIA	20,56	3,08	19,49	-208,82	-0,04%	1,34	0,74	2,04%	243,11	238,36	9,51	*
110	BBA CAP CL TARGET	-5,62	322,06	-2403,26	37984,61	-0,13%	1,28	0,94	2,01%	257,32	254,08	6,48	
111	LLOYDS EQUINOX SOURCE - FITVM	11,44	5,76	-31,31	-12,98	0,10%	1,89	0,82	1,83%	261,65	258,94	5,41	
112	HEDGING-GRIFFO FCL II	14,64	4,68	-9,79	982,35	-0,09%	2,68	1,01	1,69%	270,96	270,55	0,83	
113	PREVIDENCIA A - CL	-251,83	5,73	-178,45	3628,23	-0,08%	0,67	0,88	1,69%	273,89	272,56	2,65	
114	UNIBANCO PREVIDENCIA - CL	17,78	4,33	-11,26	-550,63	-0,29%	2,73	0,94	1,63%	272,99	272,04	1,90	
115	SIGMA	15,48	3,88	9,46	-42,07	-0,11%	2,44	0,64	2,04%	248,63	247,72	1,82	
116	LIFE	-56,99	3,39	-2,59	-13211,95	-0,01%	-0,03	0,00	0,07%	600,37	595,14	10,46	*
117	FLEMING GRAPHUS EXCLUSIVE SUL FMIA-CL	-28,90	322,07	-2403,19	2410,66	-0,13%	1,24	0,94	1,90%	263,15	258,93	8,45	
118	BANESPA F.B.L.	12,78	322,11	-2402,94	-43544,53	-0,17%	1,03	0,75	1,28%	303,97	301,62	4,71	
119	BBM HIGH YIELD 1	4,65	3,37	17,79	8704,51	0,29%	1,20	0,45	2,33%	231,04	229,06	3,97	
120	MATRIX ACOES	56,37	4,07	11,88	548,24	0,07%	-0,23	0,83	2,24%	240,59	240,08	1,01	
121	ALFA MAIS - FIC DE FITVM	15,92	322,09	-2403,04	18,15	-0,29%	1,43	0,96	2,08%	253,03	246,10	13,85	*
122	LLOYDS EQUITY - FITVM	14,45	322,09	-2403,03	-2375,52	-0,33%	1,38	0,99	2,04%	255,23	249,12	12,24	*
123	BOSTON SMALL CAP VALUATION - FIA	-31,72	309,58	-2480,61	496,36	0,08%	1,35	0,83	2,97%	216,58	209,26	14,66	*
124	ICATU BV FIA	18,65	6,84	-48,65	51,52	0,08%	2,26	1,05	1,77%	266,54	263,80	5,48	
125	BBM ACOES	71,39	321,95	-2403,96	2890,69	0,05%	1,22	0,80	1,61%	280,26	273,76	13,00	*
126	PRIVATE ACOES	16,51	4,50	-10,42	-1058,80	-0,13%	2,89	1,00	1,86%	260,27	259,83	0,90	
127	UNIBANCO CRED. INDEX	-18,11	322,08	-2403,13	1373,15	-0,12%	1,24	0,97	1,69%	275,83	274,62	2,42	
128	ALFA INDICE - FIC DE FITVM	-4399,38	8,18	-49,70	-622,85	-0,07%	1,95	1,02	1,74%	271,12	270,67	0,90	
129	FIB	13,69	322,14	-2402,73	-58,61	0,09%	1,94	0,97	1,76%	270,55	266,85	7,41	
130	BOZANO FIB	-86,82	322,06	-2403,25	11744,40	-0,09%	1,31	0,94	1,92%	262,54	261,83	1,42	
131	MAXIMA ACCESS	2922,36	157,19	-1466,32	10388,63	0,13%	0,57	0,77	3,64%	196,84	195,73	2,21	
132	CCF TELECOM	6,64	6,21	-52,34	6,38	0,05%	1,60	1,02	2,02%	251,60	245,76	11,67	*
133	SANTA FE AQUARIUS FIA	-3,44	6,15	-60,75	7,81	0,10%	0,65	0,23	1,29%	293,35	289,21	8,29	
134	CCF FIB	-53,12	5,00	-12,00	64,25	0,00%	9,04	0,88	1,70%	270,76	268,80	3,92	
135	SAFRA SETORIAL TELECOM	350,28	280,07	1769,33	-103,18	-0,09%	6,73	1,05	2,62%	230,96	225,61	10,71	*
136	MERIDIONAL ACOES	21,13	2,26	13,64	-1,28	-0,04%	1,29	0,90	2,06%	247,60	247,27	0,66	
137	BBA CAP CL TIMING	14,37	4,71	-10,77	-1487,47	-0,02%	3,21	1,02	1,65%	273,09	272,70	0,79	
138	AMERICA DO SUL ACOES	16,07	4,32	-7,51	-26,87	-0,17%	2,37	0,83	1,90%	258,33	257,65	1,36	
