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# ANALYSTS' RECOMMENDATIONS AND STOCK PERFORMANCE: AN EMPIRICAL STUDY OF BRAZILIAN PUBLIC COMPANIES

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**Abstract**:The purpose of this paper is to investigate the effect of stock recommendations in returns for Brazilian public companies. Using data from the I/B/E/S system, we examine the empirical distribution of buy, sell and hold recommendations as well their effect on prices, for the period from January 1995 through 2003. Among the points analyzed are the performance of consensus recommendations and the effect on the market of upgrades and downgrades. The results show that more than 50% of recommendations in the study period were buy. In terms of market adjusted return, the individual recommendations of some analysts performed reasonably well in the 30 days after the recommendation date, but the consensus recommendation did not perform well. The sell recommendations and downgrades produced significant negative returns.

**Keywords:** Recommendations, analysts, stock returns, investment analysis

## 1 INTRODUCTION

Many investors rely on the recommendations of capital market analysts to choose their portfolios, because of analysts' greater market expertise and specific knowledge about the companies they follow. Analysts are arguably the eyes and ears of the market.

Working independently or for financial institutions or brokerage houses, market analysts pay close attention to the obligatory and voluntary information disclosed by firms. Based on this information, they make predictions about future results, employing a particular valuation model, define a target price for a stock and recommend buying, selling or holding it. For most investors who rely on analysts, this opinion is the most important function of analysts.

Analysts' recommendations usually fall into one of five categories: a) strong buy; b) buy; c) hold; d) sell and, e) strong sell. These recommendations express the particular analyst's opinion about the company's future prospects. The whole point of relying on

analysts' recommendations is that they are specialists with deeper knowledge of the market and the companies they follow, allowing them to reach more accurate forecasts of future returns than an ordinary investor could do.

The study of financial analysts is a hot topic in finance, according to RAMNATH et al (2008), since 1992 at least 250 papers related to financial analysts have appeared in nine major research journals. Even though, many authors have challenged the accuracy and the value of analysts' forecasts and stock recommendations, based on studies of their performance over varying periods and in various markets. This article analyzes the recommendations issued by analysts of Brazilian companies from several standpoints. Besides describing the statistical properties, we also examine the information content of these recommendations, by looking at the effects of the consensus and individual recommendations analysts. Till date, there is no consensus among researchers on the issue whether analysts recommendations help investors generate abnormal profit or not. This prompted the present study.

This paper contributes to the existing literature in various ways. The studies related to the emerging or developing countries are far and few. The Brazilian market has shown impressive growth in the last years. Brazilian investors have become more informative and mature.

## 2 LITERATURE REVIEW: DO ANALYSTS' RECOMMENDATIONS HAVE VALUE?

The investigation of analysts´ recommendations performance is a well established line of research in Finance. Many authors have investigated whether analysts' recommendations have value to investors. As early as 1930s, COWLES (1933) documented that analysts' recommendations do not produce abnormal returns. DAVIES and CANES (1978) investigate buy and sell recommendations published in the Wall Street Journal´s "Heard on the Street" column in 1970 e 1971, detecting abnormal price movements the day of publication and the afterwards. They also observed a much stronger reaction for sell compared with buy recommendations. Later with the same

research design, BENEISH (1991) for the years 1978 and 1979, and LIU, SMITH and SYED (1990) for the period 1982-85, support Davies and Canes finding.

BARBER and LOEFFER (1993) investigate the effects of stock recommendations published in the month ”Dartboard” column of the Wall Street Journal, on the behavior of security prices and trading volumes from October 1988 to October 1990. The authors find positive abnormal returns of approximately four percent and an average trading volume double than normal, for the two days following the publication, concluding that the positive abnormal return was the result of naïve buying pressure (the “price pressure” hypothesis) as well as the information content of analysts´ recommendations (the “information content” hypothesis). In turn, WOMACK (1996), using a real-time (first-call) data on recommendations by 14 large brokerages, identified an excess return on the announcement of a buy recommendation that persisted up to one month afterward. However, the author finds significantly negative returns for six month following sell recommendations and no significant abnormal returns after buy recommendation. In contrast, BARBER et al. (2001) investigate the performance of consensus forecasts from Zacks database for the period 1985-1996. They found that a portfolio formed of the most highly recommended shares had excess return of 4.2%. Nevertheless, when transaction cost where considered these strategies leads non-significant abnormal returns.

