

Stock Recommendations in Swedish Printed Media: Leading or Misleading?

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ABSTRACT *This paper analyses the initiated and changed recommendations published in six well-known Swedish newspapers and business magazines for the period 1996–2000 using a buy-and-hold abnormal returns (BHARs) approach. The results distinguish between recommendations from analysts and journalists. Buy recommendations were misleading investors, whereas sell recommendations were leading them correctly, overall yielding returns in line with the market. This asymmetry is due to positive information from the management of the company being more intricate to interpret than negative. Both good and bad information provided by the management is generally positively biased, a phenomenon influencing both analyst and journalist recommendations. Following buy and sell recommendations from analysts yielded BHARs in line with those from journalists, which in turn generates returns in line with their peers. Going short in the recommended stocks, irrespective of type and origin, would lead to a 24-month BHAR of 14%.*

KEY WORDS: Stock recommendations, EMH, printed media, initiations, information asymmetry

1. Introduction

Buy and sell recommendations by financial analysts and journalists are regularly published in newspapers and business magazines, and many investors rely upon such investment advice. Recent scandals in the financial industry have unfortunately put their trust in doubt. It is therefore of primary interest to evaluate whether such advice has any real long-term value. Many of the recommendations that surface in the printed media are nothing other than reiterations of previous recommendations, often of the same journalist or analyst published in the same source.

This paper studies the post-publication performance of *new* buy and sell recommendations published in Swedish newspapers and business magazines during the period 1996–2000. This approach not only drastically reduces the otherwise common problem with overlapping returns, but also enables us to judge the stock-picking skills of those behind the recommendations.

It has been suggested that stock recommendations in newspapers and business magazines would be profitable for investors to follow (Desai *et al.* 2000). Other studies claim the opposite, concluding that markets are (at least) semi-strong efficient (Liang, 1999; Mathur and Waheed, 1995; and Muradoğlu and Yazici, 2002). Prior studies have nevertheless failed to establish whether or not abnormal profits could be made based on this kind of investment advice, and why buy

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recommendations have no investment value while sell recommendations have. We try to bring clarity to the issue by answering whether stock recommendations in Swedish printed media are leading investors or if they are misleading them. Unfortunately, there are few long-term performance studies on published stock recommendations in newspapers and business magazines, and previous long-term performance research has mainly addressed stock recommendations in other sources.¹

The competition among newspapers and business magazines is fierce to sell as many single copies as possible. More than 80% of the population in Sweden were stockholders, either directly or indirectly via a mutual fund, in the year of 2000.² To publish stock recommendations was therefore a way for them to attract additional subscribers. Publishing stock recommendations is nevertheless a sensitive task for newspapers and business magazines since they may receive future critique from investors who lost money from following them. Some would even go as far as arguing that newspapers and business magazines bear a part of the responsibility for the 'bubble' that occurred on stock markets during the latter half of the 1990s. With ever-increasing stock prices, some analysts and journalists kept on recommending so-called dot-com firms, and as we know, prices eventually became unrealistically high for a majority of these stocks.

Most studies in this area have been conducted on the considerably larger US stock markets. The Swedish stock market should be appealing to researchers since it is much smaller with a more limited number of actors, and because its concentration of telecommunication and internet companies.³ About a third of the total market share was in the possession of foreign owners during the studied period. Compared with the fraction of US equities held by foreign investors, which was 12% in June 2002, foreign ownership is about three times as common on the Swedish stock markets. Figure A.1 of the Appendix shows how market share is divided between Swedish and foreign ownership during the period 1982 and 2002. For the US numbers, see Bertaut and Griever (2004).

Short-term abnormal returns from stock recommendations in Swedish newspapers and business magazines were previously studied in Lidén (2005). Sell recommendations were found to generate a statistically significant negative cumulative abnormal return for the 20 post-publication days; recommendations from journalists had a larger impact, on and around the announcement day, than those from analysts; the most positive buy recommendations were published during weekdays, whereas the most negative sell recommendations were published during weekends.

The results of this study show that stock markets react to published recommendations at and around the publication day, and that the impact during these few days was higher to journalist recommendations than it was to analyst recommendations. If an investor was to follow the investment advice (both buy and sell recommendations) published by either analysts or journalists, he/she would earn normal returns over the 24 post-publication months. One has to keep in mind that this strategy involves *shorting* the stocks that were sell-recommended, an action often unfeasible, especially in the stocks of smaller firms. If an investor were instead to follow sell recommendations alone, he or she would earn significant as well as substantial *BHARs*. The strategy to short *all* stocks being recommended irrespective of its origin and type, would yield a statistically significant 24-month *BHAR* of about 14%. Finally, buy recommendations were misleading investors whereas sell recommendations were leading them correctly. This asymmetry is due to the complexity in interpreting the positive information from the company management leading to buy recommendations. Indeed, management seems to be overoptimistic both when they present positive and negative information. The task for analysts and journalists is to translate this positively biased information into more realistic estimations, free from overoptimism. Finally,

our results further establish the importance of using the correct procedures when calculating test statistics in long-run abnormal return calculations. Only correcting for skewness using the approach developed in Johnson (1978) is not enough. Sutton (1993) and Barber *et al.* (1999) argue that the bootstrapped skewness-adjusted test statistic is the only procedure which gives well-specified statistics when calculating *BHARs*, an argument that we support.

Section 2 describes the data, while Section 3 explains the method used and analyses the hypotheses. The results are presented in Section 4. Section 5 summarizes and draws conclusions.

2. Sample Selection and Descriptive Statistics

The data consists of stock recommendations in Swedish printed media during the period 1996–2000. The recommendations from the following six newspapers and business magazines (from this point and onward newspaper and business magazine are used synonymously) were considered: *Affärsvärlden* (AFV); *Aftonbladet* (AB); *Finansstidningen* (FTi); *Göteborgsposten* (GP); *Privata Affärer* (PA); and *Veckans Affärer* (VA).⁴ Circulation figures are presented in Table A.1 of the Appendix. The columns containing the recommendations were allocated using the online articles databases *Mediearkivet* and *Affärsdata*.