139	PACTUAL ANTARES	39,13	183,64	-3261,25	-7343,19	-0,08%	1,14	0,88	1,92%	261,56	257,57	7,99	
140	XINGU FDO ACOES	-20,62	3,89	7,45	-159,14	-0,05%	1,81	0,41	1,80%	263,04	262,96	0,17	
141	LLOYDS EXPLORER EXTRA - FITVM	13,57	4,82	-10,48	-2,38	-0,06%	4,85	1,01	1,57%	277,83	277,42	0,82	
142	BB - ACOES ELETROBRASIL	2922,33	313,31	-2457,44	-9,25	-0,40%	1,40	0,84	4,24%	180,80	175,49	10,63	*
143	LLOYDS MERCURY - FITVM	14,92	4,33	-8,50	-4,99	-0,16%	2,07	0,86	1,38%	290,79	290,48	0,63	
144	ITAU PERSONNALITE ACOES FICFIA	-3,12	1,63	-0,85	-90,49	-0,08%	0,71	0,98	2,10%	249,63	249,29	0,69	
145	DREYFUS BRASCAN CAPIBARIBE FIA	3,60	-604,34	-5118,32	-405922,30	0,04%	0,69	0,44	1,39%	290,96	288,76	4,40	
146	FI BANDEIRANTES ACOES	13,60	322,15	-2402,68	3570,95	-0,11%	1,79	0,91	1,62%	276,93	276,20	1,45	
147	MAGLIANO	15,86	322,08	-2403,12	9935,64	-0,27%	1,71	0,93	1,96%	257,15	252,41	9,49	*
148	ALPHA	13,63	321,97	-2403,81	568,70	-0,08%	1,53	0,82	1,71%	273,33	268,75	9,16	
149	ALFA INDICE II - FIC DE FTVM	13,61	322,14	-2402,76	-206,84	-0,19%	1,36	0,74	1,27%	304,22	302,30	3,82	
150	SANTANDER POWER	23,17	237,06	-2930,01	10169,23	0,06%	1,35	0,85	2,02%	254,57	250,90	7,34	
151	AVANCO CL	20,61	322,08	-2403,12	-3982,92	0,05%	1,13	0,77	1,65%	277,85	277,65	0,41	
152	SUDAMERIS INDEX C. LIVRE	71,10	322,01	-2403,56	770,73	0,05%	1,21	0,94	1,68%	276,91	276,87	0,08	
153	BCN ALLIANCE BLUE CHIP	9,69	5,28	-45,48	-9,73	-0,13%	1,26	0,84	1,64%	273,76	270,09	7,34	
154	FITVM GUARARAPES	-567,86	50,28	-4087,83	-180,60	-0,18%	0,75	0,62	1,43%	293,07	292,99	0,17	
155	CSAM GARANTIA INDEX	14,85	4,66	-10,01	66,65	-0,09%	2,70	1,02	1,54%	279,64	279,58	0,11	
156	BBV ACOES INDEX	16,20	322,13	-2402,84	637463,79	-0,28%	1,50	1,01	1,84%	265,51	257,49	16,03	*

#	Name											
157	ITAU SELECTED - FIA	17,69	322,11	-2402,94	124,70	-0,11%	1,66	0,97	2,09%	251,61	244,50	14,23 *
158	PORTO SEGURO F.I.A	14,83	322,07	-2403,19	-84,37	-0,29%	1,59	0,83	2,23%	245,67	238,48	14,38 *
159	LAM FEB - FITVM	13,55	322,16	-2402,63	-3740,01	-0,02%	1,46	0,83	1,44%	291,06	285,19	11,75 *
160	ABN AMRO ATIVO I	2922,41	44,30	2740,09	77,93	0,02%	0,82	1,13	2,24%	247,09	247,08	0,03
161	IP PARTICIPACOES LIVRE FIA	-4399,27	4,80	14,27	-22014,29	0,22%	-3,50	0,61	3,52%	195,61	195,02	1,18
162	ICATU INSTITUCIONAL BA FIA	-24,82	322,06	-2403,24	133,69	-0,18%	1,30	0,91	2,02%	256,89	248,34	17,09 *
163	DREYFUS BRASCAN INDEX FIA	15,25	322,06	-2403,26	-1015,84	-0,07%	1,41	1,00	1,73%	272,35	264,83	15,04 *
164	ALFA I FITVM	31,89	322,19	-2402,45	218761,57	-0,32%	1,37	0,95	2,08%	252,87	247,16	11,42 *
165	BOAVISTA GALES	-1077,90	242,14	-2898,61	-11909,75	-0,16%	1,30	0,95	1,81%	268,70	260,66	16,08 *
166	SUL AMERICA MOMENTUM FMIA-CL	-4399,36	-53,21	-506,10	6845,82	0,12%	0,94	1,10	2,10%	254,04	251,82	4,44
167	NUMBER ONE	13,63	322,07	-2403,17	527,61	-0,15%	1,64	0,86	1,70%	273,31	268,04	10,54 *