In a recent paper, MOKOALELI-MOKOTELI et al (2009) tests whether sell-side analysts are prone to behavioural errors when making stock recommendations as well as the impact of investment banking relationships on their judgments. The authors find first that new buy recommendations on average have no investment value whereas new sell recommendations do, and take time to be assimilated by the market. They also show that new buy recommendations are distinguished from new sells both by the level of analyst optimism and representativeness bias as well as with increased conflicts of interest. Even though most of research has been performed in US Markets, similar investigations has been performed in most developed countries. PIEPER, SCHIEREK and WEBER (1993) investigate buy recommendations published in the “Effekten-Spiegel” for the years 1990 and 1991 in the German Stock Market, concluding that abnormal returns could only be realized by buying the stock prior the publication of the recommendation.

SCHIMIDT and ZIMMERMAN (2003) investigate the price and volume behavior of Swiss stocks around buy,sell and hold recommendations, as published in the major financial newspaper in Switzerland. They find significative price reaction the week of the recommendation publication. In different context, JEGADEESH and KIM (2007) evaluate the value of analysts´ recommendations in the G7 countries (ie. Canada, France, Germany, Great Britain, Italy, Japan and United States), observing a significant reaction of stock prices to recommendation revisions in all countries, except Italy.

There are also several studies in emerging stock markets, such as DAVID (2007) that examines the changes in average returns and standard deviations of stocks that were recommended to "buy", by analysts in Tel-Aviv Stock Exchange, Israel. The findings show a large increase in the returns and a significant decrease in the standard deviations in the time span before the publication of recommendation. After publication, however, there is a slight addition to the return accompanied by a large increase in the standard deviation. In the same way, ERDOGAN et al (2010) that conducted a study on Istanbul Stock Exchange. They state that the stocks quoted in the capital market, which are recommended by analyst do not exhibit superior stock return ability for both short and long term performance of analysts' recommendations.

KUMAR et al (2009) studied the impact of buy and sell recommendations issued by analysts on the stock prices of companies listed on the National Stock Exchange (NSE) of India. The study finds that buy recommendations issued by analysts on public domains help investors generate abnormal returns on the day of the recommendation. On the other hand, sell recommendations do no show significant negative abnormal returns. LIN et al (2007) found that there are significant positive abnormal returns before and on the day of the analysts recommendations on the Taiwanese Stock Exchange. However, when the transaction costs are accounted for, the return become insignificant.

Although the question is still controversial, the majority of findings indicate that on average analysts do not appear to outperform passive benchmarks. Naturally, this does not mean that some analysts do not have a knack for picking stocks. The question is how to identify good analysts in advance.

BARBER et al. (2000) concluded that the buy recommendations of large brokerage houses performed better than the recommendations of their smaller peers, but that with respect to sell recommendations, the small brokers obtained better returns on average than those of large ones.

To sum up, the literature in general indicates that certain analysts really can outperform the market, and hence that their recommendations have value for investors. The big challenge facing investors, then, is to identify the analysts whose recommendations really have value.

The literature has demonstrated a serious "analyst optimistic bias" since in general buy recommendations outnumber sell recommendations. However following analysts´ recommendations does not in general provide abnormal risk-adjusted returns, with the possible exception to selling recommendations. This review shows that the literature is divided in its opinions about whether analysts recommendations have an impact on stock prices or not.

## 3 DATA DESCRIPTION

We obtained our data on analysts' recommendations from the Institutional Brokers Estimate System (I/B/E/S) Detail and Summary Recommendations file. This base contains analysts' recommendations for many companies around the world, including Brazilian ones. The "Recommendations" base contains buy/hold/sell recommendations. Our study period covers nine years from 1995 to 2003.