The total sample in the 1996–2000 period consists of 1,775 recommendations. Reiterations of previous recommendations occur frequently, though some newspapers are over-represented. From these, 1,234 (69%) are reiterated recommendations. We assume that newspapers considered make up the Swedish printed media when it comes to publishing stock recommendations. When a stock receives a buy recommendation in one newspaper, if it then receives a buy in another, before it receives a sell, it is deleted from the final sample irrespective of in what newspaper it is published. By using this approach, we hope to include only the *new* buy and sell recommendations in the Swedish printed media.⁵ Allowing only initiations or changes from a buy to a sell recommendation, or vice versa, the sample totals 541 recommendations. Finally, we allow this procedure to be used from 1995, although we are interested in the period beginning at 1996, just to ensure that we are left with initiated recommendations or changes from a previous view in that stock. This practically means that a stock which is buy-recommended in 1995 and then receives a buy recommendation in 1996 (without a sell recommendation in between), is deleted from the final sample. The number of buy recommendations are 317 (59% of initiations and changes) and sell recommendations 224; thus a buy-to-sell ratio of 3:2. A recommendation could be given either by an analyst or a journalist. In the final sample, a newly buy-recommended stock often receives a sell recommendation (on 130 occasions) and a newly sell-recommended stock often receives a buy recommendation (on 167 occasions) during the two-year post-recommendation period. This is something which may influence the return to these recommendations and how the results are interpreted.

Table 1 describes the distribution of added-to-buy and added-to-sell recommendations among the six newspapers, and also partitioned into those originating from analysts and journalists.

2.1 Analysts and Journalists

We define an analyst as a person employed by a bank, a brokerage firm, or similar; and a journalist as a person employed by a newspaper to write articles. Usually, an analyst is asked directly by the newspaper to publish articles containing recommendations in that newspaper. The bank or brokerage firm that the analyst represents, have private clients which they on a regular basis give investment advice. Clients pay with commission for this advice. The ‘private’ information the analyst may possess will thus be passed on to clients to profit from before disseminating it for

Table 1. Distribution of initiated and changed recommendations over newspapers and business magazines during the period 1996–2000 in Swedish printed media

Type	Newspaper/Business magazine						Total	Analysts	Journalists
	AFV	AB	FTi	GP	PA	VA			
Buy	40	39	46	54	64	74	317	99	218
Sell	42	103	33	–	39	7	224	35	189
All	82	142	79	54	103	81	541	134	407

Abbreviations: AFV = *Affärsvärlden*; AB = *Aftonbladet*; FTi = *Finanstidningen*; GP = *Göteborgsposten*; VA = *Veckans Affärer*; and PA = *Privata Affärer*.

free to the public. Certainly, the recommendations published in the newspapers from analysts will be second-hand information. Journalists, on the other hand, often publish recommendations as a routine in their daily work. They may support their recommendations: on previous reports from the company; an analysis from a bank; or they can be a result of more investigative work. There are two major differences between analysts and journalists to consider when we analyze investment advice published in the printed media from these groups.

First, the available information differs. A journalist is typically working on articles for a very limited period of time and does not have access to all the detailed information that the analyst would have. Furthermore, analysts are supported by a whole chain of staff specialized in processing detailed information and presenting it in a standardized manner. This is clearly an informational advantage for analysts over journalists. Also CEOs, CFOs, and other senior officers at a company, may be more willing to meet with analysts to discuss the company than meeting with journalists, since analysts can attract (more) potential investors. This way, analysts can gather information which journalists generally will not.

Second, there is a clear difference in the set of incentives. There are typically no incentives for journalists to give either a favourable or an unfavourable recommendation. The reason is that all newspapers demand a non-trade policy from journalists (including their families) in stocks that they cover.⁶ The analyst, on the other hand, has several incentives (other than personal) to give a certain type of recommendation. Newspapers only require analysts to follow the rules imposed on them by their employer. The bank or brokerage firm the analyst represents may be involved in, or hope to win, a corporate finance deal with the company at hand. Also, the buy-side clients of the bank, or the bank itself, may have taken positions or intend to take positions that would need a recommendation along the way. Finally, the bank can give a recommendation in order to increase income from increased transaction volume.

All these situations may tempt analysts to give buy recommendations. The above differences in job description between analysts and journalists consequently motivates us to distinguish between them in the analysis of the results.

2.2 Descriptive Statistics

Table 2 displays summary statistics for the recommended firms by analysts and journalists including mean, median, and standard deviation of market capitalization (Panel A), as well as sector-index classification (Panel B).

The mean market capitalization of *all* firms in the sample was Swedish krona (SEK) 32.2 billion, while the median was SEK 2.7 billion. At the end of year 2000, the mean of all firms

Table 2. Sample statistics

Sector	Analysts		Journalists		All	
	Buy	Sell	Buy	Sell	Buy	Sell
	99	35	218	189	317	224
<i>Panel A: Market capitalization</i>						
Mean	42.7	18.2	22.4	40.7	28.7	37.2
Median	3.2	2.9	2.1	3.3	2.3	3.2
Standard deviation	175.0	26.2	71.0	143.0	114.0	132.0
<i>Panel B: Sector distribution</i>						
Energy	1(1)	1(3)	0(0)	0(0)	1(1)	1(0)
Materials	11(11)	3(9)	14(7)	18(10)	25(8)	21(9)
Industrials	28(29)	12(34)	65(30)	49(26)	93(29)	61(28)
Consumer discretionary	14(14)	6(17)	31(14)	20(11)	45(14)	26(12)
Consumer staples	0(0)	0(0)	9(4)	5(2)	9(3)	5(2)
Health-care	12(12)	1(3)	14(7)	16(8)	26(8)	17(8)
Financials	14(14)	5(14)	31(14)	24(13)	45(14)	29(13)
Information technology	18(18)	6(17)	51(23)	54(29)	69(22)	60(27)
Telecommunication services	1(1)	0(0)	3(1)	3(1)	4(1)	3(1)
Utilities	0(0)	1(3)	0(0)	0(0)	0(0)	1(0)

