Ten Years of Misleading Information - Investment Advice in Printed Media*

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Abstract

This paper analyzes the returns to stock recommendations published in eleven well-known Swedish morning newspapers, tabloids, business newspapers and magazines during the period 1995-2004 prior to, at the time of, and for up to a year after the recommendation was published. The sample size of 5,190 buy recommendations and 851 sell recommendations by far makes it the most comprehensive study of stock recommendations in the printed media to this date. Buy recommendations are found to insignificantly underperforming the risk-replicating portfolio by almost two percentage points for the year after they were published. Buy's of small-firm stocks outperform the risk-replicating portfolio whereas medium- and large-sized firms underperforms. Unique buy recommendations perform better than repeated ones. Sell-recommended stocks underperform stocks with the same riskiness. However, readers could not profit from them because they actually increase in value.

Key words: Stock recommendations, efficient market hypothesis, printed media, initiations, information asymmetry.
JEL Classifications: G10, G14, G20.

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1 Introduction

This study is unique due to:

- its extent - the number of sources (and its varieties) and recommendations - compare with other studies
- its time-span, i.e. period 1995-2004 covering the rise and fall of global as well as Swedish stock market - compare with other studies!
- the large number of investors in Sweden relative to the population - compare with US and other industrial countries

Section 2 presents the approach chosen, while Section 3 describes the data. The results are presented in Section 4, while Section 5 concludes.

2 Hypotheses and Method

2.1 Hypotheses

Stock recommendations in printed media have been studied on many markets and published during varying periods before. Such stock recommendations are publicly available at the publication day, and the potential profitability from acting on them is a test of the semi-strong form of market efficiency. Although a few previous studies have found such recommendations to be valuable for readers (e.g. Desai et al. (2000); Ghani and Thomas (1996)), the majority find that they are of limited use to readers (e.g. Liang (1999); Mathur and Waheed (1995); and Muradoğlu and Yazici (2002)). It is therefore a largely accepted statement among researchers that stock markets are semi-strong efficient, i.e. it is impossible to earn abnormal returns by acting on publicly known information. In Sweden too, such results have been found in Lidén (2006) when studying initiated and changed recommendations. Our first hypothesis can therefore be stated as:

Hypothesis 1:
Acting on stock recommendations in the printed media leads to a normal return taking into account the return to a proper benchmark.

2.2 Construction of Reference Portfolios

What then constitutes a proper benchmark? In the search for this proper benchmark, we aim at finding a benchmark replicating the risk level in each recommended stock at the publication day and, perhaps most importantly, mimics the return to be expected from this stock. The underlying reason is the following. Let us assume that a newspaper tend to publish recommendations of relatively risky stocks. Then, when compared with the market return, these recommendations will probably seem very impressive. Financial theory, nevertheless, stipulates that investors taking on a higher degree of risk should also be compensated with a higher degree of return for doing so. Hence, overperformance is then to be expected. By filtering out these potential style differences between newspapers, it will be possible to compare them and at the same time answering the question: do newspapers in their stock recommendations successfully pick the *real* winners?

According to the Capital Asset Pricing Model (CAPM) the risk an investor takes on in an individual investment consists of two components; systematic and unsystematic risk. In this model, only systematic risk is compensated by additional expected return. Systematic risk is measured by β, and measures how correlated with the market an asset is.

The β-coefficient determines the return to be expected by this individual investment above the risk free rate. Hence, we would expect a portfolio constructed of stocks with similar betas to the recommended stock to yield the same return as the one on the recommended stock itself.

Commonly, newspapers use the market index as a benchmark for evaluating their performance. This is misleading because, according to CAPM, it should be possible to beat such a benchmark by recommending readers to buy stocks with higher-than average systematic risk, i.e. stocks with higher β.

Instead of using the market index as a benchmark, our benchmark is a risk replicating portfolio (RRP) for each recommended stock. This portfolio is found by calculating the beta for all stocks listed at the market at the recommendation date and then forming an equally-weighted portfolio of the 10 percent of stocks (typically 15 to 30 stocks) having the closest beta to the recommended stock. The outcome will be a portfolio with an expected return equal to that of the recommended stock, and with less unsystematic risk due to diversification. This benchmark should, on average, be a much better (and harder to beat) benchmark than the market index. We will also show further ahead in this paper why we believe the RRP-benchmark to be superior to the market index.

When comparing the RRP-benchmark with the market-index benchmark, we also expect buy recommendations on high beta stocks to be outperforming the market index but not the RRPs, and buy recommendations on low beta stocks to underperform the market index but performing in line with the RRPs.

The RRP for each individual recommendation was found using the following approach:

1. The beta for the six months prior to the publication day to the market was calculated for all stocks listed at the Stockholm stock exchange.[1]
2. We rank stocks on beta relative to the beta of the recommended stock.
3. An equally-weighted RRP is then formed on the ten percent of stocks with the most similar betas (in absolute terms) to the sample stock. In practice this means that stocks both having higher and lower betas will be included in the portfolio.
4. The returns on the RRP are then tracked for τ months (up to a year after publication).

We calculate the long-horizon returns on the RRPs by first compounding the returns on the securities constituting the portfolio and then summing across securities:

$$R_{rpt}^{BH} = \sum_{i=1}^{n^s} \frac{[\prod_{t=s}^{s+\tau}(1+R_{it})] - 1}{n_s}, \tag{1}$$

where n_s is the number of securities in the portfolio traded in month s. The return to this portfolio would be the same as investing equal amounts (thereby being an equally-weighted portfolio) in each of the securities which constitutes the portfolio, i.e. be a passive investment in these firms. The unique approach whereby we allow the RRP to change in composition at each date in time, allows a more accurate correction for the potential risk level in the recommended stocks.

2.3 Buy-and-hold Abnormal Return ($BHAR$)

Calculating the $BHAR$s for each recommended stock i during the period T, we use the procedure

$$BHAR_{iT} = R_{iT} - E(R_{it}), \tag{2}$$

where the period-T $BHAR$ will be calculated for the month prior to the event period (from day -22 to day -2), during the event period itsel (-1 to +1), as well as quarterly up to a year post-event; R_{iT} is the return on stock i for period T; and $E(R_{it})$ is the expected return for the same period. As a proxy for the expected return we use either the return to the market index or the RRP. By using these reference investments, Barber and Lyon (1997) have found that the *new-listing* and *rebalancing* biases are successfully eliminated but not the *skewness* bias.[2] We will return to this issue further ahead.

2.3.1 Statistical tests

Mean BHARs ($\overline{BHAR}$s) of certain types of recommendations and from a certain groups were calculated as a simple mean, i.e. stocks in that portfolio is equally weighted. This way of calculating the $\overline{BHAR}$ is preferred since it, in practice, means than an investor mimicking the recommendations would invest an equal amount of money in each recommended stock as they are published. Also, to take care of misspecified test statistics due to skewness bias which may arise when a portfolio is used as a reference investment, we employ a bootstrapped skewness-adjusted t-statistic recently used in Lyon et al. (1999). The transformed skewness-adjusted test statistic that is employed in the bootstrapping procedure was developed in Johnson (1978), and can be expressed as:

$$t_{sa} = \sqrt{n}\left(S + \frac{1}{3}\hat{\gamma}S^2 + \frac{1}{6n}\hat{\gamma}\right), \tag{3}$$

where

$$S = \frac{\overline{BHAR}_T}{\sigma(BHAR_T)}, \qquad and \qquad \hat{\gamma} = \frac{\sum_{i=1}^{n}\left(BHAR_{iT} - \overline{BHAR}_T\right)^3}{n\sigma(BHAR_T)^3}.$$

In the above expressions, $\hat{\gamma}$ is an estimate of skewness, and $BHAR_{iT}$ is the T-period $BHAR$ for observation i. Sutton (1993) argues that only the bootstrapped version of this skewness-adjusted test statistic yields well-specified test statistics. The bootstrapping procedure that we employ means that we draw 1,000 bootstrapped resamples from the sample, each having the size $n_b = n/2$, and for each resample we calculate the following test statistic:[3]

$$t_{sa}^b = \sqrt{n_b}\left(S^b + \frac{1}{3}\hat{\gamma}^b S^{b2} + \frac{1}{6n}\hat{\gamma}^b\right), \tag{4}$$

where

$$S^b = \frac{\overline{BHAR}_T^b}{\sigma^b(BHAR_T)}, \qquad and \qquad \hat{\gamma}^b = \frac{\sum_{i=1}^{n_b}\left(BHAR_{iT}^b - \overline{BHAR}_T^b\right)^3}{n_b\sigma^b(BHAR_T)^3}.$$

The presented t-values in the tables to come are simply the average of the 1,000 resample t-values.

3 Data

3.1 Analysts and Journalists

In the result section, we discuss differences in the returns to recommendations originating from analysts and journalists separately. This section will therefore be devoted to describing how we define analysts and journalists.

We define an analyst as someone employed by a bank, a brokerage firm or another employer having customers with an interest in the stock markets; and a journalist as someone employed by a newspaper to write articles.

Analysts are normally asked by the respective newspaper to put together recommendations. During our sample period, analysts from a total of 35 banks, brokerage firms, or similar were giving stock recommendations in the newspapers. Analysts give this kind of investment advice in the printed media with a relatively high frequency. Why do highly compensated professionals engage in such practices free of charge? That question is a reasonable one. We can think of at least five reasons why they are willing to do that, reasons which may also assist in explaining what we can expect from such recommendations.