In I/B/E/S , the Detail Recommendation file provides a data entry for each recommendations announcement by each sell-side analysts whose brokerage firm contributes to the database. I/B/E/S parlays the original text recommendation to its own five-point rating system, i.e. 1 (strong buy), 2 (buy), 3 (hold), 4 (under-perform) and 5(sell). Unlike US., many international analysts rate firm with buy, hold or sell recommendation. In such cases, I/B/E/S maps them to 1, 3 and 5, respectively.

The I/B/E/S Summary file provides a monthly summary for each firm followed in the database, with the number of outstanding ratings and the mean and median of those

ratings available on a monthly basis. It was employed daily return data from Economatica.

Table 1 shows the descriptive statistics of the sample of recommendations. From Panel A it can be seen that there were more recommendations from 1996 to 1999, followed by a sharp drop in the number or recommendations in 2000 to 2002. However, this number started to grow again in 2003, as indicated by the figures for the first half of that year.

**Table 1 –** Descriptive statistics of analysts' stock recommendations taken from the I/B/E/S database, from January 1995 to June 2003

**Panel A** presents by year the number of recommendations issued, the number of firms with at least one recommendation in the I/B/E/S database, the number of brokers/investment Banks and the average recommendation, according to the following rating scheme: strong buy [1], buy [2], hold [3], sell [4] and strong sell [5]). **Panel B** shows by year the number of buy, hold and sell recommendations issued.

**Panel A**

| Year | Number of Recommendations | Number of Firms | Number of Brokers | Rating Mean |
|---|---|---|---|---|
| 1,995 | 892 | 144 | 18 | 2.615 |
| 1,996 | 1,242 | 142 | 32 | 2.433 |
| 1,997 | 2,017 | 178 | 39 | 2.460 |
| 1,998 | 1,665 | 173 | 35 | 2.481 |
| 1,999 | 1,535 | 156 | 30 | 2.495 |
| 2,000 | 939 | 129 | 31 | 2.347 |
| 2,001 | 937 | 117 | 28 | 2.189 |
| 2,002 | 864 | 89 | 24 | 2.357 |
| 2,003 (Jan-Jun) | 544 | 93 | 21 | 2.341 |
| Total | 10,635 | 257 | 64 | 2.430 |

**Panel B**

| | BUY | | HOLD | | SELL | |
|---|---|---|---|---|---|---|
| YEAR | N | % Total | N | % Total | N | % Total |
| 1,995 | 350 | 39.2% | 339 | 38.0% | 203 | 22.8% |
| 1,996 | 585 | 47.1% | 486 | 39.1% | 171 | 13.8% |
| 1,997 | 962 | 47.7% | 868 | 43.0% | 187 | 9.3% |
| 1,998 | 884 | 53.1% | 599 | 36.0% | 182 | 10.9% |
| 1,999 | 790 | 51.5% | 555 | 36.2% | 190 | 12.4% |
| 2,000 | 579 | 61.7% | 254 | 27.1% | 106 | 11.3% |
| 2,001 | 588 | 62.8% | 278 | 29.7% | 71 | 7.6% |
| 2,002 | 480 | 55.6% | 288 | 33.3% | 96 | 11.1% |
| 2,003 (Jan-Jun) | 316 | 58.1% | 164 | 30.1% | 64 | 11.8% |
| Total | 5,534 | 52.0% | 3,831 | 36.0% | 1,270 | 12% |

The explanation is the series of international crises in 2000, 2001 and 2002 that, combined with a climate of instability caused by forecasts of policy changes, negatively affected the Brazilian stock market in those years.

The number of firms receiving recommendations varied in the same proportion as the number of recommendations. The number of brokers submitting their recommendations to the I/B/E/S system fell steadily during the period, while the average number of buy recommendations increased.

To investigate this characteristic in more detail, we analyzed year by year the distribution of analysts' recommendations. **Panel B** shows the annual distribution of buy, hold and sell recommendations issued by analysts of Brazilian companies.

Our data for Brazil show a clear trend for more buy recommendations over the period studied, with e steadily declining number of sell recommendations. Buy recommendations rose from 39% of all recommendations in 1995 to nearly 58% in 2003. The most extreme case was 2001, when 62.8% of the recommendations were to buy against only 7.6% for sell recommendations. Over the entire sample period, buy recommendations represented 52%.