Market capitalization figures are presented in Swedish krona (SEK) billion. Numbers in parentheses indicates percentage of group total

listed on Stockholm Stock Exchange (SSE) was SEK 11,6 billion, while the median was SEK 0.9 billion. Recommended firms consequently had a substantially higher market capitalization than the average firm listed at the SSE. Firms sell-recommended by journalists were discernably larger than those sell-recommended by analysts, whereas the opposite was true for buy recommendations, though the difference in that case was not statistically significant. Overall, the industrials sector received most buy recommendations and the information technology sector most sell's (Panel B). The dispersion of recommendations over industry sectors was similar for analysts and journalists.

Figure 1 shows the total number of added-to-buy and added-to-sell recommendations, as well as recommendations divided into those from analysts and journalists, per year in the sample.

The number of new recommendations had a fivefold increase from 1996 to 2000. The buy-to-sell ratio of initiations and changes decreased from its highpoint in 1998 of 5:2, to approximately 1:1 in 1999, and 3:2 in 2000 (not indicated in the figure). The main reason to the decrease in the ratio is the 'overheated' market during 1999 and 2000, which led to an increased scepticism to buy stocks at the time. In 1999, added-to-sell recommendations actually outnumbered added-to-buy recommendations (83 sell versus 77 buy recommendations).

We can see that during the years when the stock market reached its high point, i.e. 1999 and 2000, journalists acted as the cheerleader for buying stocks by increasing the number of new buy recommendations. Nevertheless, journalists also substantially increased the number of new sell recommendations during the period. While journalists doubled the number of initiated and changed buy recommendations from 1998 to 2000, the number of analyst recommendations of the same sort remained almost unchanged. The proportion of new buy to new sell recommendations therefore was about 1:1 for journalists whereas it was about 3:1 for analysts. Sell recommendations from analysts were very few over the whole period, especially during 1999–2000. This shows that

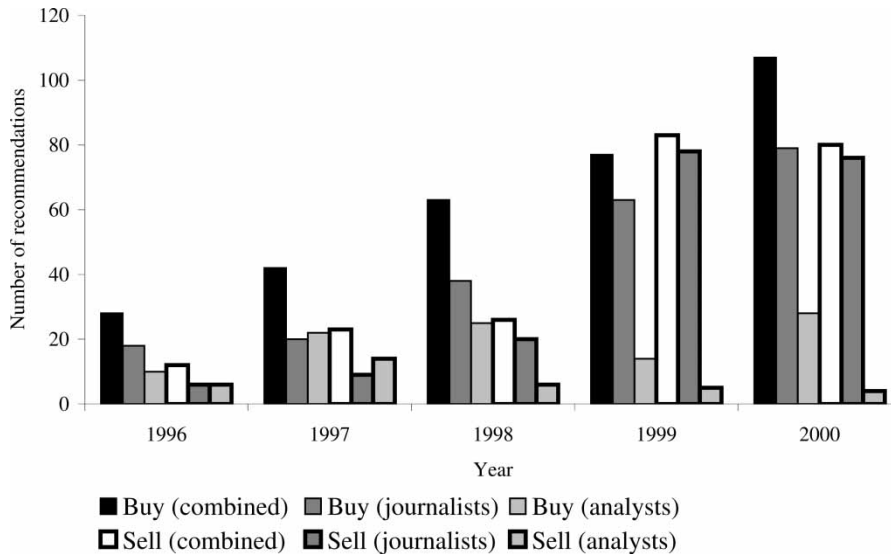


Figure 1. Recommendations per year. The figure shows added-to-buy (displayed in bars with a thinner line) and added-to-sell (displayed in bars with a thicker line) recommendations combined (both from analysts and journalists), as well as divided separately as originating from analysts and journalists

analysts may be reluctant to publish sell recommendations, a reluctance coming from the fact that analysts generally want to publish positive information about *any* firm. Reasons to this potential reluctance may be to increase the probability of winning future corporate finance deals with the firm, or for their own career concerns. In such a situation, positive recommendations are prioritized on the expense of negative recommendations. In a different setting, Hong and Kubik (2003) found evidence that favourable job loss separation for analysts covering stocks underwritten by their own houses depend more on optimism than on forecasting accuracy. Furthermore, it has also been found in Lim (2001) that it may be rational for analysts to intentionally publish positively biased earnings forecasts in order to improve management access and thereby increase forecasting accuracy.

Added-to-buy recommendations were fairly evenly distributed over calendar months with no clear high point, whereas added-to-sell recommendations were somewhat ‘clustered’ during October–November.⁷ The buy-to-sell ratio reached 4:1 during January, which was the high point, and in June it was 3:1. The ratio in January comes as no surprise since printed media publishes recommendations of stocks to buy during the new year. The peak in June, however, is a surprise. In fact, we could have expected relatively more sell recommendations for people who needed money for their holidays. The ratio reached its lowpoint in November, with many recommendations to sell for tax reasons.

The daily stock prices come from the *Scandinavian Information Exchange* (SIX) and were adjusted for dividends being reinvested in the stock from the ex-dividend day.