First, the analyst employer have incomes based on transaction fees; an increased trading volume consequently leads to an increased income. Recommendations in the printed media will presumably lead to an increase in trading volume and thereby an increase in analysts' income.

Second, they may also have private clients who have recently taken, or are about to take, positions in certain securities; hence a 'helping-hand' phenomenon may be a reason for analyst recommendations.

Third, they may also have, or be willing to get, the firm whose stock they recommend as a future client. The potential overoptimism analysts at investment banks may have in such situations leading to positively biased recommendations, have been found in the overwhelming overoptimism literature (e.g. Dugar and Nathan (1995); Dechow et al. (2000); Lin and McNichols (1998); Michaely and Womack (1999); Bradshaw et al. (2003); Rajan and Servaes (1997); and Hong and Kubik (2003)). The corporate finance deals are very lucrative for the banks. Positive recommendations may increase their probability for winning these deals. As an interesting detail, Ljungqvist et al. (2003) have found that such analyst overoptimism did not increase the probability for winning future corporate-finance deals.

Fourth, they may give overoptimistic recommendations since this have been found to more often leading to a favorable job loss separation rather than being accurate in their forecasts (e.g. Hong and Kubik (2003); and Boni and Womack (2002)).

Fifth, there may be a reputational aspect involved as well; analysts would want to have a reputation as giving valuable and accurate recommendations rather than the opposite.

All above the incentives available to analysts reveal the importance to distinguish between analyst and journalist in the performance evaluation of the recommendations. Points two and three may lead to directly misleading recommendations while point five should make analysts give leading recommendations.

None of the above incentives exist for journalists. It may, nevertheless, be tempting for some of the journalists to use their informational advantage prior to publishing a recommendation to buy or sell the stock they are about to give a buy- or a sell recommendation.[4] All newspapers today require of their employees to report all their holdings and changes therein to the chief editor. There are also rules prohibiting journalists from buying a stock which they intend to buy-recommend until the article has been published. If they buy it after publication, it must be held for no less than three months if the stock increases in price. If the buy-recommended stock would fall they are, however, allowed to sell it before the three-month period has passed. All mentioned restrictions are closely related to the insider trading regulations in Sweden. Although this is the picture of how journalists must act today, it has not always been the case. Another possibility exist when a journalist may potentially earn from his/her relative informational advantage. Let us assume that the journalist did research on a certain stock and has prepared an article leading to a buy recommendation. He or she may then deliberately decide *not* to publish the recommendation, but purchasing the stock himself instead. Although journalists we have spoken to claim that this is seldom the case, it may still occur. How often, nevertheless, remains an open question.

There is yet another difference between the two groups; access to information. Analysts have access to detailed information that will not be available to journalists. They are also supported by a number of employees specialized in processing detailed information in a standardized manner. The number of man hours an analyst may put into analyzing a certain stock will obviously be higher than for a journalist who often work on a recommendation alone. Finally, because banks work closely with some firms, they will also have access to information and contacts with CEOs, CFOs, and other key employees which is not usually the case for a journalist. This informational advantage of analysts over journalists should enable them to come up with a more accurate valuation of the stock and consequently more valuable recommendations.

With the presented differences in the incentives, information and thereby possible behavior between the groups, we stress the importance to distinguish between them in the analysis of the performance of their recommendations.

3.2 Descriptive Statistics

In total, there are 6,610 stock recommendations in the Swedish newspapers and magazines during the period 1995-2004 consisting of 5,714 buy recommendations and 896 sell recommendations. Many of the recommendations concern initial public offerings and recently listed stocks (listed less than six months before publication). Since we are only interested in the value of the information contained in the recommendations of already listed companies, these recommendations are dropped. Recommendations on IPOs totals to 569 (8.6 percent of the initial sample), consisting of 524 buy recommendations (9.2 percent of the initial sample of buy's) and 45 sell recommendations (5.0 percent of the initial sample of sell's). When the recommendations on IPOs have been dropped from our initial sample, the sample consists of 5,190 buy recommendations and 851 sell recommendations. Besides documenting whether it is a buy or a sell and being from an analyst or journalist, we also gathered the following information for each individual recommendation: the market size measured as the number of outstanding shares multiplied by the share price; if there was an earnings announcement the day before, at the day of, or the day after the publication; the name of the columnist; and the employer of the columnist.

In table 1, the number of stock recommendations, and details such as: a description of type of newspaper; whether analysts or journalists give recommendations; circulation; number of issues; collaboration with other newspapers in the sample; are presented divided by each separate newspaper.

A considerable amount of the given recommendations in newspapers comes from analysts, i.e. about 27 percent of all recommendations. Analysts are very active in giving buy recommendations and less active giving sell recommendations. This fits well with the common belief that analysts tend to market positive information rather than negative. In general terms, buy recommendations are six times as common as sell's. While journalists have a tendency to quite often give sell recommendations in relation to buy's (the buy-to-sell ratio is about 5), that is certainly not the case for analysts. On every sell recommendation given by analysts, there are no less than 23 buy recommendations!

Again, speaking in general terms, *Börsveckan* and *Dagens Industri* gives recommendations of relatively small stocks whereas *Aftonbladet* and *Göteborgsposten* tend to recommend relatively large ones.

Table 2 present sample descriptives and distribution over years for recommendations divided into those from analysts and journalists.

Over the years, analysts have given relatively steadily 20-40 percent of all buy recommendations. Sell recommendations were common for analysts in relative terms in the beginning of the period but after 1998, however, analysts simply ceased with negative recommendations. The number of buy recommendations from analysts peaked during 1998, while it did so during 2000 for journalists. Although journalists had a somewhat bullish view in many stocks during the bubble-period, i.e. 1998-2000, they also increased the number of sell recommendations dramatically in 1999 and kept that level during 2000-2001 as well.

Now to the details about given recommendations. Analysts gave recommendations of larger stocks than did journalists and the difference is statistically significant, a difference coming from the relatively larger buy-recommended stocks from analysts. The first-day market-adjusted returns to buy recommendations display that the market believed more in journalist recommendations than in those from analysts. The positive reaction to buy recommendations from journalists was twice the size of analysts, but the negative reaction to sell recommendations was more than thirteen times larger. The raw one-year returns to buy recommendations is relatively high, though the market-adjusted one-year returns are just marginally above zero. The fact that buy recommendations from journalists do better than those from analysts is due to journalists frequently giving buy's to stocks performing relatively well when the market generally do poorly. When it comes to sell recommendations, those who followed analyst recommendations would actually have *lost* more than eight percentage points in their investments. Journalist sell-recommended stocks were unchanged. The market-adjusted one-year returns to sell recommendations from analysts performed better than those from journalists; analysts tended to give sell recommendations to stocks which performed worse than the market. These stocks actually increased in price, but much less than the market generally did. This can be understood by remembering that analysts gave most of their sell's when the market index increased (1995-98), whereas those from journalists were given when markets fell.

We also put buy- and sell recommendations together. Calculating the first-year market-adjusted returns, for example, we take the first-year market-adjusted return to buy-recommended stocks minus the corresponding for sell-recommended stocks. With this approach, we find journalist recommendations to perform slightly better than those of analysts. The returns are very low when compared to the return on the market.

Stock recommendations are regularly published based on information which is released directly from the company in question. Released earnings announcements, for example, may reveal new information leading to recommendations. For this reason we consider a recommendation to be given due to an upcoming or an already released earnings announcement if it was given during a period of two days before to two days after the earnings announcement. For our sample, this occurs in 235 instances (3.9 percent of the sample observations). As we have previously mentioned, recommendations are regularly repeated. We study returns up to a year after they were published. We define a repeated recommendation as one of the same type (i.e. buy or sell) that is given within a year of the previous without one with contradictory view given in between. With this definition, as many as 4,883 of our sample recommendations (80.8 percent) are repeated ones. For obvious reasons, earnings announcements is one source to repeated recommendations. In 200 of the 235 earnings-announcements given recommendations (85.1 percent), they were found to be repeated ones. This finding also fits well with the fact that stocks of large firms are often repeated and these stocks are also followed extremely well both by the printed media and analysts.

4 Empirical Results

The results presented in this section follow certain restrictions. The RRPs are formed on the stocks with the closest six-month beta-coefficient prior to the recommendation date. In addition to these results we have also formed the RRP based on 3-, 9- and 12-month betas. The results are, with minor variations, essentially the same and are therefore not presented here. The results to these calculations can be found in tables 11 and 12 of the Appendix. Furthermore, the RRPs presented here are formed on the ten percent of stocks with the closest beta coefficient to the recommended stock. We have also performed calculations where the RRPs are formed on the 5 and 15 percent of stocks with the closest beta to the recommended stock. This sensitivity check was performed only for the six-month beta calculation. Again, this alternative approach dos not alter the results and are therefore not presented her. They are nevertheless presented in tables 13 and 14, also in the Appendix-section.