Instead of verifying the number of recommendations issued by analysts, the aim of using the monthly consensus recommendations is to identify on average what they were recommending. shows the same trend for buy recommendations to outweigh sell ones. Despite fluctuations, this analysis also shows there was an increasing trend in buy recommendations accompanied by a declining trend in sell recommendations.

## 4 ANALYSIS OF THE RETURNS PRODUCED BY A RECOMMENDATION

### 4.1 The problem of models to evaluate returns

The main concern of an active investor is to choose a portfolio that will be most likely to produce a high return. The investor will buy and hold stocks that appear likely to appreciate and will sell stocks that look likely to depreciate.

To have value, a recommendation must give the investor an edge in achieving future returns in comparison with a passive investment strategy of choosing a market-tracking portfolio and sitting on it, or that allows avoiding losses in a bear market. Therefore, in general the first reference to evaluate the value of a recommendation is the performance of the market as a whole. In a bull market, when most stocks are appreciating, a recommendation will only have value if it allows choosing a stock that will outperform the market.

It is clear, then, that to analyze the return of recommendations, the performance of the market is very important. The method of calculating the market-adjusted return contemplates these observations.

Although the average performance of the market must be considered in judging analysts' recommendations, the risk associated with an investment also must be remunerated. When an investor buys a stock with high risk (greater than the overall market risk), he should logically be remunerated with a higher return than could have been attained from a low-risk stock.

This reflects a basic axiom in finance: the higher the risk, the greater the investor's return must be. The market-adjusted return methodology does not deal well with this aspect of investing. More sophisticated models are required to consider the risk component. In this context, to conclude that buy or sell recommendations are creating value for investors it is necessary to incorporate a risk-adjustment approach.

Having made these observations, we now examine the performance of the recommendations in our sample, in all cases identifying which model is being used to compute the effective return provided by the recommendation.

## 4.2 The behavior of the returns for individual recommendations over the study period

As a first approach to the question of the returns associated with a recommendation, we sought to identify the market-adjusted returns for the analysts' recommendations by examining different portfolios, grouped according to the individual recommendation of each analyst.

**Table 2** presents the average market-adjusted returns of for each of the possible recommendations for a period of 30 days from the recommendation date (indicated in the I/B/E/S system).

The average return values, in percentage terms, assume an investment of equal proportion in a determined portfolio in all the stocks recommended by the analysts. The hypothetical investor would buy and hold the respective stocks for 30 days and then sell them. It is important to note that these returns do not include the transaction costs of buying and selling the assets.

We obtained all the information on price variations from the Economática database. These data indicate a satisfactory average performance for the individual recommendations of the analysts. In the period from January 1995 to June 2003, the strong buy recommendations were positive 0.65% ($t$ = 2.661). Curiously, the buy recommendations (as opposed to strong buy ones) performed better, indicating a certain incoherence between the intensity of the recommendation and the performance of the market. With respect to strong sell recommendations, the performances were always negative and significant, while for regular sell recommendations, the result was negative (-0.352% and $t$ = 0.445), but not significant.

A year-by-year analysis of the performance in average terms shows that the performance of analysts' recommendations was highly variable. There were periods of satisfactory performance, such as 2001 and 2003, but others with disappointing performance, as in 1997.

Additional tests indicated that in general terms the differences in return between a strong buy portfolio and a strong sell portfolio were statistically significant, indicating that

a strategy of selling the latter portfolio (P5) and buying the former one (P1) would have produced positive returns.

**Table 2 -** Average market-adjusted return of portfolios formed based on analysts' recommendations from January 1995 to June 2003

This table presents for Brazilian companies the percentage of market-adjusted returns obtained by portfolios formed according to the recommendation of analysts for a period of 30 days (ranging from strong buy [1], buy [2], hold [3], sell [4] and strong sell [5]). The table shows the average percentage return over 30 days of the companies. The returns are accompanied by *t*-statistics. The difference of means test between portfolio 1 and portfolio 5 (P1 – P5) is documented.