3. Method and Hypotheses

Previous research on long-term performance after various corporate events has evaluated abnormal performance based either on the buy-and-hold abnormal return method (*BHAR*), or the cumulative

abnormal return method (*CAR*). A reason for the widespread use of *BHAR* is that it more accurately captures investor experience from holding a security for a long post-publication period and thereby being more intuitive than other methods. However, some have argued that this method does not correct for the cross-sectional dependence of observations due primarily to overlapping returns.⁸ Because we here allow only initiations and changes from previous recommendations, the number of overlapping returns, and thereby the potential problem, can be kept at an absolute minimum. In Barber and Lyon (1997) it was also discussed that, even though *BHARs* give rise to negatively biased test statistics (mostly due to skewness), it is nevertheless preferred for detecting overperformance of published recommendations. The problem with skewness is believed to be more severe when the benchmark consists of a portfolio of stocks (such as the sector index) rather than of a controlling firm.

3.1 Buy-and-hold Abnormal Return (*BHAR*)

Each recommendation was assigned $t = 0$ for the publication-day (*PD*), and the event-period (*EP*) consists of the days -1 to $+1$. Data was required to be available one month before the start of the *EP* (21 trading days) and up to 24 months after the *PD*. Because it is almost impossible for an investor to profit from information contained in an announcement released before the opening, we assume an investor to invest at the day *after* the *PD* for our post-recommendation performance calculations.⁹ To minimize the effect of survivorship bias when a firm did not survive the 24 months, abnormal performance was estimated for as many months as data were available, a procedure also used in Kothari and Warner (1997).

Calculating the *BHARs* for each recommended stock i during the period T , we use the procedure

$$BHAR_{iT} = \prod_{t=1}^T [1 + R_{iT}] - \prod_{t=1}^T [1 + R_{rT}] \quad (1)$$

where the period- T *BHAR* will be calculated for the month prior to the *EP* (from day -22 to day -2), during the *EP*, as well as for the 6-, 12-, 18-, and 24 post-event months; R_{iT} is the return on stock i for period T ; and R_{rT} is the return on the appropriate reference investment, r , for the same period. We calculate *BHARs* using two different reference investments: (1) the return on a controlling firm; and (2) the return on the sector index to which the recommended stock belongs. The first approach (controlling-firm approach) has been used frequently in long-run returns studies and, for example, Barber and Lyon (1997) point out that using a control firm which have been found by matching on firm size yield well-specified test statistics and also takes care of *ARs* being sensitive to the size of the recommended firm. For that purpose we first match on sector index and then on firm size. The second approach uses the sector index (again value-weighted) as classified by the Global Industry Classification System (GICS) jointly created by *Morgan Stanley Capital International* and *Standard & Poors*.

Mean *BHARs* (\overline{BHARs}) for a specific type of recommendation and from a specific group were calculated as a simple mean, i.e. each stock in that portfolio is equally weighted. This way of calculating the \overline{BHAR} is preferred since it, in practice, means that an investor mimicking the recommendations would invest an equal amount of money in each recommended stock. Also, to take care of misspecified test statistics due to skewness, we employ a bootstrapped skewness-adjusted t -statistic recently used in Barber *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:

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

where

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

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:¹⁰

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

where

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

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

3.2 Hypotheses

If we assume that markets are at least semi-strong efficient, investing according to publicly available stock recommendations should not yield abnormal long-run returns. Markets tend to react rapidly to new information. They react so fast to this information that it would be almost impossible for a professional investor with all available tools to profit from it. Indeed, Kim *et al.* (1997) have shown that it only takes about 5 and 15 minutes for stock prices at NYSE and NASDAQ to react to the private information in analyst recommendations. This leads us to our first hypothesis:

Hypothesis 1: The main body of previous research has found stock recommendations in printed media to be of practically no additional value, therefore we should not expect the Swedish printed media to be any different.

Analysts, and the bank or brokerage firm he or she represents, spends huge resources in order to pick a few investment opportunities. In order to compensate their commission-paying clients and themselves for this research cost, this investment advice should, on average, outperform the appropriate comparison measure. Recently, Lidén (2005) found the information in analysts' recommendations being passed on to private clients prior to being published in newspapers. So, if anything, they should be taken advantage of before publication and by the time they are published these recommendations are second-hand, just as journalist recommendations are assumed to be.

As such, they should perform in line with the market, at best. Our second expectation can therefore be stated as:

Hypothesis 2: There should be no difference between the long-run performance of analyst and journalist recommendations.

For logical reasons, analysts and journalists often base their stock recommendations on direct statements (such as earnings announcements) from the company management. So, if the company management were overly optimistic about the firms' future prospects, this may lead to positive information being released eventually leading to biased stock recommendations. That management overoptimism is no illusion has been found in a variety of settings. For example, McNichols (1989) find management forecasts biased and stock returns in the pre-forecast and forecast announcement periods positively associated with management earnings forecast errors. Also, deAngelo *et al.* (1996) find that overoptimism leads managers to overestimate future earnings when growth prospects fade.

Assuming that the company management are positively biased in the information they hand to the public, there are two possible directions this may take the observed recommendations in newspapers. First, if analysts and journalists recognizes the information as positively biased they will adjust their stock-price valuation taking this bias into account. Buy and sell recommendations should then be expected to be of no value, since analysts and journalists have already uncovered the biased information from the management enabling them to publish bias-free recommendations. Second, if analysts and journalists do not recognize the bias, published recommendations will be tainted with this positive bias. Buy recommendations should then be expected to be *less* valuable to an investor and sell recommendations to be *more* valuable than if this bias had been recognized. When company management releases positive information, it is difficult for analysts and journalists to know whether the described situation is close to the reality or not. When negative information is released, it is generally worse than described.

4. Empirical Results

The buy-and-hold abnormal returns for all buy and sell recommendations are presented in Table 3.¹¹ Though there are some differences between the results from the controlling-firm and sector-index reference portfolios, they essentially reach similar results. For that reason, we only discuss results from the controlling-firm approach.