168	TRIADE SENIOR	-22,91	322,02	-2403,47	442,39	0,18%	0,94	0,42	2,42%	237,15	233,22	7,85
169	SUDAMERIS INSTITUCIONAL CL	17,93	2,40	0,44	-3,74	-0,07%	1,33	0,79	2,25%	237,59	235,14	4,88
170	FLEMING GRAPHUS EQUITY FMIA-CL	17,51	322,09	-2403,08	12286,78	-0,07%	1,28	0,96	1,78%	270,30	267,07	6,45
171	SARDEGNA CL	1710,53	4,89	13,41	4371,93	-0,69%	-31,61	0,70	5,04%	157,81	111,20	93,22 *
172	BOAVISTA INDEX	-31,92	-1,12	31,84	-20,05	-0,08%	0,99	1,21	1,96%	258,33	258,09	0,49
173	SAM MOMENTUM FIQ FIA	-4399,36	-569,78	-5343,12	53370,11	0,06%	0,94	1,11	2,09%	254,51	252,10	4,83
174	PACTUAL CYGNUS	24,54	2,63	10,32	4,13	0,02%	1,24	0,83	1,87%	259,75	258,49	2,52
175	UNIBANCO PREVIDENCIA FMIA	15,08	4,61	-9,65	67,63	-0,19%	2,73	0,90	1,62%	274,94	274,35	1,18
176	BANESTADO ACOES	-4399,38	221,86	-2586,72	-989,08	-0,11%	1,11	0,80	1,80%	270,09	265,93	8,33
177	FI ACOES BANDEIRANTES IBOVESPA	13,65	322,17	-2402,59	1410,15	0,01%	2,01	1,01	1,66%	275,95	275,70	0,50
178	GERACAO F.I.A.	2757,26	280,07	1769,33	3058,43	-0,22%	4,67	0,74	2,56%	233,45	227,80	11,32 *
179	PILLAINVEST ACOES	15,37	4,39	-7,65	-117,00	-0,29%	2,04	0,67	1,77%	265,22	265,13	0,19
180	ARUS ACOES 2	25,10	322,11	-2402,95	-241,02	-0,27%	1,37	0,94	1,93%	261,50	258,72	5,57
181	FMIA CCF BANKING	6,19	147,88	2313,62	10628,13	0,16%	0,96	0,63	3,59%	196,47	195,16	2,61
182	ALFA TELECOM - FITVM	6,03	231,28	-2965,93	-447,33	-0,25%	1,42	0,90	2,10%	247,91	238,62	18,59 *
183	BBV ACOES	54,18	6,04	37,84	95,98	-0,41%	-0,26	0,98	2,24%	243,10	240,73	4,74
184	ITAU PRIVATE ACOES I FIC FIA	9,43	3,04	3,61	1,80	0,59%	1,31	0,33	2,89%	208,88	208,29	1,19
185	ITAU PRIVATE ACOES M FIC FITVM	60,61	4,05	11,78	-1772,40	0,06%	-0,24	0,83	2,23%	241,03	240,45	1,16
186	BANRISUL INDICE	-996,23	242,03	-2899,31	9219,55	0,05%	1,34	1,00	2,16%	250,13	247,37	5,51
187	ALFA DINAMICO - FIC DE FITVM	-1018,89	215,63	-3062,93	207792,45	-0,24%	1,25	0,91	1,97%	260,03	257,26	5,55
188	LLOYDS EQUINOX EXTRA - FIQFITVM	13,65	322,14	-2402,73	-12452,63	0,02%	1,77	0,82	1,88%	263,24	258,99	8,49
189	ALFA INVEST - FIC DE FITVM	0,59	0,26	17,53	-2,45	-0,42%	0,61	0,96	1,97%	250,45	249,16	2,57
190	UNIBANCO PRIVATE GOLD	16,35	322,11	-2402,96	1569,92	-0,06%	1,33	0,93	1,86%	265,16	262,58	5,16
191	FIA PLURAL JAGUAR	821,47	-605,87	-8154,91	-1360,35	-0,24%	0,76	1,04	2,47%	236,65	236,20	0,90
192	LLOYDS INSTITUCIONAL - FITVM	14,77	322,10	-2403,03	-18745,16	-0,28%	1,40	0,99	2,02%	256,35	255,84	1,01
193	SAFRA CARTEIRA MISTA - CL	13,90	4,78	-10,55	-46,19	-0,05%	2,22	0,75	1,26%	301,65	301,12	1,05
194	ICATU INDEX BV FIA	18,06	322,09	-2403,04	2143,44	-0,13%	1,34	0,98	1,77%	270,98	269,91	2,13
195	PACTUAL TOTAL INDEX	14,63	4,70	-9,45	-36,66	-0,07%	2,76	1,04	1,56%	279,00	278,55	0,90
196	CARTEIRA SAFRA RENDA MISTA	13,91	4,78	-10,53	-19,32	-0,12%	2,12	0,72	1,19%	307,50	307,03	0,93