| Portfolio | 1,995 | 1,996 | 1,997 | 1,998 | 1,999 |
|---|---|---|---|---|---|
| 1 | 0.063% | -0.116% | -2.134% | -0.650% | 2.887% |
| | 0.086 | -0.209 | -4.427 | -0.690 | 3.439 |
| **2** | -2.916% | 0.042% | -1.249% | 1.756% | 1.495% |
| | -1.412 | 0.062 | -2.315 | 2.242 | 2.354 |
| **3** | -3.125% | -2.466% | -2.861% | -1.346% | 0.613% |
| | -4.250 | -5.326 | -6.417 | -1.737 | 0.803 |
| **4** | -2.225% | -3.331% | 1,687% | 3.179% | 6.444% |
| | -1.401 | -2.380 | 0.437 | 1.197 | 1.798 |
| 5 | -7.520% | -3.497% | -3.377% | -0.160% | 0.476% |
| | -4.987 | -3.201 | -2.446 | -0.080 | 0.374 |
| **P1-P5** | 7.583% | 3.381% | 1.243% | -0.490% | 2.411% |
| | 4.541 | 2.653 | 1.932 | -0.150 | 1.653 |

| Portfolio | 2,000 | 2,001 | 2,002 | 2,003 | 1995 - 2003 |
|---|---|---|---|---|---|
| 1 | 2.867% | 1.707% | 1.540% | 2.626% | 0.650% |
| | 3.721 | 2.410 | 2.219 | 2.841 | 2.651 |
| **2** | 1.409% | 0.770% | 1.685% | 2.312% | 0.965% |
| | 2.243 | 1.127 | 2.639 | 2.745 | 3.843 |
| **3** | 0.888% | 0.769% | 0.307% | -0.510% | -1.161% |
| | 1.105 | 1.076 | 0.415 | -0.512 | -4.947 |
| **4** | 2.959% | -0.253% | -2.553% | -0.943% | -0.352% |
| | 0.925 | -0.087 | -1.405 | -0.474 | -0.445 |
| 5 | 0.982% | -0.241% | 2.962% | -1.727% | -1.668% |
| | 0.655 | -0.092 | 1.294 | -0.731 | -2.819 |
| **P1-P5** | 1.884% | 1.948% | -1.421% | 4.353% | 2.318% |
| | 1.220 | 1.001 | -0.390 | 1.714 | 4.572 |

### 4.3 The performance of consensus recommendations

The specialized press generally presents consensus recommendations as being a good thermometer of how a certain stock will perform. But many studies have shown that consensus recommendations suffer from the same problems as individual recommendations, particularly the tendency to omit bad news and reluctance to issue sell recommendations.

A serious problem in consensus recommendations is the temporal aspect or precariousness of the recommendations. Unlike a prediction of a result, a buy or sell recommendation can become obsolete from one day to another, depending on the behavior of the particular stock.

If prices fluctuate constantly, the circumstances in which the conditions are defined to buy or sell also change. In this respect, the fear is that relying on consensus recommendations may not be advisable.

One of the reasons in favor of using analysts' consensus is that by combining a greater number of opinions, the information should, on average, more nearly reflect the market's expectation, making the consensus recommendation a good indicator of future performance.

To investigate these points, we examined the consensus recommendations, ascertained by the I/B/E/S system in the third week of every month. We grouped the average recommendations of the analysts and investigated the behavior of the returns of the shares for each consensus recommendation. Simultaneously, we classified these returns by the number of recommendations utilized to calculate the consensus. These figures are organized in **Table 3**.

**Table 3 –** Average market-adjusted returns of portfolios chosen by the consensus recommendation and by the number of recommendations that make up the consensus, from January 1995 to June 2003

| Consensus Recommendation | Number of Recommendations | | | | | Total |
|---|---|---|---|---|---|---|
| | [1-3] | [4-6] | [6-9] | [10-15] | [16- ] | |
| **Strong Buy** | -0.249%<br>-0.354 | 0.331%<br>0,325 | -1.160%<br>-0.570 | -1.480%<br>-1.308 | 0.975%<br>-1.401 | -0.174%<br>-0.352 |
| **Buy** | -0.602%<br>0.224 | 0.047%<br>0.108 | -0.227%<br>0.639 | 0.153%<br>1.228 | -0.448%<br>-1.386 | -0.221%<br>-1.267 |
| **Hold** | -1.175% *<br>-1.645 | -0.679%<br>-0.728 | -0.541%<br>-0.787 | -0.555%<br>-0.738 | -1.186%<br>-0.988 | -0.812% **<br>-2.175 |
| **Sell** | -1.633% *<br>-1.849 | -2.538% **<br>-2.328 | -0.830%<br>0,121 | -3.654%<br>-1.249 | | -1.819% ***<br>-2.873 |
| **Strong Sell** | -3.767% ***<br>-3.116 | -1.734%<br>-0.361 | | | | -3.669% ***<br>-3.124 |