Buy recommendations were of stocks that performed in line with the market in the month prior to the recommendation. During the *EP* these stocks gave rise to an abnormal return of 1.55% (with a *t*-value of 2.62) but during the post-publication periods these recommendations yielded negative *BHARs*. For the 24 months following the publication day, they would have yielded a return of -8.58 % (with a *t*-value of -1.07) for an investor acting on them after accounting for the return on the controlling firm.¹² Earlier in this paper we pointed out that it is important to use the correct test statistic, otherwise we would potentially understate the standard error leading to higher (and incorrect) *t*-values. If we, for example, would instead have used the *ordinary* skewness-adjusted test statistic proposed by Johnson (1978), the *t*-value for the event-period *BHAR* of buy recommendations would become 3.89.

The literature argues that smaller companies react more heavily to company-related announcements than larger companies.¹³ It is therefore important to control for market capitalization when talking about *BHARs*. It could also be that the *BHARs* are driven by earnings announcements

Table 3. BHARs for buy and sell recommendations

Period	Buy recommendations			Sell recommendations		
	\overline{BHAR}_C	\overline{BHAR}_S	n	\overline{BHAR}_C	\overline{BHAR}_S	n
<i>All recommendations</i>						
Pre-publication	1.12 (0.72)	0.16 (0.05)	317 [159]	-2.03 (-1.20)	1.29 (0.53)	224 [112]
Event-period	1.55 (2.62***)	2.31 (3.85***)	317 [159]	-1.00 (-1.08)	-1.36 (-2.52**)	224 [112]
6 months	-2.55 (-0.78)	-2.59 (-0.80)	317 [159]	-11.42 (-2.73***)	-4.96 (-1.44)	224 [112]
12 months	-6.15 (-1.10)	-2.63 (-0.54)	315 [158]	-13.42 (-2.00**)	-10.62 (-1.99**)	223 [112]
24 months	-8.58 (-1.07)	-6.57 (-0.95)	296 [148]	-21.89 (-2.09**)	-15.88 (-2.65***)	208 [104]

The pre-publication period consists of the month prior to the event period (from day -22 to -2), and the event-period consists of the day before to the day after the publication (from day -1 to +1). BHARs were calculated using two different reference investments: (1) the return on a controlling firm ($BHAR_C$); and (2) the return on the sector index to which the recommended stock belongs ($BHAR_S$). Numbers in parentheses display the bootstrapped skewness-adjusted t -stats for testing the null hypothesis that the $BHAR$ is equal to zero, and numbers in brackets display the bootstrapping resample size during different periods ($n_b = n/2$). * = significant at the 10% level, ** = significant at the 5% level, and *** = significant at the 1% level using a two-tailed t -test of the above procedure.

just before, at, or after the recommendation is published. Therefore, we also run the following regression:

$$\begin{aligned}
 BHAR_{(EP,i)}^{Buy} &= 14.78 - 0.60Size_i - 0.67Earn_i \\
 &\quad (2.21^{**})(-2.02^{**}) \quad (-0.22) \\
 \bar{R}^2 &= 0.02
 \end{aligned} \tag{4}$$

where $BHAR_{(EP,i)}^{Buy}$ measures the $BHAR$ for buy recommendations during the period starting from the day prior to the PD and ending on the day after the PD for each stock i ; $Size_i$ is the log of market capitalization; and $Earn_i$ is a dummy which takes the value of one if the company being buy-recommended issued an earnings-announcement during the EP and zero otherwise. Standard errors are corrected for heteroscedasticity using the procedure in White (1980), and t -statistics are reported in parentheses.

The regression result in Equation 4 shows that, even though market capitalization differences comes out statistically significant, so does the constant, i.e. buy recommendations give rise to a positive price-reaction during the EP . The regression also reveals that smaller stocks react more heavily than does larger stocks, just as the theory predicts. The fact that nine companies issued earnings-announcements during the EP does not, however, seem to be an important factor explaining the $BHAR$ during this period.

Sell recommendations were of stocks that had an insignificant decrease during the month prior to the recommendation. During the EP , these stocks decreased in price, but not significantly different from zero. After six months, these stocks have decreased relative to their peers by 11.42% (with a t -value of -2.73). In the next 18 months they continue to fall, and during the 24-month post-publication period they yield $BHAR$ s of -21.89% (with a t -value of -2.09).

A profitable investment strategy would consequently be to *short* the sell-recommended stocks over the 24-month post-publication period.

We also run a regression where *BHAR* for the 24-month post-publication period is the dependent variable, and as independent variables: a variable controlling for market capitalization; also, in order to control for recommendations given during year 2000 being different in *BHARs* from the 1996–1999 period, a dummy controlling for whether the recommendation was given during the year of 2000 or not was introduced; and dummies controlling for in which newspaper it was published:

$$\begin{aligned}
 BHAR_{(24\text{post-months},i)}^{Sell} &= -76.82 + 3.42Size_i - 26.58y2000_i \\
 &\quad (-0.89)(0.91)(-1.45) \\
 &\quad + \textit{newspaper dummies} \\
 \bar{R}^2 &= 0.04
 \end{aligned}
 \tag{5}$$

Standard errors are corrected for heteroscedasticity using the procedure in White (1980), and *t*-statistics are reported in parentheses. The multiple regression in equation 5 shows that neither the constant nor the independent variables show up statistically significant. This is much to our surprise, especially because of the strong *t*-stats in Table 3. One of the drawbacks of the controlling-firm approach is the fact that matching firms play an important role for estimated abnormal performance of the recommendations. Especially in smaller samples. Also, if the controlling firm experiences an extraordinarily good or bad stock price development during the 24-month period this will highly influence the results obtained. Such extraordinary movements will not be evident on broader indices, such as the market index or sector indices (which is our second reference portfolio). If we perform the same regression where we let the sector-adjusted *BHARs* be the dependent variable, the constant shows up highly statistically significant:

$$\begin{aligned}
 BHAR_{(24\text{post-months},i)}^{Sell, Sector\ index} &= -209.82 + 8.95Size_i - 15.78y2000_i \\
 &\quad (-4.51^{***})(4.90^{***})(2.00^{***}) \\
 &\quad + \textit{newspaper dummies} \\
 \bar{R}^2 &= 0.11
 \end{aligned}
 \tag{6}$$