Let us first begin by commenting on the RRPs. When we form the RRP for each and every recommended stock, we have saved the ticker-codes of the stocks that are to be included. This is important in order to enable an analysis of what kind of stocks will be included relative to the one recommended. A common approach in similar studies would be to present industry-adjusted returns. Industry-adjusted returns means using a sector index rather than the market index as a benchmark to each recommendation. This is appealing since stocks in the same sector tend to be facing similar risks. But it is also possible that stocks in other sectors could be facing the same risks. Furthermore, assume that a stock which is heavily weighted in a certain sector index receives a recommendation. Using the sector-index return as a benchmark would essentially mean comparing the return to the recommended stock with an index containing a large part of the return to that stock. This is a bad order. Our approach guarantees that the recommended stock will never be allowed to be included in the RRP. Also, when we analyze the stocks that are included in the RRP, we see an interesting pattern. A large majority of the included stocks actually come from the same sector industry. But far from all. The outcome will be that the RRP will include the stocks in the same sector index which explain the movements in the stock price but also stocks from other sectors explaining these movements. Finally, Stockholm stock exchange is a relatively small stock market. Using an industry-adjusted approach would become extremely sensitive to the return to a few stocks and thereby leading to incorrect results.

The buy-and-hold abnormal returns to buy recommendations are presented in table 3

[Insert table 3 about here]

In the table, we present the BHARs, not only for the RRP as a benchmark, but also for the market index. The reason for doing so is twofold. First, most studies present market-adjusted returns. Second, we take this opportunity to show how different the outcome of the results turn out to be depending on the choice of benchmark. If nothing else is said, we will focus on the RRP-adjusted returns.

The buy-recommended stocks are of stocks that did perform well during the month prior to being recommended in the newspapers. The reaction to these recommendations around, and at, the publication day is positive and statistically strong. For the first few months, there seem to be some indication that the information contained in the recommendations makes investors to value these stocks higher than they did at the publication. Over longer periods (9-12 months) this slight advantage over their peers is reversed to a disadvantage. One year after the buy recommendations were published, they have decreased by two percentage points on average relative to their peers. These figures are, nevertheless, statistically insignificant.

At this point, there are two issues that should briefly be discussed. First, when compared with the market index the buy recommendations seem impressive. They actually significantly outperform the market index on average by almost four percentage points for a year after publication. Obviously, measuring the buy-and-hold abnormal returns in this manner would lead to a completely false conclusion. Newspapers tend to give buy recommendations of relatively risky stocks. Taking into account that buy recommended stocks are riskier than the average stock leads to less an impressive performance. Second, we earlier stressed the importance of using the bootstrapped skewness-adjusted t-statistic. Using the ordinary t-statistic would lead to stronger-than realistic statistical significance. For example, the 12-month t-stat figure for buy recommendations would become statistically significant at the ten percent level instead of statistically *insignificant* at conventional levels using the skewness-adjusted t-statistic.

Table 3 also present returns to buy recommendations divided into those from analysts and journalists separately. Both analysts and journalists tend to give buy recommendations of stocks that have performed well during the month prior to the publication day. At the publication day itself, the reaction in the stock price to buy recommendations from journalists is much stronger than it is to stocks that are buy recommended by analysts. In fact, the reaction to buy recommendations from journalists is more than twice the magnitude of the reaction to analyst buy recommendations. When it comes to the post-publication returns, both analyst and journalist recommendations underperform other stocks with similar riskiness. However, during the first three months, stocks being recommended by analysts increase by more than one percentage point. One year after the recommendations were published, those from journalists underperformed by more than one percentage point whereas analyst recommendations underperformed by almost three percentage points.

The BHARs to sell recommendations are shown in table 4.

[Insert table 4 about here]

The stocks which are given a sell recommendation have increased in price relative to other stocks with the same riskiness during the month prior to the publication. The reaction to sell recommendations at the publication day is nevertheless strong and negative. These stocks decrease by two percentage points at the publication day. During the coming few months, these stocks continue to decrease; after a year they have decreased by more than ten percentage points relative to the RRP. Dividing sell recommendations from analysts and journalists, there are a few points to mention. First, sell recommendations from analysts are very seldom. Second, analysts tend to give sell recommendations to stocks that have performed poorly during the previous month whereas journalists prefer to give sell to stocks that have performed relatively well during the same period. The reaction to sell recommendations from journalists is much stronger than it is to sell recommendations from analysts; almost 20 times larger. Nevertheless, both analysts and journalists succeed in finding the loosers.

That sell recommended stocks decrease relative to other equally risky stocks does not reveal the potential profitability from acting on them. In order to profit from sell recommendations there are two prerequisites that has to be met: (1) the stocks receiving a sell recommendation has to decrease in price, and (2) it has to be possible to short the stock.

As for the first prerequisite, stocks that receive a sell recommendation surprisingly *increase* in price by two percentage points during the first year after the publication. So even if the second prerequisite was met, it would not be profitable to trade on the information in sell recommendations. Doing so would lead to a financial loss. The reason that sell recommendations seem very impressive is because other stocks increased by much more and thereby making sell-recommended stocks underperformers. As for the second prerequisite, most stocks on Stockholm stock exchange are not shortable. Therefore, sell recommendations are only to any use for current shareholders who may use them to sell these stocks and buy other stocks with the same riskiness.

4.1 Robustness

In the previous section, we found buy recommendations not to fully compensate investors for the risk they took on when following them. Although investors were not fully compensated, the results were not as weak as to say that they were misleading investors. Furthermore, sell recommendations successfully pinned down underperforming stocks. To profit from this underperformance would not be possible since the price of these stocks increased in value a year after they were published. In addition to these main findings we also stressed the importance of the t-statistic and - perhaps most importantly - the benchmark one uses when analyzing the post publication performance.

This section will discuss how these results hold over different groups and how other circumstances affect the performance of the recommendations, with an emphasis on the buy recommendations.

4.1.1 Individual newspapers

Even though buy recommendations have shown a weak performance for those who based their investment decisions upon them, there may still be individual newspapers who publish winning recommendations. We will discuss whether that is the case here as well as other issues.

The BHARs to buy- and sell recommendations in individual newspapers are shown in tables 5 and 6.

[Insert tables 5 and 6 about here]

There are several aspects of the buy recommendations from individual newspapers worth mentioning.

All newspapers give buy recommendations of stocks that increased in value prior to the publication day. Especially *Börsinsikt* and *Börsveckan* gave buy recommendations of stocks that had a healthy stock-price development before being recommended. There is a positive reaction to these recommendations at the day when the recommendations are published in the respective newspaper. For *Aktiespararen* and *Privata Affärer* this reaction is, however, statistically insignificant. The largest reaction to the published buy recommendations was found for *Börsveckan* and *Dagens Industri*. For *Dagens Industri* it was close to five percentage points. There may be two potential factors explaining this sizeable positive reaction in the stock price at the publication day. It could either be that the recommendations reveal information that was unknown to the stock market prior to the publication day or that the stock-market participants had a strong believe that a buy recommendation in *Dagens Industri* would lead to an increased stock price. When observing the post-recommendation performance to these recommendations it is evident that the latter explanation seems the more appealing. There was no information revealed in these recommendations that made the stock market reevaluate the price of these stocks, i.e. the reaction on the publication day was seemingly an overreaction.

During the post-recommendation period the buy recommendations from most newspapers underperform their benchmark. In all instances but for *Aftonbladet* this is insignificantly so. Those who followed the buy recommendations from that newspaper would have been compensated with a return of −15.72 percent (with a t-value of −3.04). The return to buy's from *Expressen* was even worse in economic terms, −17.22 percent, but statistically insignificant. So the two tabloids present by far the worst buy recommendations.

No newspaper present buy recommendations that would have been profitable to follow although those who followed buy recommendations from Börsveckan would have earned a substantial return.

If we look at the sell recommendations in table 6 we see that there was a strong negative reaction at the publication day to sell recommendations in all newspapers. Again, the strongest reaction was to the recommendations in *Dagens Industri* but as for buy recommendations in that newspaper, stock prices bounces back. For buy recommended stocks it seemed to be due to an overreaction, but here it is because a single recommendation went all wrong. On January 25 1999 *Dagens Industri* recommended their readers to sell off their stocks in Icon Medialab. During the coming year, however, the share price rocketed by no less than 985 percent. They would, however, turn out to be correct in their judgement in the longer run. After two years from the publication day of the recommendation the price had decreased by 42 percent.

So, the sell-recommended stocks has a negative price reaction at the publication day followed by further decreasing prices. Even that this is the case, only the sell recommendations from *Aftonbladet* would have been profitable to act on over the first post-publication year. In contrast with the stocks being given a sell recommendation in other newspapers, these also experience a decrease in absolute value. More than half of these stocks decrease in value and on average they decrease with 14 percentage points. If it would be possible to short these stocks in practice, an investor could earn a handsome return from acting on them.

To conclude: buy recommendations show a bad post-publication performance and the worst ones can be found in *Aftonbladet*; and sell recommendations show a good performance and the best ones can also be found in *Aftonbladet*.

Taking away *Aftonbladet* in the analysis would lead to an improvement in the performance of buy's and a worse performance of sell's. Buy recommendations would still trail the risk replicating portfolio by almost one percentage point whereas the underperformance of sell recommended stocks would shrink to roughly four percentage points.

4.1.2 Individual columnists

Are there any individual columnists who underperform or overperform the RRP? The BHARs to recommendations from successful and unsuccessful columnists are displayed in table 7.