197	TITULO F.I.A	-0,86	3,01	12,86	2,02	0,40%	1,37	0,64	4,08%	177,42	174,88	5,09
198	CIDADE STRATEGY	25,53	322,10	-2402,99	92,46	-0,08%	1,33	0,96	1,69%	275,42	269,94	10,95 *
199	IP GAP IBOVESPA PLUS FIA	13,75	4,85	-10,35	15,76	-0,07%	4,68	1,03	1,77%	265,99	265,51	0,96
200	CHASE PERFORMANCE	14,25	4,59	-10,29	36,75	-0,19%	2,37	0,87	1,70%	269,06	267,03	4,07
201	BCN ALLIANCE FOCUS	14,66	4,02	-31,93	-30,24	-0,13%	1,28	0,81	1,72%	267,66	263,05	9,20
202	PAVARINI F.I.A.	24,43	322,13	-2402,83	-22,86	-0,05%	1,26	0,80	2,32%	242,46	239,68	5,56
203	LIBERAL N FIA	3,55	1,64	23,93	44,76	0,19%	0,71	1,05	2,02%	250,78	249,47	2,63
204	BANEB CARTEIRA LIVRE	23,66	322,09	-2403,04	11873,84	-0,15%	1,47	0,90	2,57%	231,81	225,60	12,43 *
205	PACTUAL ANDROMEDA N	-4399,35	4,87	-9,96	-1098,36	-0,11%	12,67	0,95	2,15%	246,39	245,94	0,91
206	SANTA FE SCORPIUS FIA	2922,41	322,26	-2402,02	-85,60	-0,15%	1,59	1,06	2,12%	252,83	251,49	2,67

	Funds				MS, DUMMY & QUADRATIC TIMING MEASURES						
	Name	Equity	MS Timing	Position	Quartile	Dummy Timing	Position	Quartile	Square Timing	Position	Quartile
1	BB-ACOES CARTEIRA LIVRE 1	3.820,2	0,00	112º	3	-0,01	174º	4	-0,10	180º	4
2	BB CARTEIRA ATIVA	1.906,5	0,50	9º	1	-0,03	181º	4	-0,03	172º	4
3	DYNAMO PUMA	485,6	0,50	9º	1	-0,02	179º	4	-0,13	183º	4
4	OPPORTUNITY LOGICA II FIA	449,5	0,00	172º	4	0,36	4º	1	0,52	89º	2
5	BB-ACOES PRICE	357,8	0,00	163º	4	-0,01	177º	4	-0,04	175º	4
6	BB-GUANABARA	306,7	0,04	79º	2	0,27	11º	1	0,70	51º	1
7	ITAUACOES - FIA	272,5	0,50	24º	1	0,00	172º	4	-0,24	191º	4
8	BRASIL PRIVATE EQUITY	234,2	0,50	9º	1	-0,08	190º	4	-0,31	193º	4
9	CITIACOES	191,5	0,49	59º	2	0,17	53º	2	0,74	36º	1
10	BRADESCO FIA	170,9	0,00	120º	3	0,04	157º	4	-0,06	178º	4
11	ITAU CARTEIRA LIVRE FIA	161,3	-0,50	194º	4	0,16	61º	2	0,64	63º	2
12	BB-ACOES INDICE	151,3	0,49	180º	4	0,21	25º	1	0,72	42º	1
13	FATOR SINERGIA CL	146,1	-0,50	205º	4	-0,12	199º	4	-0,20	190º	4
14	CAIXA ACOES	128,1	0,49	55º	2	0,17	57º	2	0,67	56º	2
15	ITAU GALAXIA FIA	119,4	0,00	92º	2	0,26	13º	1	0,45	105º	3
16	PORTFOLIO ACOES	118,0	1,00	2º	1	0,12	95º	2	0,61	72º	2
17	BOSTON IBOVESPA SELECT	115,9	0,50	48º	1	0,25	14º	1	0,94	17º	1
18	CAIXA PREMIUM BLUE IBOVESPA FIA	113,7	0,00	129º	3	0,17	55º	2	0,83	22º	1
19	UNIBANCO ACOES BLUE	112,0	0,00	179º	4	0,06	138º	3	0,32	125º	3
20	BB FUNDO DE ACOES	109,2	0,00	116º	3	0,02	165º	4	0,06	164º	4
21	BOSTON PRIV. IBOVESPA PLUS	106,0	0,00	113º	3	0,10	116º	3	0,27	131º	3
22	OPPORTUNITY INSTITUCIONAL FIA	101,3	0,00	129º	3	0,13	91º	2	0,59	81º	2
23	UNIBANCO STRATEGY - CL	100,6	0,00	129º	3	0,11	105º	3	0,47	101º	2
24	BRADESCO LIVRE FACIL FIA	96,1	0,48	60º	2	0,22	21º	1	0,92	18º	1
25	BOSTON IBOVESPA PLUS	95,1	0,00	111º	3	0,10	117º	3	0,27	133º	3
26	PRIVATE INDICE ACOES PLUS FIA	85,3	0,00	110º	3	0,10	114º	3	0,41	108º	3
27	UNIBANCO GALILEU - CL	82,2	0,00	129º	3	-0,01	175º	4	0,03	167º	4