According to Equation 6 it would be a profitable trading strategy over the 24 post-publication months to short the stocks being sell recommended. Furthermore, if we instead perform the same regression as in Equation 5 (for the controlling-firm approach), but where we let 6-, 12-, and 18-month *BHARs* of sell-recommended stocks be the dependent variable, the constant shows up statistically significant at all three occasions. So, despite the results in Equation 5, we strongly believe that it would be a profitable investment strategy to short the sell-recommended stocks.¹⁴

Combining the impact from buy and sell recommendations would have left an investor following them with a return of 3.96 % (with a *t*-value of 0.58) more than their controlling firms for the 24-month period. So, the initiated or changed stock recommendations published in Swedish printed media performed in line with their peers. In subsection 3.2 it was stated that we should not expect the sample recommendations to outperform a comparable benchmark (Hypothesis 1). Although sell recommendations on its own may be profitable to follow, taking the negative contribution from buy recommendations into account, these recommendations perform in line with the market. The results therefore support the hypothesis.

The fact that buy-recommended stocks decrease in price during the 24 post-publication months, while sell-recommended stocks also decrease, makes us believe that shorting stocks receiving *any* type of recommendation could be profitable. If the investor would have adopted this strategy for the period of interest, he/she would have gained some 14.06% (with a t -value of 2.07).

Above results show that buy recommendations, if anything, were misleading investors, while sell recommendations were leading them. Sell recommendations were thus informative but buy recommendations were not. The management of the company are usually overoptimistic about the future prospects of the company, meaning that their estimations will be positively biased. When there is positive information, management tend to be excessively upbeat about the future. This overoptimistic *positive* information sometimes leads to buy recommendations from analysts and journalists. The market reacts to the information in the recommendations leading to increasing stock prices, but after the PD, stock prices falls back. This is a classical *overreaction*. The reaction, however, takes considerable time, i.e. the market does not initially recognize the full extent of the positive bias. On the other hand, when management releases negative information, this is again presented as being slightly better than it actually is. This overoptimistic *negative* information sometimes leads to sell recommendations from analysts and journalists. Again, the market reacts to the information with decreasing stock prices as a result. This time stock prices also decrease after the PD, i.e. the market *underreacts*. As for buy recommendations, it takes a considerable amount of time for the market to understand the positive bias in management information.

One may say that there is an informational-asymmetry dilemma between management on the one hand, and analysts and journalists on the other. If we analyse the results presented in this section it is obvious that analysts and journalists were fooled by the overoptimism from the positive information, but they were not from negative information. In turn, this is due to positive information being more intricate to interpret.

4.1 Analysts versus Journalists

Table 4 shows *BHARs* divided into recommendations from analysts and journalists and Table 5 shows a comparison of their *BHARs*.

Buy-recommended stocks from analysts performed insignificantly worse than those from journalists during the pre-publication month (see Table 5). During the *EP*, the stock-price reaction to these recommendations were lower than it was to buy recommendations from journalists. The *market* consequently believes that journalist buy recommendations contain relatively more new information, but not significantly so. In the post-recommendation period journalist buy recommendations performed better than analyst recommendations, but the differences are insignificant (as displayed by the 6-, 12-, 18-, and 24-month *BHARs*).

The pre-publication month *BHAR* to sell-recommended stocks from analysts was 1.62% (with a t -value of 0.38) *higher* than it was for journalist sell recommendations and during the *EP* the difference is 3.20% (with a t -value of 1.57). This means that also sell recommendations from journalists were valued higher by the market. During the post-publication periods, however, these recommendations gave rise to continuous decreases in stock prices, leading to sell recommendations from analysts performing insignificantly better than those from journalists.

The overall picture of the results tells us that analyst and journalist recommendations yield returns in line with their peers. More specifically, if an investor would follow both buy and sell recommendations from analysts during the 24-month post-publication period he/she would earn -9.16% (with a t -value of -0.62) whereas following those from journalists would yield 8.45% (with a t -value of 1.07). The rather substantial difference of 17.61% (with a t -value of 1.16) is

Table 4. BHARs for buy and sell recommendations, divided into analyst and journalist recommendations

Period	Buy recommendations			Sell recommendations		
	\overline{BHAR}_C	\overline{BHAR}_S	n	\overline{BHAR}_C	\overline{BHAR}_S	n
<i>Analyst recommendations</i>						
Pre-publication	-0.06 (-0.01)	-3.68 (-1.89*)	99 [50]	-0.67 (-0.29)	-3.25 (-1.27)	35 [18]
Event-period	0.84 (1.12)	1.15 (1.49)	99 [50]	1.70 (1.25)	0.21 (0.30)	35 [18]
6 months	-3.18 (-0.49)	2.07 (0.19)	99 [50]	-11.95 (-1.91*)	-7.94 (-1.57)	35 [18]
12 months	-9.94 (-0.95)	-0.96 (-0.25)	99 [50]	-18.79 (-1.81*)	-14.76 (-1.84*)	35 [18]
18 months	-13.25 (-1.03)	-4.0 (-0.49)	95 [48]	-28.82 (-2.18**)	-30.58 (-2.33**)	34 [17]
24 months	-22.13 (-1.37)	-7.77 (-0.79)	94 [47]	-29.35 (-2.12**)	-35.73 (-2.59***)	33 [17]
<i>Journalist recommendations</i>						
Pre-publication	1.65 (0.79)	1.91 (0.86)	218 [109]	-2.29 (-1.20)	2.13 (0.79)	189 [95]
Event-period	1.87 (2.33**)	2.84 (3.64***)	218 [109]	-1.50 (-1.53)	-1.65 (-2.60**)	189 [95]
6 months	-2.26 (-0.55)	-4.71 (-1.39)	218 [109]	-11.32 (-2.33**)	-4.41 (-1.05)	189 [95]
12 months	-4.43 (-0.71)	-3.39 (-0.61)	217 [109]	-12.41 (-1.62)	-9.85 (-1.66*)	188 [94]
18 months	-6.11 (-0.78)	-13.14 (-1.32)	213 [107]	-20.36 (-2.00**)	-7.80 (-1.25)	180 [90]
24 months	-2.08 (-0.29)	-6.01 (-0.80)	203 [102]	-20.52 (-1.76*)	-12.15 (-1.86*)	176 [88]