[Insert table 7 about here]

Let us begin by discussing the successful columnists, i.e. columnists 1 through 3. In order to find the successful and unsuccessful columnists we gathered and analyzed columnists giving at least 30 buy recommendations during the sample period. To be honest, very few of the 208 columnists give more than 30 buy recommendations. It is a common scenario that the most unsuccessful columnists can be found among those who give only a few recommendations.

Columnist 1 was the one giving most buy's in our sample; 317 in total. One year after the buy recommendations from this columnist were given, they had gained over 13 percent relative stocks with equal riskiness. With much less number of recommendations, the buy's from columnist 2 (41 recommendations) and columnist 3 (30 recommendations) lead to BHARs of 21 and 34 percent a year after being published.

There are, obviously, individual columnists who succeed in giving buy recommendations who beat the the appropriate benchmark. But as we can see from the recommendations from columnists 4 through 8, the opposite is also true.

This sad group of five individual columnists really underperform the benchmark by far. The underperformance a year after being published ranges from 8 to 37 percent. One can also see that the market does not react to these recommendations significantly positively at the publication day, contrary to buy recommendations in general.

If we were to drop the buy recommendations from the successful columnists, the one-year BHARs would decrease to -3.31 percent (with a t-value of -2.29). If we would also drop the underperforming columnists, the same figure would be -2.33 percent (with a t-value of -1.56).

4.1.3 Unique and repeated recommendations

It is often the case that recommendations are repeated; more often rule than exception. In order to get a picture of which recommendations are repeated and which ones are not, we reasoned in the following way. If a stock is given a buy recommendation in one newspaper and in less than one year is given another buy in the same or another newspaper without a sell in between, the second buy is considered a repeated one. For a series of buy recommendations of the same stock without a sell recommendation in between and less than a year between each of them, all but the first one is considered repeated.

There are two reasons why this is important. First, subsequent recommendations are given with the recent ones in mind. But our approach assumes that recommendations are independent. We have chosen one year between the same recommendation for defining which recommendations are repeated ones and which are not; this is the horizon on which we analyze the BHARs. Therefore, if the distance between two recommendations without a sell in between, they should be independent from each other. Based on these simple criteria about 86 percent (4,455 out of 5,190) of all buy recommendations were repeated ones.

The BHARs to unique and repeated buy recommendations are shown in table 8.

[Insert table 8 about here]

We can see that unique buy recommendations are of stocks that increased much prior to being recommended, much more than repeated buy-recommended stocks. The unique recommendations also experience a much stronger reaction at in the days surrounding the publication as well as the publication day itself. The reaction at the publication day was more than three times the size for unique recommendations relative to repeated ones. Unique buy recommendations beat the risk-replicating portfolio by almost 7 percent a year after it was given. Repeated buy recommendations, on the other hand, lost to the risk-replicating portfolio by more than 3 percent. The 10-percent difference between the two is statistically significant. The 10-percent difference between unique and repeated buy recommendations from journalists is also statistically significant but not the same difference between analyst's recommendations.

Analysts give 8 repeated recommendation for every new recommendation whereas the same relationship is 5.5 for journalists. This is actually not so surprising. In their daily work, the most important clients for analysts are institutional investors, i.e. mutual funds and insurance companies. These clients are not interested in smaller companies because of the rules they must follow. Consequently they are more interested in investing in larger firms. Therefore analysts aim at analyzing larger firms. Also, repeated recommendations are naturally more common in larger firms because more journalists and analysts follow them than smaller firms.

4.1.4 Earnings announcements

Stock recommendations are often given in connection to recent earnings announcements. We define a recommendation to be driven or influenced by an earnings announcement if it was given at the day before, at the same day, or the day after the announcement. In our sample period about 4 percent (207 of 5,190 recommendations) of all buy recommendations were driven by an earnings announcement.

The BHARs to buy recommendations driven by positive earnings announcements are shown in table 8.

As we can see, the one-year post-publication BHAR to buy recommendations driven by an earnings announcement is positive, but insignificantly so.

4.1.5 Years

The BHARs to buy recommendations over year of recommendation are shown in table 9.

[Insert table 9 about here]

We can see that during some years buy recommendations did better (1996, 1997, 2000 and 2001), and during some years worse (1999 and 2003). The many recommendations during 1999 did exceptionally much worse than during any other individual year. Excluding these recommendations from the analysis, the buy recommendations from the other years did actually beat the RRP by 3.76 percent.

4.1.6 Firm size

We also divided buy recommendations into different groups based on market capitalization of the recommended firm. We classified firms as either 'small', 'medium' or 'large'. As of July 1, a small firm at the Stockholm stock exchange is defined as one with a market capitalization less than 150 million euro, a medium-sized firm as one between 150 and 1,000 million euro, and a large firm is one with a market capitalization above 1,000 million euro. We then converted these figures to Swedish kronor (SEK). A large firm on July 1 would then be a firm larger than 9,224 million SEK. For the sake of dividing firms into different size categories, we adjusted the market capitalization for the stock-market development for earlier periods. Using that approach a large firm in the beginning of 1995 was a firm with a market capitalization above 2,602 million SEK.

The BHARs to buy recommendations over different size groups are shown in table 10.

[Insert table 10 about here]

Buy recommendations are fairly evenly distributed between small (31 percent), medium (32) and large (37) firms. Buy recommendations of small-firm stocks perform much better than the RRP, whereas recommendations of medium- and large-sized stocks underperform the same benchmark. A year after these buy recommendations were published they outperformed those of medium-sized stocks by more than 8 percentage points and large-sized stocks by more than 12 percentage points. Journalists succeed in finding the winners among small firms whereas analysts fail totally with medium-sized firms and both analysts and journalists fail with large-sized firms.

4.1.7 Outliers

In every sample outliers will exist. To what extent does outliers here affect or change or findings? Recommendations with extreme abnormal returns are a part of reality. But these extreme occasions may be an outcome of an individual newspaper or columnist being pure lucky or unlucky. So when we draw our conclusions concerning the potential value of the recommendations for a reader, these may be depending heavily on a few observations. By filtering out these most extreme observations, we may draw more reliable conclusions, free from lucky or unlucky recommendations.

5 Summary and Conclusions

T.B.W.

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Tables and Figures

Table 1: **Descriptive statistics over the distribution of stock recommendations by newspapers in Sweden for the period 1995-2004.** For buy-, sell and all recommendations combined, this table presents the number of recommendations and in parentheses the percentage of such coming from analysts. The size of recommended stocks are presented in SEK billion and calculated as the number of outstanding shares multiplied by the stock price at the recommendation date. Standard deviation of size is presented in parentheses, also in SEK billion. We define an analyst as someone employed by a bank, brokerage firm or other employer having customers with an interest in the stock markets; and a journalist as someone employed by a newspaper to write articles. Abbreviations: AFV = *Affärsvärlden*; AB = *Aftonbladet*; AS = *Aktiespararen*; BI = *Börsinsikt*; BV = *Börsveckan*; DI = *Dagens Industri*; EXP = *Expressen*; FT = *Finanstidningen*; GP = *Göteborgsposten*; PA = *Privata Affärer*; VA = *Veckans Affärer*; BM = Business magazine; T = Tabloid; TBM = Trading-based magazine; BD = Business daily; MN = Morning newspaper; A = Analyst; and J = Journalist. Figures for circulation has been taken from Tidningsstatistik AB and the number of readers for each issue comes from Sifo Media.

	Buy		Sell		All		Description of newspapers					
Newspaper	No. of rec. (% analysts)	Size (s.d.)	No. of rec. (% analysts)	Size (s.d.)	No. of rec. (% analysts)	Size (s.d.)	Type	Who	No. of issues	Circ.	Readers	Coll.
AFV	596	22 (55)	218	30 (121)	814	24 (78)	BM	J	41/y	18,400	108,000	No
AB	388 (37)	75 (207)	239 (15)	21 (46)	627 (29)	54 (167)	T	A/J	7/w	444,100	1,444,000	BV/FT/VA
AS	217	21 (48)	6	3 (4)	223	20 (47)	BM	J	11/y	78,600	154,000	No
BI	704 (100)	17 (81)	16 (100)	17 (81)	720 (100)	14 (69)	TBM	A	45/y	1,000	n/a	No
BV	608	12 (35)	39	17 (55)	647	12 (36)	TBM	J	42/y	2,200	n/a	No
DI	222	7 (22)	50	1 (2)	272	6 (20)	BD	J	6/w	116,700	434,000	No
EXP	110	24 (49)	20	12 (25)	130	22 (46)	T	J	7/w	342,100	1,187,000	AFV
FT	336	22 (103)	80	23 (43)	416	22 (94)	BD	J	6/w	38,300	184,000	No
GP	576 (100)	67 (165)	0	-	576 (100)	67 (165)	MN	A	7/w	246,000	577,000	No
PA	731 (17)	33 (112)	2	4 (5)	733 (17)	33 (112)	BM	A/J	11/y	90,800	266,000	BI/BV
VA	702 (5)	27 (108)	181 (10)	24 (61)	883 (6)	27 (100)	BM	A/J	44/y	32,700	128,000	No
Totals	**5,190 (30)**	**31 (110)**	**851 (8)**	**23 (74)**	**6,041 (27)**	**30 (106)**						

Table 2: **Descriptive statistics of buy- and sell recommendations in Swedish printed media for the period 1995-2004.** In the upper half of the table, the number of buy- and sell recommendations are displayed as divided into those from analysts and those from journalists and how they are spread over the sample period. For each row by years, the number of recommendation from each group is followed by the percentage of the total of recommendations for that group and year. In the second part of the table, we display (in order of appearance): the number of recommended stocks; average number of recommendations per stock; average size (measured as the market capitalization at the recommendation date) of recommended stocks; standard deviation of size; first-day market-adjusted returns in percentage points; first-year raw returns in percentage points; and first-year market-adjusted returns in percentage points. Returns for all recommendations have been calculated as the returns to buy-recommended stocks minus the return to sell-recommended stocks, i.e. the return an investor would get from going long in buy-recommended and short in sell-recommended stocks.