28	CART.LIVRE -FFS	79,4	-0,08	187º	4	-0,08	191º	4	-0,15	184º	4
29	BRADESCO LIVRE FIA	77,8	0,50	51º	1	0,17	58º	2	0,75	34º	1
30	CITIFOCUS ACOES	75,6	0,49	53º	2	0,12	97º	2	0,61	73º	2
31	DYNAMO COUGAR	75,1	0,00	171º	4	0,05	142º	3	0,02	169º	4
32	IP PARTICIPACOES FIA	74,6	0,50	3º	1	-0,09	192º	4	-0,30	192º	4
33	ITAU INSTITUCIONAL TELECOM FIA	72,9	-0,50	197º	4	0,24	17º	1	1,01	13º	1
34	CHASE EQUITIES	71,4	0,00	102º	2	0,10	115º	3	0,27	132º	3
35	ALFA INDEX - FITVM	70,8	0,50	42º	1	0,16	66º	2	0,59	78º	2
36	BOSTON TELECOM	64,8	0,00	129º	3	0,04	150º	3	0,19	145º	3
37	CCF-ACOES	60,4	0,00	182º	4	0,18	43º	1	0,75	31º	1
38	CCF INSTITUCIONAL	56,2	0,00	129º	3	0,08	124º	3	0,49	96º	2
39	ACOES HSBC ACUMULACAO	55,6	0,50	4º	1	0,03	160º	4	0,08	161º	4
40	CCF TOP EX 157	55,4	0,00	170º	4	0,12	100º	2	0,50	92º	2
41	CITIACOES RENDA MISTA	52,5	0,00	178º	4	0,05	147º	3	0,29	128º	3
42	SAFRA PRIVATE	52,5	0,50	22º	1	0,16	62º	2	0,78	29º	1
43	SIGMA	50,2	-1,00	206º	4	0,02	163º	4	-0,04	174º	4
44	ICATU INSTITUCIONAL BSP FIA	50,1	0,50	35º	1	0,19	40º	1	0,70	49º	1
45	BB-ACOES MASTER	49,4	0,00	123º	3	0,23	19º	1	0,76	30º	1
46	CSAM GARANTIA S	49,1	-0,50	195º	4	-0,03	182º	4	-0,12	182º	4
47	OPPORTUNITY I FIA	48,4	-0,50	197º	4	0,21	24º	1	0,82	24º	1
48	PACTUAL TALITHA	48,0	0,32	69º	2	0,12	94º	2	0,13	153º	3
49	ALFA SPECIAL - FITVM	47,2	0,00	124º	3	0,06	139º	3	0,30	126º	3
50	BB ACOES TELEBRASIL	46,2	0,50	9º	1	0,03	162º	4	0,09	158º	4

51	ABN AMRO TELECOM FIA	45,9	0,00	129º	3	0,08	126º	3	0,34	121º	3
52	FINASA INDICE EXCLUSIVO	45,7	0,50	50º	1	0,20	30º	1	0,83	23º	1
53	CARTEIRA LIVRE BSA	45,4	0,50	9º	1	0,01	168º	4	-0,33	194º	4
54	BBA CAP CL - GEMINI	44,7	0,49	58º	2	0,15	68º	2	0,65	61º	2
55	CCF BLUE CHIP	44,7	0,50	28º	1	0,18	45º	1	0,99	15º	1
56	SAFRA ACOES	44,6	0,46	66º	2	0,15	70º	2	0,72	40º	1
57	PLURAL INSTITUCIONAL FIA	44,6	0,50	26º	1	0,19	37º	1	0,94	16º	1
58	BOREAL ACOES III	44,0	-0,50	189º	4	0,18	47º	1	0,62	68º	2
59	BMG ACOES	44,0	0,00	129º	3	0,25	16º	1	0,82	25º	1
60	PRIVATE FOCUS	42,3	0,49	52º	1	0,12	98º	2	0,60	74º	2
61	BRADESCO II FIA	41,3	0,00	129º	3	0,20	29º	1	0,70	48º	1
62	SUDAMERIS ACOES	41,0	0,50	31º	1	0,00	171º	4	-0,03	173º	4
63	TELECOMUNICACOES	38,1	-0,50	197º	4	0,19	36º	1	0,71	46º	1
64	CITITELECOM	38,1	0,50	9º	1	0,19	38º	1	0,71	47º	1
65	HSBC ACOES INDICES	36,8	0,00	97º	2	0,16	64º	2	0,60	75º	2
66	BANESPA - FBA	35,8	-0,50	191º	4	-0,04	185º	4	-0,18	189º	4
67	CSAM GARANTIA A	35,6	0,50	6º	1	0,02	167º	4	-0,05	177º	4
68	PREVIDENCIA C - CL	35,2	0,00	164º	4	-0,57	206º	4	-1,81	206º	4
69	SUDAMERIS LUCE CL	35,0	-0,50	197º	4	-0,03	184º	4	-0,17	188º	4
70	ITAU PERSONNALITE MARCHE FICFIA	34,7	0,00	129º	3	0,18	50º	1	0,66	58º	2
71	CCF LIBRIUM	33,3	0,00	129º	3	0,07	134º	3	0,40	111º	3
72	ITAU LUXOR FIA	33,2	0,00	129º	3	0,04	153º	3	0,18	146º	3
73	BCN ALLIANCE SUPERACAO TELECOM	33,2	0,00	117º	3	0,14	83º	2	0,51	90º	2