The pre-publication period consists of the month prior to the event period (from day -22 to -2), and the event-period consists of the day before to the day after the publication (from day -1 to +1). BHARs were calculated using two different reference investments: (1) the return on a controlling firm (\overline{BHAR}_C); and (2) the return on the sector index to which the recommended stock belongs (\overline{BHAR}_S). Numbers in parentheses display the bootstrapped skewness-adjusted t -stats for testing the null hypothesis that the BHAR is equal to zero, and numbers in brackets display the bootstrapping resample size during different periods ($n_b = n/2$). * = significant at the 10% level, ** = significant at the 5% level, and *** = significant at the 1% level using a two-tailed t -test of the above procedure.

nevertheless statistically insignificant. This finding supports our previously stated hypothesis (Hypothesis 2) that recommendations from analysts and journalists should be performing equally as well. The reaction during the event period to buy and sell recommendations from journalists versus analysts shows a substantial difference in BHARs, meaning that that investors have greater confidence in journalist recommendations. There may be several explanations to this but one could be that investors realize that analysts may have a hidden agenda when presenting their recommendations in the printed media.

Buy recommendations were earlier found, if anything, to be misleading and sell recommendations to be leading investors. Dividing the sample into recommendations from analysts and journalists, these results generally hold. That is, buy recommendations from both analysts and journalists were misleading (but not significantly so), whereas sell recommendations from both groups were leading them correctly.

Table 5. BHARs for buy and sell recommendations, analyst and journalist recommendations compared

Period	Buy recommendations		Sell recommendations	
	\overline{BHAR}_C	\overline{BHAR}_S	\overline{BHAR}_C	\overline{BHAR}_S
Analysts versus Journalists				
Pre-publication	-1.71 (-0.61)	-5.59 (-1.76*)	1.62 (0.38)	-5.38 (-1.26)
Event-period	-1.03 (-0.81)	-1.69 (-1.10)	3.20 (1.57)	1.86 (1.62)
6 months	-0.92 (-0.11)	6.78 (0.87)	-0.63 (-0.07)	-3.53 (-0.52)
12 months	-5.51 (-0.41)	2.43 (0.23)	-6.38 (-0.45)	-4.91 (-0.45)
18 months	-7.14 (-0.43)	9.19 (0.58)	-8.46 (-0.46)	-22.78 (-1.39)
24 months	-20.05 (-1.02)	-1.76 (-0.12)	-8.84 (-0.40)	-23.53 (-1.35)

The pre-event period consists of the month prior to the event period (from day -22 to -2), and the event-period consists of the day before to the day after the publication (from day -1 to +1). $BHAR_s$ were calculated using two different reference investments: (1) the return on a controlling firm ($BHAR_C$); and (2) the return on the sector index to which the recommended stock belongs ($BHAR_S$). Numbers in parentheses display the t -stats for the null hypothesis that the difference in $BHAR_s$ between analysts and journalists are equal to zero. The distribution of $BHAR_s$ is bootstrapped in order to test the difference in $BHAR_s$ between analysts and journalists. This procedure means drawing 1,000 resamples (each of half the subsample size) of $BHAR$ in each subsample (i.e. analyst sample or journalist sample) and then performing a simple two-tailed t -test of its difference. * = significant at the 10% level, ** = significant at the 5% and *** = significant at the 1% level.

5. Summary and Conclusions

This paper analyses the long-run returns from mimicking initiated or changed stock recommendations given by analysts and journalists and published in Swedish printed media. The sample period is 1996–2000, which covers the turbulent 1999–2000 period. If an investor followed all initiations and changes, he or she would not earn more than following their peers. This result is in line with our beliefs prior to performing this study, as well as the major body of previous research. Following only sell recommendations, however, an investor could earn substantial buy-and-hold abnormal returns. There are limitations to such a strategy since it may not always be practically possible to make such transactions at given points in time, especially for stocks of smaller firms. The limitations may be due to a liquidity problem involved in such a transaction – a liquidity problem leading to a shrinking possibility to profit from that information. Following all recommendations from *either* analysts or journalists yield returns in line with the reference investments, and no sizeable difference between the two groups was observed. Also, we found no evidence supporting that analysts may hand their information to private clients to profit from before publication. Since all recommendations perform in line with their reference investments, an investor would be equally well off holding these reference investments instead.

Apart from the profitable trading strategy to short stocks receiving a sell recommendation, there is yet another feasible and potentially profitable trading strategy. This strategy involves shorting

all buy- and sell-recommended stocks, i.e. going against buy recommendations but in line with sell's for a two-year post-recommendation period. This strategy would have yielded a statistically significant buy-and-hold abnormal return of about 14%.

The results of this paper have shown stock recommendations in Swedish printed media during the period to be both misleading (regarding buy recommendations) and leading (regarding sell recommendations). As we have mentioned earlier in the paper, this could possibly be due to winners being more difficult to pick than losers. The explanation behind the asymmetry is that company management are overoptimistic about the future prospects of its company, an overoptimism generating positively biased information from the management to the public, in good times and bad. Because of the complexity in understanding the future prospects of the company, the overoptimism in positive information from management deceives analysts and journalists to issue misleading buy recommendations.