	Buy			Sell			All		
Year	Analysts	Journalists	Total	Analysts	Journalists	Total	Analysts	Journalists	Total
1995	63 (25)	191 (75)	254	10 (100)	- (0)	10	73 (28)	191 (72)	264
1996	81 (31)	179 (69)	260	10 (38)	16 (62)	26	91 (32)	195 (68)	286
1997	158 (40)	236 (60)	394	28 (56)	22 (44)	50	186 (42)	258 (58)	444
1998	264 (40)	390 (60)	654	9 (16)	47 (84)	56	273 (38)	437 (62)	710
1999	208 (28)	524 (72)	732	8 (6)	149 (94)	157	216 (24)	673 (76)	889
2000	190 (24)	600 (76)	790	1 (1)	139 (99)	140	191 (21)	739 (79)	930
2001	146 (24)	475 (76)	621	2 (1)	161 (99)	163	148 (19)	636 (81)	784
2002	129 (31)	283 (69)	412	- (0)	65 (100)	65	129 (27)	348 (73)	477
2003	162 (32)	349 (68)	511	1 (1)	87 (99)	88	163 (27)	436 (73)	599
2004	181 (32)	381 (68)	562	2 (2)	94 (98)	96	183 (28)	475 (72)	658
Totals	**1,582 (30)**	**3,608 (70)**	**5,190**	**71 (8)**	**780 (92)**	**851**	**1,653 (27)**	**4,388 (73)**	**6,041**
No. of rec. stocks	300	422	444	47	263	269	311	445	466
Av. no./stock	5.3	8.5	11.7	1.5	3.0	3.2	5.3	9.9	13.0
Av. size	40	27	31	24	22	23	39	26	30
Std. of size	126	102	110	44	74	68	124	98	106
First-day adj. ret. (%)	0.77	1.71	1.42	-0.15	-2.10	-1.94	-	-	-
Raw first-year ret. (%)	18.05	16.84	17.20	8.51	0.09	0.82	16.87	13.92	14.71
First-year adj. ret. (%)	0.99	3.82	2.98	-19.04	-7.84	-8.86	1.79	4.52	3.79

Table 3: **BHARs in percentage to buy recommendations before, at and after the publication.** The buy-and-hold abnormal returns are presented using two reference-portfolio measures as the expected return: (1) the simple market portfolio (M) here characterized by the SIX return index; and (2) a risk replicating portfolio (RRP). The RRP is a reference investment, or a portfolio, for each individual stock recommendation consisting of the ten percent of all listed stocks with the closest beta-coefficient (in absolute terms) to the recommended stock. The beta-coefficient is calculated for the six-month period prior to the publication day. The t-stats reported are the bootstrapped skewness-adjusted t-stats. The transformed skewness-adjusted test statistic that is employed here was developed in Johnson (1978), and can be expressed as: $t^b_{sa} = \sqrt{n_b}\left(S^b + \frac{1}{3}\hat{\gamma}^b S^{b2} + \frac{1}{6n}\hat{\gamma}^b\right)$; where both S^b and $\hat{\gamma}^b$ comes from the bootstrapping procedure. The bootstrapping procedure means that we draw 1,000 bootstrapped resamples from the sample, each having the size $n_b = n/2$. For each resample we calculate the above test statistic. The presented t-values in the tables to come are simply the average of the 1,000 resample t-values. * = significant at the 10-percent level, ** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations					
	All (N=5,190)		Analysts (N=1,582)		Journalists (N=3,608)	
Period	M	RRP	M	RRP	M	RRP
Pre $[-21;-1]$	2.90	2.36	3.42	2.96	2.68	2.10
	(7.22***)	(5.40***)	(7.94***)	(6.56***)	(4.42***)	(3.11***)
Event $[-1;1]$	2.04	1.88	1.51	1.26	2.27	2.15
	(18.94***)	(16.73***)	(7.41***)	(5.62***)	(15.82***)	(14.54***)
PD	1.48	1.41	0.82	0.75	1.77	1.71
	(16.00***)	(14.59***)	(5.30***)	(4.39***)	(14.34***)	(13.61***)
3m $[1;63]$	1.47	0.78	0.74	1.23	1.79	0.59
	(2.87***)	(1.43)	(0.99)	(1.52)	(2.76***)	(0.81)
6m $[1;126]$	1.93	0.37	-0.15	0.46	2.84	0.32
	(2.51**)	(0.38)	(-0.18)	(0.38)	(2.91***)	(0.29)
9m $[1;189]$	2.43	-1.54	0.32	-1.27	3.35	-1.66
	(2.34**)	(-1.33)	(0.20)	(-0.77)	(2.76***)	(-1.19)
12m $[1;252]$	3.79	-1.85	1.93	-2.88	4.60	-1.40
	(3.15***)	(-1.37)	(0.88)	(-1.18)	(3.27***)	(-0.87)

Table 4: **BHARs in percentage to sell recommendations before, at and after the publication.** The buy-and-hold abnormal returns are presented using two reference-portfolio measures as the expected return: the market portfolio (M); and a risk replicating portfolio (RRP). The RRP is a reference investment, or a portfolio, for each individual stock recommendation consisting of the ten percent of all listed stocks with the closest beta-coefficient (in absolute terms) to the recommended stock. The beta-coefficient is calculated for the six-month period prior to the publication day. The t-stats reported are the bootstrapped skewness-adjusted t-stats. The transformed skewness-adjusted test statistic that is employed here was developed in Johnson (1978), and can be expressed as: $t^b_{sa} = \sqrt{n_b}\left(S^b + \frac{1}{3}\hat{\gamma}^b S^{b2} + \frac{1}{6n}\hat{\gamma}^b\right)$; where both S^b and $\hat{\gamma}^b$ comes from the bootstrapping procedure. The bootstrapping procedure means that we draw 1,000 bootstrapped resamples from the sample, each having the size $n_b = n/2$. For each resample we calculate the above test statistic. The presented t-values in the tables to come are simply the average of the 1,000 resample t-values. * = significant at the 10-percent level, ** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Sell recommendations					
	All (N=851)		Analysts (N=71)		Journalists (N=780)	
Period	M	RRP	M	RRP	M	RRP
Pre $[-21;-1]$	1.63	1.14	-1.78	-1.66	1.94	1.40
	(1.20)	(0.92)	(-0.94)	(-0.95)	(1.39)	(1.02)
Event $[-1;1]$	-2.04	-2.13	0.39	0.60	-2.26	-2.37
	(-3.32***)	(-3.57***)	(0.30)	(0.60)	(-3.49***)	(-3.53***)
PD	-2.11	-2.17	-0.21	-0.12	-2.28	-2.36
	(-9.37***)	(-9.54***)	(-0.50)	(-0.25)	(-9.33***)	(-9.88***)
3m $[1;63]$	-3.78	-4.35	-4.94	-2.36	-3.67	-4.53
	(-2.25**)	(-2.60**)	(-1.87*)	(-0.83)	(-1.95*)	(-2.51**)
6m $[1;126]$	-6.03	-6.56	-6.28	-0.44	-6.01	-7.13
	(-2.42**)	(-2.70***)	(-1.10)	(-0.12)	(-2.30**)	(-2.81***)
9m $[1;189]$	-8.81	-10.99	-14.10	-15.27	-8.32	-10.60
	(-2.76***)	(-3.72***)	(-2.14**)	(-2.07**)	(-2.51**)	(-3.35***)
12m $[1;252]$	-7.90	-10.57	-19.04	-22.54	-6.87	-9.46
	(-2.24**)	(-2.93***)	(-2.31**)	(-2.14**)	(-1.84*)	(-2.43**)