74	CITI INSTITUCIONAL ACOES	33,0	0,00	169º	4	0,12	96º	2	0,59	79º	2
75	ITAU INDICE ACOES FIC FIA	32,8	0,00	103º	2	0,19	34º	1	0,72	41º	1
76	ITAU CART. INSTITUCIONAL FIA	32,3	0,50	47º	1	0,19	35º	1	0,75	33º	1
77	PLURAL FIA LIVRE	31,9	0,00	114º	3	0,23	20º	1	1,03	10º	1
78	ITAU PERSONNALITE TECHNIQUE FIA	30,8	0,32	68º	2	0,29	8º	1	1,53	3º	1
79	BOREAL ACOES V	30,3	0,00	129º	3	-0,12	198º	4	-0,36	198º	4
80	ABN AMRO ACOES	29,9	0,00	129º	3	0,06	136º	3	0,35	117º	3
81	SUDAMERIS ACOES C.L.	29,3	0,00	87º	2	-0,05	188º	4	0,00	171º	4
82	BANERJ ACOES FICFIA	27,7	0,50	38º	1	0,14	80º	2	0,50	94º	2
83	SANTANDER ACOES	27,5	0,00	126º	3	0,18	46º	1	0,68	53º	2
84	PACTUAL ANDROMEDA	27,3	0,50	9º	1	0,08	128º	3	0,10	156º	4
85	ITAU AVANTAGE FIA	27,0	0,00	129º	3	-0,01	173º	4	0,29	127º	3
86	MULTIPLY VARIABLE CARTEIRA LIVRE	26,6	0,00	168º	4	0,04	154º	3	0,12	154º	3
87	SAO FRANCISCO	25,4	0,00	175º	4	0,04	151º	3	0,22	141º	3
88	SAFRA INDICIAL	25,3	0,01	82º	2	0,17	56º	2	0,63	67º	2
89	SUDAMERIS FBFREE CL	25,0	0,50	29º	1	0,03	158º	4	0,16	150º	3
90	PACTUAL ADARA	24,9	0,50	23º	1	0,14	77º	2	0,17	149º	3
91	BOZANO SEGURIDADE	24,8	-0,01	186º	4	0,14	76º	2	0,79	28º	1
92	CSAM GARANTIA IBX-ECO	24,7	0,04	77º	2	-0,13	200º	4	-0,49	200º	4
93	ITAUVEST - FIA	23,7	0,00	122º	3	0,13	85º	2	0,50	93º	2
94	BFII SUDAMERIS CL	22,8	-0,50	192º	4	-0,04	186º	4	-0,16	186º	4
95	BOZANO PORT. LIVRE	22,7	0,50	45º	1	0,14	74º	2	0,74	35º	1
96	ALFA - FIC DE FITVM	22,6	0,00	129º	3	-0,20	202º	4	-0,61	202º	4
97	CCF GOLD	22,6	0,00	129º	3	0,15	72º	2	0,73	37º	1
98	LLOYDS SHARE - FITVM	21,5	0,10	73º	2	0,10	111º	3	0,46	103º	2
99	FLEMING GRAPHUS ENERGIA FMIA-CL	21,3	0,17	72º	2	0,15	69º	2	0,61	71º	2
100	FINASA ACOES I	21,0	-0,50	197º	4	0,11	103º	2	0,42	107º	3
101	FDO QUALIFIED - CL	18,9	0,00	106º	3	0,04	155º	4	0,03	166º	4
102	CARTEIRA LIVRE - PR	18,3	0,00	129º	3	0,14	79º	2	0,67	57º	2

103	BOSTON ENERGY - FIA	18,1	0,00	129º	3	0,35	5º	1	1,01	14º	1
104	ICATU INSTITUCIONAL BX FIA	18,0	0,00	115º	3	0,19	39º	1	0,79	27º	1
105	SUDAMERIS ACOES PRIVATE CL	18,0	0,07	75º	2	0,05	146º	3	0,16	151º	3
106	CCF-FRANCIAL ACOES	18,0	0,50	37º	1	0,11	109º	3	0,39	112º	3
107	BCN ALLIANCE SEGURIDADE	17,4	0,50	20º	1	0,10	113º	3	0,40	110º	3
108	CHASE INVESTOR	16,9	0,50	21º	1	0,00	170º	4	0,01	170º	4
109	PLURAL FIA	16,8	0,00	90º	2	0,13	86º	2	0,72	43º	1
110	BBA CAP CL TARGET	16,7	0,00	167º	4	0,17	54º	2	0,66	59º	2
111	LLOYDS EQUINOX SOURCE - FITVM	16,5	0,00	109º	3	0,08	127º	3	0,18	148º	3
112	HEDGING-GRIFFO FCL II	16,5	-0,50	193º	4	0,14	78º	2	0,29	129º	3
113	PREVIDENCIA A - CL	16,5	-0,50	197º	4	-0,21	203º	4	-0,61	203º	4
114	UNIBANCO PREVIDENCIA - CL	16,3	0,50	8º	1	0,06	137º	3	0,26	136º	3
115	SIGMA	16,0	0,00	93º	2	0,11	106º	3	0,27	134º	3
116	LIFE	15,8	0,50	9º	1	0,14	75º	2	0,69	52º	1
117	FLEMING GRAPHUS EXCLUSIVE SUL FMIA-CL	15,7	0,00	98º	2	0,17	51º	1	0,58	82º	2