Another detail that previous research have seemed to ignore, is the existing conflicts-of-interest issues when analysts give recommendations in printed media. The ties between the analyst employer and the recommended company was consistently foreseen in the sample recommendations. Ongoing corporate finance activities must be fully disclosed in connection to a recommendation. How can we otherwise expect readers of the newspapers to make good and healthy investments (which is the whole purpose) based on these recommendations?

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A. Appendix

Table A.1. Circulation estimates for the sample newspapers and business magazines as of 31 December 2000

Newspaper	Circulation
AFV	27,600
AB	117,000*
FTi	38,300
GP	380,600**
PA	27,400
VA	288,500

*Average over weekend days; **Sunday figures.

Source: Tidningsstatistik AB.

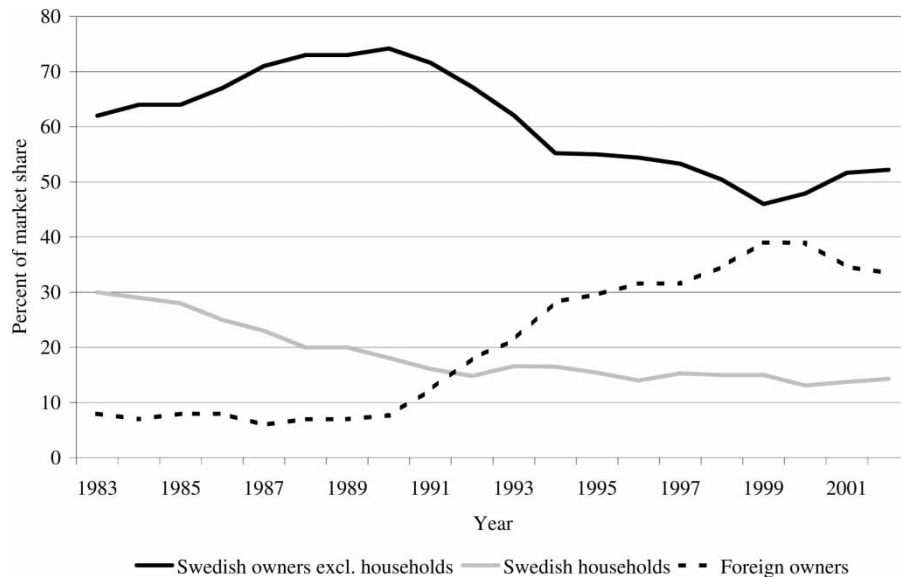


Figure A.1. Stockholm Stock Exchange ownership. The black line indicates Swedish ownership excluding the households, the grey line indicates the Swedish households ownership, and the dashed black line foreign ownership. All figures are in percentage of total market share. *Source:* Statistics Sweden (SCB)

Notes

- ¹ In Womack (1996) it was found that the post-publication drift for buy recommendations from US brokerage houses was modest and short-lived but for sell recommendations it was large and extended for six months; in Bjerring *et al.* (1983) it was shown that investors following the advice from a Canadian brokerage house would have earned significant abnormal returns; in Ferreira and Smith (2003) the recommendations presented on Louis Rukeyser's *Wall Street Week* TV show were shown to generate significant holding-period returns a year after the announcement, and in Barber *et al.* (2001) an investor who followed the most favorable consensus recommendations was shown to earn an annual return of four percent.
- ² From a survey by TEMO in 2000. In 1995 it was 53%, thus a 51% increase.
- ³ See Karmin (2000) where the Swedish stock market was pointed out as a market with many investment opportunities in telecommunication and internet companies. Because of its high concentration of these stocks, it drew much attention during 1999 and 2000 from domestic as well as foreign investors.
- ⁴ For a description of the respective newspaper or business magazine, see Lidén (2005).
- ⁵ This approach have also been used in Womack (1996), among others.
- ⁶ For a detailed explanation of how the newspapers in this paper monitor and regulate journalist stock trades, see Lidén (2005).
- ⁷ The number of recommendations over calendar months of publication are not presented here, but can be made available upon request.
- ⁸ Criticism towards *BHAR* for this reason have been raised by Brav and Gompers (1997), Fama (1998), Barber *et al.* (1999), and Mitchell and Stafford (2000).
- ⁹ That it is close to impossible to profit from this information have been showed in Kim *et al.* (1997).
- ¹⁰ It was found in Barber *et al.* (1999) that a size of $n/2$ gives well-specified inferences.
- ¹¹ In Table 3, we have left out 18-month *BHARs* since they do not add anything different than what is observed for 24-month *BHARs*. When presenting the empirical results we ignore costs imposed from transacting. Nowadays, costs from transacting in stocks approaches levels close to negligible. Since the results are calculated such that the investor mimicking these recommendations would buy (or sell) the stock and hold on to them for a certain period of time, and then sell (or buy back) the stock, this gives rise to a two-trip transaction cost. Assuming that the investor is based in

Sweden, online brokerage firms charge a fee of around 0.10% on the value of the transaction each way. Obviously, including transaction costs, the results would not change dramatically, i.e. only about 0.20%.

¹² We also run a regression having the 24-month *BHAR* as the dependent variable, and as independent variables a dummy controlling from whom the recommendation originated, a variable controlling for market capitalization differences, a dummy controlling for whether the recommendation was published during the year 2000, and dummies controlling for in what newspaper it was published. The result from this regression shows that the constant is statistically insignificant, hence we cannot say that it would have been a profitable investment strategy to short these stocks.

¹³ The well-known size effect in this setting is discussed in Dimson and Marsh (1986).

¹⁴ It should be stressed, however, that shorting stocks may not always be possible, leading to a shrinking possibility to profit from these recommendations.

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