Fifty-Fifty.
Stock Recommendations and Stock Prices.
Effects and Benefits of Investment Advice in the Business Media.

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Abstract

The business media play an active role in influencing stock prices. Statistically significant excess returns at the time of the publication of stock recommendations have been documented many times. Frequently these abnormal gains begin to accumulate long *before* the publication date. In most cases they reach their highs on the day the recommendations are disseminated to the public. With few exceptions a price reversal sets in shortly thereafter: Excess returns in recommended stocks are at least partially given up. Many stocks now enter a period of underperformance, earning significant negative returns. The return reversions indicate that such stock price reactions are due to price pressure from "naive" investors hoping to profit from the experts. However, most media lack any real information that is not yet reflected in stock prices. In short: There is no evidence that stock recommendations published in the media offer any systematic opportunity to outperform the market. The evidence leads to the opposite conclusion: That investors who follow such advice will lose in the long run.

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255 columns in 26 years. This is the end result of William Peter Hamilton's work for the *Wall Street Journal* from 1904 until his death in December 1929 when he died of pneumonia in his house in Brooklyn. Hamilton, successor of the founding publisher Charles Henry Dow, is considered to be one of the fathers of modern financial journalism. Famous for his instinct for detecting profitable investment opportunities, Hamilton is still regarded as an outstanding stock market forecaster and a master of pattern recognition, even long after his death. He is even said to have predicted the great crash in 1929 three days in advance.

In December 1932, three years after Hamilton's death, Alfred Cowles, a businessman from Colorado, gives a lecture in Cincinnati, Ohio. The title of his talk is "Can Stock Market Forecasters Forecast?". Cowles, who is very interested in topics of quantitative economics, wants to find out if it is possible to predict trends in the development of stock prices and stock indices. The stock market crash had cast doubt on the applicability of existing forecasting models. The text of his lecture in Ohio, published in 1933 in the newly established journal *Econometrica*, becomes one of the classics of modern financial literature.

In his study, Cowles examines the accuracy of prognoses of different investment experts. Among his samples are market forecasts of 16 specialized stock market services, the investment decisions of 20 fire insurance companies, the predictions of 24 financial publications as well as William Peter Hamilton's columns in the *Wall Street Journal*. Cowles is not really impressed

with the results of the stock market specialists: Correct forecasts are accidental at best. Often, the performance of the forecasts is several percent worse than the benchmark indices.

Even Hamilton, who has built up such an excellent reputation as an expert for stock market trends, is posthumously judged to have been only partly successful: According to Cowles, the recommendations of the financial columnist achieved an annual return of 12 per cent between 1903 and 1929. A portfolio with stocks from the benchmark index would easily have beaten this result with 15.5 per cent per annum.[1] The accuracy of the forecasts of the *WSJ*-columnist is slightly better, but nevertheless does not differ from a random distribution. 45 out of 90 forecasts were correct. In brief: His hit rate is exactly fifty-fifty.

1. Introduction

With the stock market boom in the 1990s, stock market coverage enjoyed a boom as well. The upswing of the financial markets was accompanied by a systematic expansion and a strategic reorientation of the business media: Investment and finance issues received broad attention, not only in special-interest-media, such as investment and financial magazines, but also in general business coverage, in newspapers and on television. From specialist journals to the yellow press – the stock market became a dominant topic.

But business coverage not only expanded significantly, it also shifted its focus: Stocks, warrants, mutual funds, and how to trade them profitably became a lot more significant in this new kind of business journalism.[2] Finance and investment instruments were the number one topic. News about financial products rather than general business or developments on the labor market prevailed in business journals at the turn of the millennium. And even years after the beginning of the stock market crash, according to the results of quantitative content analyses, more than half of all articles dealt with capital investment opportunities.[3] Other topics lagged far behind.