Table 5: **BHARs to buy recommendations from individual newspapers.** The presented buy-and-hold abnormal returns display the returns to recommended stocks relative to the RRP formed on the 10 percent of stocks with closest beta to the recommended stock. The t-stats reported are the bootstrapped skewness-adjusted t-stats. * = significant at the 10-percent level,** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations										
	AFV (n=596)	AB (n=388)	AS (n=217)	BI (n=704)	BV (n=608)	DI (n=222)	EXP (n=110)	FT (n=336)	GP (n=576)	PA (n=731)	VA (n=702)
Period	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP
Pre $[-21;-1]$	0.31	3.22	0.28	4.55	6.91	2.18	1.04	1.59	1.18	0.99	1.17
	(0.15)	(3.29***)	(0.33)	(5.79***)	(2.20**)	(1.87**)	(-0.19)	(0.89)	(1.79*)	(1.53)	(1.52)
Event $[-1;1]$	3.09	0.75	0.00	2.10	3.11	5.20	2.71	3.24	0.51	0.50	1.51
	(7.96***)	(2.00**)	(0.30)	(4.96***)	(6.86***)	(10.71***)	(2.43**)	(6.08***)	(1.97**)	(1.83*)	(4.48***)
PD	2.00	0.63	0.42	1.27	3.00	4.74	1.10	1.70	0.26	0.53	1.16
	(3.93***)	(3.46***)	(1.47)	(3.83***)	(6.80***)	(12.49***)	(2.62**)	(5.07***)	(1.77*)	(1.26)	(5.72***)
3m $[1;63]$	0.09	-1.31	0.79	1.77	0.56	-3.54	3.33	2.11	-0.61	2.20	1.71
	(0.06)	(-0.74)	(0.31)	(1.36)	(0.39)	(-1.69*)	(-0.17)	(1.05)	(-0.49)	(1.75*)	(1.45)
6m $[1;126]$	0.76	-6.40	0.61	0.12	-0.19	-1.70	4.28	2.55	-0.36	0.86	3.48
	(0.14)	(-2.31**)	(0.17)	(0.08)	(-0.08)	(-0.42)	(-0.21)	(0.86)	(-0.13)	(0.56)	(2.01**)
9m $[1;189]$	-2.87	-17.25	3.72	-0.96	3.19	-6.15	1.93	0.94	-1.71	-1.33	1.40
	(-1.02)	(-3.82***)	(0.67)	(-0.27)	(0.98)	(-1.61)	(-0.13)	(0.23)	(-0.64)	(-0.53)	(0.42)
12m $[1;252]$	-5.62	-15.72	-0.02	0.20	5.77	-6.05	-17.22	0.03	-3.72	1.39	0.63
	(-1.50)	(-3.04***)	(-0.04)	(0.04)	(1.30)	(-1.28)	(-1.57)	(-0.06)	(-0.99)	(0.51)	(0.19)

Table 6: **BHARs to sell recommendations from individual newspapers.** The presented buy-and-hold abnormal returns display the returns to recommended stocks relative to the RRP formed on the 10 percent of stocks with closest beta to the recommended stock. The t-stats reported are the bootstrapped skewness-adjusted t-stats. * = significant at the 10-percent level,** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Sell recommendations					
	AFV (n=218)	AB (n=239)	BV (n=39)	DI (n=50)	FT (n=80)	VA (n=181)
Period	RRP	RRP	RRP	RRP	RRP	RRP
Pre $[-21;-1]$	5.20	0.48	0.70	3.18	-3.12	-0.09
	(2.06**)	(0.05)	(0.22)	(0.39)	(-1.44)	(-0.18)
Event $[-1;1]$	-2.34	-0.93	-0.90	-7.31	-2.39	-2.29
	(-2.07**)	(-1.17)	(-0.67)	(-5.61***)	(-2.96***)	(-3.34***)
PD	-3.16	-0.78	-1.96	-5.06	-2.17	-2.34
	(-5.12***)	(-2.29**)	(-2.39**)	(-5.71***)	(-3.98***)	(-5.83***)
3m $[1;63]$	-3.06	-6.98	-5.82	2.97	-6.06	-1.88
	(-1.08)	(-2.12**)	(-1.38)	(-0.11)	(-2.06**)	(-0.72)
6m $[1;126]$	-0.03	-18.20	-4.80	11.23	-6.45	-4.05
	(-0.16)	(-5.15***)	(-0.82)	(0.63)	(-1.53)	(-1.21)
9m $[1;189]$	-5.55	-27.70	-11.23	6.28	-4.93	-2.59
	(-1.15)	(-5.65***)	(-1.52)	(0.25)	(-0.78)	(-0.63)
12m $[1;252]$	-5.25	-26.86	-7.85	18.42	-5.69	-6.03
	(-0.81)	(-5.69***)	(-0.90)	(0.42)	(-0.78)	(-1.17)

Table 7: **BHARs in percentage to buy recommendations from individual columnists.** The buy-and-hold abnormal returns are presented using the RRP as a benchmark for expected return. The t-stats reported are the bootstrapped skewness-adjusted t-stats. * = significant at the 10-percent level, ** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations - individual columnists							
	Successful ones			Unsuccessful ones				
	C 1 (n=317)	C 2 (n=41)	C 3 (n=30)	C 4 (n=72)	C 5 (n=143)	C 6 (n=105)	C 7 (n=33)	C 8 (n=32)
Period	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP
Pre $[-21;-1]$	10.22	3.51	4.63	1.03	-3.56	1.92	3.47	-0.59
	(1.29)	(1.38)	(3.13***)	(0.52)	(-2.47**)	(1.40)	(1.80*)	(-0.30)
Event $[-1;1]$	1.39	0.92	3.41	0.67	1.28	0.50	0.34	0.18
	(3.03***)	(0.81)	(3.14***)	(0.74)	(2.07**)	(0.82)	(0.37)	(0.21)
PD	1.08	1.06	2.62	0.41	1.90	0.34	-0.40	0.33
	(3.20***)	(2.14**)	(2.64**)	(0.82)	(1.50)	(1.18)	(-0.13)	(0.70)
3m $[1;63]$	1.22	4.39	5.22	-2.87	-0.24	-4.93	-4.06	2.12
	(0.74)	(1.36)	(1.44)	(-1.10)	(-0.18)	(-1.66*)	(-1.35)	(0.34)
6m $[1;126]$	2.75	9.11	17.70	-5.82	-4.91	-9.56	-4.03	5.01
	(1.01)	(2.33**)	(2.67**)	(-1.53)	(-1.35)	(-2.39**)	(-0.91)	(0.52)
9m $[1;189]$	7.01	13.95	23.54	-7.71	-9.52	-13.15	-6.52	-8.28
	(1.61)	(2.56**)	(2.34**)	(-1.77*)	(-2.11**)	(-2.39**)	(-0.91)	(-0.86)
12m $[1;252]$	13.07	21.45	34.83	-8.85	-12.49	-13.66	-14.83	-37.43
	(2.05**)	(3.33***)	(2.23**)	(-1.78*)	(-2.45**)	(-1.76*)	(-2.00**)	(-1.95*)

Table 8: **BHARs in percentage to unique, repeated and earnings announcement driven buy recommendations.** The buy-and-hold abnormal returns are presented using the RRP as a benchmark for expected return. The t-stats reported are the bootstrapped skewness-adjusted t-stats. * = significant at the 10-percent level, ** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations								
	Unique			Repeated			EA-driven		
	All (N=735)	Analysts (n=176)	Journalists (n=559)	All (N=4,455)	Analysts (n=1,406)	Journalists (n=3,049)	All (N=207)	Analysts (n=54)	Journalists (n=153)
Period	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP
Pre $[-21;-1]$	7.58	6.32	7.97	1.50	2.53	1.03	2.32	-0.49	3.31
	(3.00***)	(3.10***)	(2.22**)	(5.06***)	(5.73***)	(2.47**)	(1.03)	(-0.36)	(1.17)
Event $[-1;1]$	4.58	3.88	4.79	1.44	0.94	1.67	1.73	1.48	1.94
	(9.58***)	(3.15***)	(9.26***)	(10.84***)	(4.46***)	(10.27***)	(3.21***)	(1.53)	(2.70***)
PD	3.22	1.11	3.88	1.12	0.70	1.31	1.03	1.00	1.13
	(6.82***)	(2.97***)	(6.12***)	(11.90***)	(3.73***)	(10.72***)	(2.53**)	(1.95*)	(2.16**)
3m $[1;63]$	0.95	3.95	0.00	0.75	0.89	0.69	1.79	-2.72	3.41
	(0.69)	(1.46)	(-0.03)	(1.32)	(1.04)	(0.86)	(0.82)	(-0.82)	(1.25)
6m $[1;126]$	2.82	5.92	1.85	-0.04	-0.22	0.04	2.87	-1.35	4.33
	(1.42)	(1.71*)	(0.78)	(-0.05)	(-0.20)	(0.02)	(0.97)	(-0.31)	(1.19)
9m $[1;189]$	5.05	2.61	5.82	-2.63	-1.75	-3.04	2.00	2.42	1.86
	(1.71*)	(0.45)	(1.69*)	(-2.20**)	(-0.97)	(-1.90*)	(0.39)	(0.04)	(0.35)
12m $[1;252]$	6.77	4.28	7.53	-3.27	-3.77	-3.04	3.94	12.20	1.19
	(1.99**)	(0.71)	(1.88*)	(-2.09**)	(-1.39)	(-1.67*)	(0.39)	(0.07)	(0.11)