118	BANESPA F.B.L.	15,2	1,00	1º	1	0,07	132º	3	0,37	116º	3
119	BBM HIGH YIELD 1	15,2	-0,50	188º	4	0,14	82º	2	1,01	12º	1
120	MATRIX ACOES	15,0	-0,50	196º	4	0,08	123º	3	0,34	122º	3
121	ALFA MAIS - FIC DE FITVM	15,0	0,49	56º	2	0,12	99º	2	0,62	69º	2
122	LLOYDS EQUITY - FITVM	14,4	0,50	43º	1	0,20	28º	1	0,71	44º	1
123	BOSTON SMALL CAP VALUATION - FIA	14,3	0,00	107º	3	0,28	9º	1	1,02	11º	1
124	ICATU BV FIA	13,9	0,00	121º	3	0,20	33º	1	0,73	39º	1
125	BBM ACOES	13,8	0,00	129º	3	0,09	119º	3	0,37	114º	3
126	PRIVATE ACOES	13,6	0,50	7º	1	0,14	84º	2	0,58	83º	2
127	UNIBANCO CRED. INDEX	13,4	0,48	63º	2	0,13	89º	2	0,48	98º	2
128	ALFA INDICE - FIC DE FITVM	13,2	0,00	105º	3	0,15	71º	2	0,58	84º	2
129	FIB	13,2	0,50	41º	1	0,11	107º	3	0,46	102º	2
130	BOZANO FIB	13,1	0,00	129º	3	0,17	52º	1	0,75	32º	1
131	MAXIMA ACCESS	13,0	0,00	129º	3	-0,34	205º	4	-0,85	204º	4
132	CCF TELECOM	12,9	0,00	94º	2	0,18	42º	1	0,81	26º	1
133	SANTA FE AQUARIUS FIA	12,4	0,01	81º	2	0,13	92º	2	0,60	76º	2
134	CCF FIB	12,4	0,00	177º	4	0,07	129º	3	0,38	113º	3
135	SAFRA SETORIAL TELECOM	12,4	0,00	129º	3	-0,11	195º	4	-0,35	197º	4
136	MERIDIONAL ACOES	12,3	0,00	119º	3	0,18	49º	1	0,84	21º	1
137	BBA CAP CL TIMING	12,2	0,50	5º	1	0,10	112º	3	0,47	100º	2
138	AMERICA DO SUL ACOES	12,2	0,00	91º	2	0,00	169º	4	0,08	160º	4
139	PACTUAL ANTARES	12,1	0,00	125º	3	0,11	108º	3	0,08	159º	4
140	XINGU FDO ACOES	11,9	0,48	62º	2	-0,30	204º	4	-0,95	205º	4
141	LLOYDS EXPLORER EXTRA - FITVM	11,5	0,00	108º	3	0,22	22º	1	0,67	55º	2
142	BB - ACOES ELETROBRASIL	11,4	0,00	129º	3	0,55	1º	1	1,61	2º	1
143	LLOYDS MERCURY - FITVM	11,2	0,00	100º	2	0,05	145º	3	0,20	144º	3
144	ITAU PERSONNALITE ACOES FICFIA	11,1	0,50	27º	1	0,13	90º	2	0,51	91º	2
145	DREYFUS BRASCAN CAPIBARIBE FIA	10,9	0,00	128º	3	-0,05	189º	4	-0,34	196º	4
146	FI BANDEIRANTES ACOES	10,8	0,50	32º	1	0,06	140º	3	0,14	152º	3
147	MAGLIANO	10,6	0,49	54º	2	0,32	6º	1	1,35	5º	1
148	ALPHA	10,5	0,50	39º	1	-0,02	180º	4	-0,10	179º	4
149	ALFA INDICE II - FIC DE FTVM	10,5	0,50	33º	1	0,05	144º	3	0,23	140º	3
150	SANTANDER POWER	10,5	0,00	99º	2	0,48	2º	1	1,66	1º	1
151	AVANCO CL	10,2	0,21	71º	2	-0,01	178º	4	-0,04	176º	4
152	SUDAMERIS INDEX C. LIVRE	10,1	0,00	129º	3	0,12	93º	2	0,45	104º	3
153	BCN ALLIANCE BLUE CHIP	10,0	0,00	104º	3	0,03	161º	4	0,06	163º	4
154	FITVM GUARARAPES	10,0	0,00	129º	3	-0,03	183º	4	-0,16	185º	4

155	CSAM GARANTIA INDEX	9,9	0,00	181º	4	0,17	59º	2	0,59	80º	2
156	BBV ACOES INDEX	9,7	-0,01	185º	4	0,21	26º	1	0,88	19º	1
157	ITAU SELECTED - FIA	9,5	0,47	65º	2	0,27	10º	1	1,13	7º	1
158	PORTO SEGURO F.I.A	9,5	0,50	46º	1	0,24	18º	1	1,16	6º	1
159	LAM FEB - FITVM	9,4	0,50	30º	1	0,03	159º	4	0,25	138º	3
160	ABN AMRO ATIVO I	9,1	0,00	129º	3	0,20	31º	1	0,87	20º	1
161	IP PARTICIPACOES LIVRE FIA	9,0	0,50	9º	1	0,30	7º	1	0,68	54º	2
162	ICATU INSTITUCIONAL BA FIA	8,9	0,01	83º	2	0,14	81º	2	0,64	62º	2