The results demonstrate that in general terms the consensus recommendation in the study period can be classified as weak, particularly with respect to buy recommendations, irrespective of the number of analysts taking part in the consensus. In all the sub-groups the average returns were statistically not significant, both considering firms with the most liquid stocks and the group containing a greater number of firms. Regarding sell recommendations, the consensus only performed modestly at best. Even though the values determined were negative, many of them were statistically insignificant.

## 5 REVISED RECOMMENDATIONS

The analyses carried out so far classify recommendations irrespective of whether one was the last recommendation issued in the monthly period. However, another way to investigate the effect of recommendations is by evaluating how the returns behave when the same analyst revises a previous recommendation. When an analyst revises a stock's recommendation downward, it is called a downgrade, and an upward revision is called an upgrade.

Another important particularity that can be investigated is the market's reaction to a radical change in recommendation. The most extreme revision would be for an analyst who issued a strong buy (sell) recommendation to change course and suddenly issue a strong sell (buy) recommendation. This is the most radical example of a downgrade (upgrade). How would the market react to this new information?

To investigate this phenomenon, we worked with the sample of all recommendations for which it was possible to identify an author (either a single analyst or team). We then analyzed the revisions that occurred.

For this study, we gathered 7,160 recommendations that met this requirement. We then constructed a transition matrix for this sample, showing how the recommendations changed and were revised. The results are reported in **Table 4**, **Panel A**. In this sample, downgrades predominated, with 53%, against upgrades with 47%.

In general, after the revisions buy recommendations continued to predominate, representing 54% of the recommendations, against only 11% for sell recommendations and 35% for hold.

To calculate the abnormal returns of a revised recommendation, we investigated the effects in the market of the average returns of portfolios organized by combining the previous recommendation with the new one.

From this procedure we identified 20 portfolios representing the possible combinations. For each of these portfolios we ascertained the average abnormal return accumulated from two days before the recommendation to thirty days after it [AbRet(-2,30)]. The setback of the analytical window by two days was to deal with the possibility that the recommendation was disclosed to brokerage clients before it was indicated in the I/B/E/S system.

The average returns of each of these portfolios are listed in **Panel B,** which shows that the downgrades of Brazilian companies were more informative than upgrades in the period studied.

Most of the upgrades, unlike expected, led to accumulated negative abnormal returns, though the great majority of these were not statistically significant, indicating that the null hypothesis cannot be ruled out that upgrades are not informative. The few

significant values were found for upgrades from strong sell and sell to hold. This type of revision was received by the market a irrelevant news, because in practical terms the returns were negative.

On the other hand, the downgrades were very informative to the market. There were significant abnormal returns in revisions of downgrades of strong buy and buy to hold or sell. These findings indicate that the Brazilian market is much more sensitive to downgrades than to upgrades.

**Table 4 –** Review of recommendations for Brazilian companies: Data from I/B/E/S between January 1998 and June 2003

**Panel A:** Transition matrix of recommendations

| | To: | | | | | | |
|---|---|---|---|---|---|---|---|
| **From:** | **Strong Buy** | **Buy** | **Hold** | **Sell** | **Strong Sell** | **Total** | DownGrades |
| **Strong Buy** | | 242 | 372 | 43 | 24 | 681 | ~ 53 % |
| **Buy** | 205 | | 432 | 24 | 77 | 738 | |
| **Hold** | 343 | 385 | | 77 | 114 | 919 | |
| **Sell** | 41 | 15 | 64 | | 10 | 130 | Upgrades |
| **Strong Sell** | 22 | 61 | 126 | 9 | | 218 | ~ 47 % |
| **First Recom** | 1,165 | 1,373 | 1,531 | 151 | 254 | 4,474 | |
| **Total** | 1,776 | 2,076 | 2,525 | 304 | 479 | 7,160 | |