Table 9: **BHARs to buy recommendations over years.** The presented buy-and-hold abnormal returns display the returns to recommended stocks relative to the RRP formed on the 10 percent of stocks with closest beta to the recommended stock. The t-stats reported are the bootstrapped skewness-adjusted t-stats. * = significant at the 10-percent level,** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations									
	1995 (n=254)	1996 (n=260)	1997 (n=394)	1998 (n=654)	1999 (n=732)	2000 (n=790)	2001 (n=621)	2002 (n=412)	2003 (n=511)	2004 (n=562)
Period	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP
Pre $[-21;-1]$	14.49	1.96	3.29	1.85	1.76	1.84	2.59	3.92	0.16	-0.87
	(2.06**)	(1.91*)	(3.63***)	(2.93***)	(1.82*)	(2.00**)	(3.13***)	(3.39***)	(0.18)	(-1.16)
Event $[-1;1]$	0.83	1.09	2.50	1.51	1.81	2.68	2.01	1.69	1.39	2.14
	(2.80***)	(2.17**)	(4.22***)	(5.01***)	(6.25***)	(7.77***)	(4.93***)	(3.59***)	(3.65***)	(4.84***)
PD	1.60	0.93	1.31	0.94	1.11	1.52	2.01	1.14	1.24	2.13
	(2.16**)	(3.50***)	(5.26***)	(4.98***)	(5.80***)	(7.91***)	(4.87***)	(3.63***)	(2.54**)	(4.55***)
3m $[1;63]$	1.16	0.09	4.34	2.74	-7.17	3.60	4.78	3.54	-4.25	0.68
	(0.84)	(0.02)	(3.13***)	(2.15**)	(-2.84***)	(3.37***)	(4.50***)	(1.90**)	(-3.31***)	(0.56)
6m $[1;126]$	0.72	2.46	5.87	2.19	-16.50	6.92	6.40	4.17	-5.28	1.37
	(0.36)	(0.99)	(2.47**)	(1.39)	(-3.05***)	(5.13***)	(4.55***)	(2.28**)	(-1.99**)	(0.85)
9m $[1;189]$	-0.73	4.66	10.05	4.60	-34.77	7.40	9.06	0.70	-7.26	1.86
	(-0.27)	(1.34)	(2.78***)	(2.16**)	(-5.21***)	(4.81***)	(5.05***)	(0.30)	(-2.00**)	(0.73)
12m $[1;252]$	1.10	8.03	12.41	3.02	-37.47	6.58	9.41	-0.93	-8.52	2.75
	(0.37)	(1.65*)	(2.86***)	(0.96)	(-4.85***)	(4.08***)	(4.80***)	(-0.35)	(-2.12**)	(0.69)

Table 10: **BHARs in percentage to buy recommendations divided into size groups.** The buy-and-hold abnormal returns are presented using the RRP as a benchmark for expected return. The division of buy recommended firms into different size groups follow the definition from Stockholm Stock Exchange as of October 2 2006. A stock was considered as small if the market capitalization was less than 150 million euro, a medium-sized stock between 150 and 1,000 million euro, and large ones those larger than 1,000 million euro. These figures were then converted to Swedish kronor (SEK). In order to get an estimate of today's market value of a stock traded in, say, 1995 we have adjusted it for the return on the main index of Stockholm Stock Exchange. This means that, for example, a large firm in 1995 was one with a market capitalization larger than 2,602 million SEK. The t-stats reported are the bootstrapped skewness-adjusted t-stats. * = significant at the 10-percent level, ** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations								
	Small			Medium			Large		
	All (N=1,577)	Analysts (n=432)	Journalists (n=1,145)	All (N=1,676)	Analysts (n=454)	Journalists (n=1,222)	All (N=1,937)	Analysts (n=696)	Journalists (n=1,241)
Period	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP	RRP
Pre $[-21; -1]$	3.73	6.05	2.85	1.58	2.17	1.36	1.93	1.54	2.14
	(5.15***)	(5.04***)	(3.06***)	(3.59***)	(2.95***)	(2.36**)	(1.47)	(2.73***)	(0.31)
Event $[-1; 1]$	4.12	3.05	4.52	1.61	1.22	1.76	0.29	0.18	0.36
	(12.59***)	(4.61***)	(11.32***)	(9.28***)	(3.94***)	(8.48***)	(2.29**)	(0.81)	(2.30**)
PD	3.08	1.80	3.56	1.22	0.73	1.41	0.22	0.10	0.29
	(11.06***)	(3.44***)	(10.31***)	(5.96***)	(4.32***)	(5.02***)	(3.12***)	(0.76)	(3.39***)
3m [1; 63]	3.23	4.78	2.65	0.44	0.10	0.56	-0.91	-0.24	-1.28
	(3.07***)	(2.67***)	(2.07**)	(0.40)	(0.10)	(0.33)	(-1.40)	(-0.22)	(-1.55)
6m [1; 126]	3.64	5.17	3.06	-0.86	-3.08	-0.03	-1.23	-0.16	-1.83
	(2.23**)	(1.95*)	(1.55)	(-0.60)	(-1.55)	(-0.25)	(-1.20)	(-0.10)	(-1.47)
9m [1; 189]	4.58	6.01	4.06	-2.41	-6.09	-1.03	-5.73	-2.56	-7.48
	(2.17**)	(1.56)	(1.58)	(-1.24)	(-2.14**)	(-0.49)	(-3.74***)	(-1.14)	(-3.77***)
12m [1; 252]	5.74	7.51	5.09	-2.86	-7.16	-1.24	-7.00	-6.29	-7.40
	(2.14**)	(1.36)	(1.70*)	(-1.21)	(-2.00**)	(-0.49)	(-3.71***)	(-2.00**)	(-3.19***)

Notes

[1]Beta (β) is then calculated in the following way using six months of daily data: $\beta = [Cov(r_i, r)]/[Std(r)]$; where r_i is the daily return to any stock (except the one which is given a recommendation) and r is the return to the recommended stock.

[2]The *new listing* bias arises because the reference portfolio usually contain new firms; the *rebalancing* bias arises because the compounded return on the reference portfolio are calculated assuming periodic rebalancing while returns on the sample firms are compounded without rebalancing; and *skewness* bias arises because the distribution of long-run abnormal stock returns is positively skewed.

[3]It was found in Lyon et al. (1999) that a size of $n/2$ gives well-specified inferences.

[4]This is very uncommon in Sweden, though there have been cases where persons acting as journalists have acted in this way. For example, a columnist working for *Dagens Industri*, was discovered to have been actively trading in stocks while at the same time given recommendations in the newspaper to the readers. When interviewed about it, he told media that he actively traded in stocks since he wanted to author a book about daytrading and thereby wanted to practice it before writing a book about it. *Dagens Industri* cleared him from all suspicion since they found no obvious pattern in his trades with the recommendations. He quit working as a columnist at *Dagens Industri* after this incident but has since returned. He no longer make trades in stocks.

Appendix

A Risk replicating portfolio abnormal returns for varying beta-calculations

Table 11: **BHARs to buy recommendations for varying beta calculation horizons of the RRP.** The presented buy-and-hold abnormal returns have been calculated when beta for the risk replicating portfolio have been calculated for 3, 6, 9 and 12 months prior to the recommendation date. * = significant at the 10-percent level,** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations											
	All (N=5,190)				Analysts (N=1,582)				Journalists (N=3,608)			
Period	RRP^3	RRP^6	RRP^9	RRP^{12}	RRP^3	RRP^6	RRP^9	RRP^{12}	RRP^3	RRP^6	RRP^9	RRP^{12}
Pre $[-21;-1]$	2.35	2.36	2.18	2.05	3.00	2.96	3.03	2.77	2.06	2.10	1.81	1.75
	(5.60***)	(5.40***)	(4.97***)	(4.45***)	(6.92***)	(6.56***)	(6.58***)	(5.75***)	(3.17***)	(3.11***)	(2.57**)	(2.32**)
Event $[-1;1]$	1.93	1.88	1.70	1.82	1.45	1.26	1.13	1.36	2.14	2.15	1.95	2.02
	(17.67***)	(16.73***)	(13.69***)	(15.52***)	(6.92***)	(5.62***)	(4.69***)	(5.85***)	(14.79***)	(14.54***)	(11.85***)	(12.85***)
PD	1.35	1.41	1.30	1.30	0.73	0.75	0.65	0.64	1.62	1.71	1.58	1.58
	(14.11***)	(14.59***)	(12.23***)	(11.83***)	(4.55***)	(4.39***)	(3.82***)	(3.66***)	(12.68***)	(13.61***)	(11.48***)	(11.10***)
3m $[1;63]$	0.67	0.78	0.83	0.36	0.57	1.23	1.06	0.48	0.71	0.59	0.74	0.31
	(1.21)	(1.43)	(1.61)	(0.59)	(0.69)	(1.52)	(1.29)	(0.49)	(1.05)	(0.81)	(1.07)	(0.32)
6m $[1;126]$	-0.34	0.37	-0.09	-0.50	-0.55	0.46	-0.84	-1.26	-0.25	0.32	0.24	-0.17
	(-0.44)	(0.38)	(-0.16)	(-0.49)	(-0.47)	(0.38)	(-0.64)	(-0.87)	(-0.21)	(0.29)	(0.15)	(-0.11)
9m $[1;189]$	-1.07	-1.54	-1.36	-0.24	-0.81	-1.27	-1.52	-0.78	-1.18	-1.66	-1.29	-0.01
	(-0.94)	(-1.33)	(-1.15)	(-0.24)	(-0.50)	(-0.77)	(-0.76)	(-0.45)	(-0.82)	(-1.19)	(-0.93)	(0.04)
12m $[1;252]$	-1.13	-1.85	-1.58	-0.74	-1.08	-2.88	-3.53	-3.25	-1.15	-1.40	-0.74	0.33
	(-0.87)	(-1.37)	(-1.11)	(-0.49)	(-0.46)	(-1.18)	(-1.36)	(-1.19)	(-0.74)	(-0.87)	(-0.48)	(0.23)

Table 12: **BHARs to sell recommendations for varying beta calculation horizons of the RRP.** The presented buy-and-hold abnormal returns have been calculated when beta for the risk replicating portfolio have been calculated for 3, 6, 9 and 12 months prior to the recommendation date. * = significant at the 10-percent level,** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed *t*-test.