163	DREYFUS BRASCAN INDEX FIA	8,8	0,50	49º	1	0,18	48º	1	0,73	38º	1
164	ALFA I FITVM	8,8	-0,50	190º	4	0,09	121º	3	0,59	77º	2
165	BOAVISTA GALES	8,7	0,00	129º	3	0,18	44º	1	0,64	64º	2
166	SUL AMERICA MOMENTUM FMIA-CL	8,6	0,00	165º	4	0,10	110º	3	0,25	137º	3
167	NUMBER ONE	8,4	0,50	34º	1	0,02	164º	4	0,07	162º	4
168	TRIADE SENIOR	8,3	0,07	74º	2	0,05	148º	3	0,37	115º	3
169	SUDAMERIS INSTITUCIONAL CL	8,2	0,06	76º	2	0,07	130º	3	0,47	99º	2
170	FLEMING GRAPHUS EQUITY FMIA-CL	8,0	0,47	64º	2	0,13	88º	2	0,50	95º	2
171	SARDEGNA CL	7,9	-0,50	197º	4	-0,14	201º	4	0,12	155º	4
172	BOAVISTA INDEX	7,8	0,00	127º	3	0,17	60º	2	0,63	66º	2
173	SAM MOMENTUM FIQ FIA	7,7	0,00	129º	3	0,09	118º	3	0,21	143º	3
174	PACTUAL CYGNUS	7,6	0,00	173º	4	0,05	143º	3	-0,10	181º	4
175	UNIBANCO PREVIDENCIA FMIA	7,4	0,00	183º	4	0,07	135º	3	0,35	118º	3
176	BANESTADO ACOES	7,3	0,00	129º	3	0,08	122º	3	0,28	130º	3
177	FI ACOES BANDEIRANTES IBOVESPA	7,3	0,50	36º	1	0,18	41º	1	0,63	65º	2
178	GERACAO F.I.A.	7,1	0,00	129º	3	-0,11	194º	4	-0,17	187º	4
179	PILLAINVEST ACOES	7,0	0,22	70º	2	-0,12	196º	4	-0,53	201º	4
180	ARUS ACOES 2	6,9	0,00	85º	2	0,09	120º	3	0,55	85º	2
181	FMIA CCF BANKING	6,8	0,48	61º	2	-0,05	187º	4	0,27	135º	3
182	ALFA TELECOM - FITVM	6,7	0,50	25º	1	0,07	131º	3	0,48	97º	2
183	BBV ACOES	6,4	0,00	166º	4	0,44	3º	1	1,36	4º	1
184	ITAU PRIVATE ACOES I FIC FIA	6,3	0,00	184º	4	-0,11	193º	4	-0,33	195º	4
185	ITAU PRIVATE ACOES M FIC FITVM	6,3	0,50	9º	1	0,04	149º	3	0,23	139º	3
186	BANRISUL INDICE	6,2	0,00	129º	3	0,12	101º	2	0,52	88º	2
187	ALFA DINAMICO - FIC DE FITVM	6,1	-0,50	197º	4	0,05	141º	3	0,33	124º	3
188	LLOYDS EQUINOX EXTRA - FIQFITVM	6,1	0,50	40º	1	0,08	125º	3	0,18	147º	3
189	ALFA INVEST - FIC DE FITVM	6,1	0,00	86º	2	-0,12	197º	4	-0,47	199º	4
190	UNIBANCO PRIVATE GOLD	6,0	0,49	57º	2	0,16	63º	2	0,65	60º	2
191	FIA PLURAL JAGUAR	5,9	0,00	129º	3	0,04	156º	4	0,35	119º	3
192	LLOYDS INSTITUCIONAL - FITVM	5,9	0,50	44º	1	0,20	32º	1	0,71	45º	1
193	SAFRA CARTEIRA MISTA - CL	5,8	0,00	96º	2	0,13	87º	2	0,41	109º	3
194	ICATU INDEX BV FIA	5,8	0,45	67º	2	0,15	67º	2	0,62	70º	2
195	PACTUAL TOTAL INDEX	5,8	0,00	95º	2	0,21	27º	1	0,70	50º	1
196	CARTEIRA SAFRA RENDA MISTA	5,7	0,00	101º	2	0,11	104º	3	0,34	120º	3
197	TITULO F.I.A	5,7	0,04	78º	2	-0,01	176º	4	0,33	123º	3
198	CIDADE STRATEGY	5,5	0,00	89º	2	0,12	102º	2	0,55	86º	2
199	IP GAP IBOVESPA PLUS FIA	5,5	0,00	174º	4	0,22	23º	1	0,53	87º	2
200	CHASE PERFORMANCE	5,4	0,00	176º	4	0,02	166º	4	0,03	165º	4
201	BCN ALLIANCE FOCUS	5,4	0,00	118º	3	0,04	152º	3	0,02	168º	4
202	PAVARINI F.I.A.	5,4	0,01	84º	2	0,16	65º	2	0,43	106º	3
203	LIBERAL N FIA	5,3	0,00	88º	2	0,15	73º	2	0,22	142º	3
204	BANEB CARTEIRA LIVRE	5,3	0,02	80º	2	0,26	12º	1	1,08	8º	1
205	PACTUAL ANDROMEDA N	5,2	0,50	9º	1	0,07	133º	3	0,09	157º	4
206	SANTA FE SCORPIUS FIA	5,1	0,00	129º	3	0,25	15º	1	1,03	9º	1