**Panel B:** Average accumulated abnormal returns in 2 days before to 30 days after the recommendation [AbRet(-2,30)]

| From: \ To: | Strong Buy | Buy | Hold | Sell | Strong Sell |
|---|---|---|---|---|---|
| **Strong Buy** | | -1.16%<br>-1.38 | **-2.28%**<br>**-3.58** | **-6.49%**<br>**-3.00** | -5.26%<br>-1.61 |
| **Buy** | 1.30%<br>1.47 | | **-2.32%**<br>**-3.50** | -1.47%<br>-0.72 | -0.44%<br>-0.29 |
| **Hold** | -0.16%<br>-0.25 | -0.60%<br>-0.91 | | -1.80%<br>-1.01 | -2.77%<br>-1.52 |
| **Sell** | -1.61%<br>-0.91 | 2.03%<br>0.67 | -3.87%<br>-1.78 | | -5.76%<br>-1.33 |
| **Strong Sell** | 3.33%<br>0.96 | -1.49%<br>-0.83 | -2.82%<br>-1.89 | -3.58%<br>-0.83 | |

## 6 CONCLUSIONS AND CRITICAL CONSIDERATIONS

The analyses made in this article of analysts' recommendations about Brazilian public companies, obtained from the I/B/E/S system for the period from January 1995 to June 2003 indicate the following conclusions:

i. Buy recommendations always represented more than 50% of the recommendations issued for Brazilian companies, whether measuring individual or consensus recommendations. This was true in all the years observed, with a tendency for buy recommendations to increase in more recent years.

ii. Sell recommendations were much rarer than buy or hold recommendations. For each sell recommendation there were nine buy or hold recommendations. The percentage of sell recommendations also fell over the study period. The data indicate a disproportionately small number of sell recommendations in Brazil.

iii. The investigation of the effects on market-adjusted returns of the different recommendations showed that on average analysts' recommendations performed satisfactorily. However, the sell recommendations were much more significant in

terms of values. Analysis of the difference between the returns of portfolios formed of stocks receiving strong buy and strong sell recommendations showed a positive difference in nearly all the years studied, indicating that a strategy of selling the portfolio of shares with strong sell recommendations and buying that containing shares receiving strong buy recommendations can provide a positive market-adjusted return. However, this analysis does not consider the transaction costs and risks of the stocks.

iv. The consensus buy recommendations did not perform satisfactorily. The average market-adjusted returns over a 30-day horizon from the day of the consensus recommendation were predominantly insignificant, irrespective of the number of analysts participating in the consensus. The consensus sell recommendations, in contrast, at times did have information content, depending on the circumstances.

v. For revisions, downgrades were much more informative for Brazilian companies than upgrades. In terms of abnormal returns, we found significantly negative abnormal returns for downgrades and statistically insignificant values for upgrades. These findings indicate that the market was not positively influenced by upgrades of strong sell to hold recommendations, but the market did react to an upgrade to hold in similar fashion to the reaction to a sell recommendation.

We should remark that many analysts perform better than the average of all analysts, so the findings here cannot be generalized to all analysts' recommendations. They only reflect the average performance of all analysts with information available on their recommendations.

The biggest problem that could undermine the conclusions reached here are possible errors in the data contained in the I/B/E/S system, from where we obtained the recommendations. If this database contains systematic errors, the results presented here could be compromised. However, I/B/E/S enjoys a good international reputation and data from its system is widely used in academic studies, so we believe this possibility is low.

Another potential problem is how representative the data from the I/B/E/S system is of the recommendations of all analysts of Brazilian firms. There is no question that the

universe of brokers that make their recommendations available for inclusion in the system is small in relation to all brokers. However, even though is it not possible to identify the analysts' names (due to the confidentiality of information required by Thomson Financial), we stress that various among the 30 largest brokers, according to the ranking of *Investidor Institutional* magazine provided information on their forecasts and recommendations to the I/B/E/S system, thus providing stronger support for the conclusions of this study.

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