	Sell recommendations											
	All (N=851)				Analysts (N=71)				Journalists (N=780)			
Period	RRP^3	RRP^6	RRP^9	RRP^{12}	RRP^3	RRP^6	RRP^9	RRP^{12}	RRP^3	RRP^6	RRP^9	RRP^{12}
Pre $[-21;-1]$	0.63	1.14	0.15	-0.25	-1.20	-1.66	-1.82	-1.59	0.80	1.40	0.33	-0.12
	(0.47)	(0.92)	(0.10)	(-0.35)	(-0.65)	(-0.95)	(-0.95)	(-0.87)	(0.57)	(1.02)	(0.26)	(-0.13)
Event $[-1;1]$	-2.19	-2.13	-2.71	-2.36	0.34	0.60	0.40	0.60	-2.42	-2.37	-2.99	-2.63
	(-3.68***)	(-3.57***)	(-5.00***)	(-4.42***)	(0.34)	(0.60)	(0.43)	(0.53)	(-3.70***)	(-3.53***)	(-5.09***)	(-4.69***)
PD	-2.17	-2.17	-2.28	-2.20	-0.11	-0.12	-0.15	-0.18	-2.36	-2.36	-2.48	-2.39
	(-9.79***)	(-9.54***)	(-9.84***)	(-9.08***)	(-0.26)	(-0.25)	(-0.29)	(-0.37)	(-9.99***)	(-9.88***)	(-10.26***)	(-9.10***)
3m $[1;63]$	-3.85	-4.35	-5.16	-4.36	-1.41	-2.36	-2.96	-1.23	-4.07	-4.53	-5.36	-4.66
	(-2.18**)	(-2.60**)	(-3.44***)	(-2.70***)	(-0.55)	(-0.83)	(-1.04)	(-0.43)	(-2.23**)	(-2.51**)	(-3.32***)	(-2.76***)
6m $[1;126]$	-7.85	-6.56	-8.31	-6.83	-0.83	-0.44	-3.87	-0.31	-8.50	-7.13	-8.72	-7.45
	(-3.18***)	(-2.70***)	(-3.42***)	(-2.76***)	(-0.16)	(-0.12)	(-0.65)	(-0.10)	(-3.23***)	(-2.81***)	(-3.25***)	(-2.90***)
9m $[1;189]$	-10.22	-10.99	-12.51	-11.75	-15.01	-15.27	-14.68	-9.40	-9.78	-10.60	-12.31	-11.97
	(-3.53***)	(-3.72***)	(-4.30***)	(-4.05***)	(-2.07**)	(-2.07**)	(-2.10**)	(-1.46)	(-3.18***)	(-3.35***)	(-4.03***)	(-3.89***)
12m $[1;252]$	-11.10	-10.57	-12.05	-10.92	-23.50	-22.54	-13.85	-10.68	-9.95	-9.46	-11.88	-10.95
	(-3.16***)	(-2.93***)	(-3.68***)	(-3.44***)	(-2.32**)	(-2.14**)	(-1.60)	(-1.32)	(-2.68***)	(-2.43**)	(-3.48***)	(-3.28***)

Table 13: **BHARs to buy recommendations for various compositions of the RRP.** The presented buy-and-hold abnormal returns display the returns to recommended stocks relative to the RRP. This portfolio is constructed in three different settings for each category of recommendations: 5, 10 and 15 percent of the stocks with the closest beta are included in these three different RRPs. * = significant at the 10-percent level,** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Buy recommendations								
	All (N=5,190)			Analysts (N=1,582)			Journalists (N=3,608)		
Period	$RRP^{6,5\%}$	$RRP^{6,10\%}$	$RRP^{6,15\%}$	$RRP^{6,5\%}$	$RRP^{6,10\%}$	$RRP^{6,15\%}$	$RRP^{6,5\%}$	$RRP^{6,10\%}$	$RRP^{6,15\%}$
Pre $[-21;-1]$	2.15	2.36	2.32	2.92	2.96	2.88	1.81	2.10	2.07
	(4.58***)	(5.40***)	(5.35***)	(6.06***)	(6.56***)	(6.49***)	(2.44**)	(3.11***)	(3.13***)
Event $[-1;1]$	1.65	1.88	1.79	1.08	1.26	1.19	1.90	2.15	2.05
	(11.81***)	(16.73***)	(15.62***)	(4.34***)	(5.62***)	(5.44***)	(10.20***)	(14.54***)	(13.51***)
PD	1.33	1.41	1.38	0.66	0.75	0.69	1.64	1.71	1.69
	(11.92***)	(14.59***)	(14.18***)	(3.53***)	(4.39***)	(4.25***)	(11.28***)	(13.61***)	(13.07***)
3m $[1;63]$	0.50	0.78	0.69	1.34	1.23	1.16	0.14	0.59	0.48
	(0.81)	(1.43)	(1.27)	(1.61)	(1.52)	(1.49)	(0.12)	(0.81)	(0.62)
6m $[1;126]$	-0.65	0.37	-0.16	-0.02	0.46	-0.14	-0.92	0.32	-0.17
	(-0.74)	(0.38)	(-0.19)	(0.02)	(0.38)	(-0.09)	(-0.70)	(0.29)	(-0.14)
9m $[1;189]$	-1.92	-1.54	-1.37	-1.03	-1.27	-0.77	-2.30	-1.66	-1.63
	(-1.51)	(-1.33)	(-1.23)	(-0.57)	(-0.77)	(-0.44)	(-1.43)	(-1.19)	(-1.17)
12m $[1;252]$	-1.64	-1.85	-1.70	-2.60	-2.88	-2.98	-1.29	-1.40	-1.14
	(-1.14)	(-1.37)	(-1.22)	(-0.95)	(-1.18)	(-1.22)	(-0.74)	(-0.87)	(-0.72)

Table 14: **BHARs to sell recommendations for various compositions of the RRP.** The presented buy-and-hold abnormal returns display the returns to recommended stocks relative to the RRP. This portfolio is constructed in three different settings for each category of recommendations: 5, 10 and 15 percent of the stocks with the closest beta are included in these three different RRPs. * = significant at the 10-percent level,** = significant at the 5-percent level, and *** = significant at the 1-percent level using a two-tailed t-test.

	Sell recommendations								
	All (N=851)			Analysts (N=71)			Journalists (N=780)		
Period	$RRP^{6,5\%}$	$RRP^{6,10\%}$	$RRP^{6,15\%}$	$RRP^{6,5\%}$	$RRP^{6,10\%}$	$RRP^{6,15\%}$	$RRP^{6,5\%}$	$RRP^{6,10\%}$	$RRP^{6,15\%}$
Pre	1.03	1.14	1.16	-1.48	-1.66	-1.58	1.26	1.40	1.40
$[-21;-1]$	(0.75)	(0.92)	(0.91)	(-0.85)	(-0.95)	(-0.86)	(0.84)	(1.02)	(1.02)
Event	-2.26	-2.13	-2.20	0.56	0.60	0.54	-2.52	-2.37	-2.45
$[-1;1]$	(-3.69***)	(-3.57***)	(-3.57***)	(0.59)	(0.60)	(0.55)	(-3.75***)	(-3.53***)	(-3.70***)
PD	-2.23	-2.17	-2.26	-0.24	-0.12	-0.10	-2.41	-2.36	-2.46
	(-9.71***)	(-9.54***)	(-9.97***)	(-0.46)	(-0.25)	(-0.23)	(-9.67***)	(-9.88***)	(-9.99***)
3m	-4.63	-4.35	-4.92	-2.13	-2.36	-2.24	-4.86	-4.53	-5.17
$[1;63]$	(-2.73***)	(-2.60**)	(-2.86***)	(-0.77)	(-0.83)	(-0.83)	(-2.73***)	(-2.51**)	(-2.76***)
6m	-7.97	-6.56	-7.59	-5.75	-0.44	-2.60	-8.18	-7.13	-8.06
$[1;126]$	(-3.16***)	(-2.70***)	(-3.09***)	(-0.73)	(-0.12)	(-0.44)	(-3.08***)	(-2.81***)	(-3.04***)
9m	-11.07	-10.99	-10.59	-19.35	-15.27	-14.51	-10.30	-10.60	-10.23
$[1;189]$	(-3.65***)	(-3.72***)	(-3.42***)	(-1.84**)	(-2.07**)	(-1.99*)	(-3.25***)	(-3.35***)	(-3.16***)
12m	-11.49	-10.57	-11.05	-15.75	-22.54	-14.88	-11.10	-9.46	-10.70
$[1;252]$	(-3.20***)	(-2.93***)	(-3.08***)	(-1.75**)	(-2.14**)	(-1.84*)	(-2.89***)	(-2.43**)	(-2.79***)