The tone of the articles also quickly changed. With the economization of the public sphere as a consequence of the „New Economy“ boom, business and stock market coverage became increasingly positive.[4] Systematic capital

appreciation by means of stock market gains seemed to be within reach for everybody. At least this was the impression conveyed by the media which, with their tips for stocks and investments, painted scenarios of collective wealth in ever more glowing colors. During the dramatic climax of the stock market boom, the already low percentage of sell recommendations in the commentaries of analysts and journalists dropped to a negligible level.[5] And even during the slump, despite contrary evidence, the view of the reporters, in the long term and in its general trend, was positive.[6]

In view of the importance attached to stock recommendations in the media, the lack of knowledge about this kind of business communication is surprising: Neither its effects nor its benefits have been researched systematically. Studies of price reactions to and the accuracy of stock recommendations published in the mass media have gotten avid attention from Anglo-Saxon empirical financial market research for more than two decades. However, the attempt to condense this dispersed knowledge about the price formation of securities into a model of mutual interaction between financial markets and business media has never been undertaken.[7] So far, no media research has been published on this topic.

In the following, the results of 32 case studies on the interaction of stock recommendations and stock prices will be extracted. They will then be subject to a qualitative meta-analysis (confer table 1).[8] As this synthesis from existing empirical material will show, a stable pattern occurs in a long-term overview of the different phases of the market cycle. The result is a surprisingly clear picture of the chances and limits of the dissemination of investment information by the mass media. The questions to be answered are: What is the effect of stock recommendations in the business media? And who profits from them?

2. The Publicity-Effect: The Big Moment of the Gurus

Statistical evaluations of the hit rate of stock recommendations give cause to fear the worst. In their study of 1.647 stock recommendations published in leading German business magazines, Kladobra and von der Lippe (2001) come to clear conclusions: Buy recommendations comprise the overwhelming

majority of stock recommendations in the business media. Temporary gains occur in less than half of all cases. Recommended stocks that fall – and are thus certain to bring a loss for the investor – outnumber by far the stocks that move up. Upside target prognoses, i.e. analysts' forecasts of target prices a stock should reach within a certain period of time, are almost always missed (86.2 % of the recommendations with an "upside target").

Dorfleitner and Klein (2002) examine the quality of predictions made via chart techniques, published in the German investment magazine *Börse Online* between 1995 and 2001. They confirm similarly weak results for these price forecasts via "technical analysis": Firstly, the accuracy of these forecasts is low. Success, if it occurs at all, is only accidental. Secondly, investment strategies on the basis of these forecasts are not systematically better than the market – often, it can even be an advantage to do exactly the opposite of the analysts' projections. In brief: The published forecasts do not tell anything about future price trends.

Thus, these studies provide a clear indication that the business media as a whole neither have extraordinary forecast abilities, nor are they capable of triggering the fulfillment of their own prophesies – otherwise, the hit rate would have to be much higher: A significant proportion, beyond random probabilities, of all tips, would have to be fulfilled. However, this does not seem to be the case. Stock recommendations are said to attract wide audiences to the business media. But the empirical findings concerning the success of recommendations in the media lead to the following supposition: Neither journalists nor their informants can systematically and accurately predict stock prices.

This, however, does *not* mean that stock recommendations always remain without any effect. What is decisive is the time frame: In the short term, as a series of case studies which will be examined later shows, tips in the mass media can actually influence stock prices. In the print media, on TV or on the Internet, recommendations given by stock market commentators seem to be an incentive for investors to buy stocks. Abrupt and significant price and volume increases of the stocks commented on can be the consequence. The experts' tips generate temporary price pressure through investors who buy the advertised stocks.[9]

Especially tips published on television, according to the results of several studies, can cause considerable stock movements on the markets. Wolfgang Gerke (2000) points out several cases in which stock prices reacted to stock analyses on TV. Gerke carried out a study on the German program "3sat Börse", which runs weekly on *3sat*, the common channel of *ARD*, *ZDF*, *ORF* and *SRG*. He found that stock recommendations by investment gurus, in particular tips on second-line securities, can cause "extreme price movements". Cumulated price changes after well-known journalists and analysts drew public attention to certain stocks on TV amounted to 24 per cent on average.

Gerke mentions a case in which the TV-tips of an analyst made an excess return of 9 per cent possible - *before* the program was broadcast.[10] Such extraordinary price reactions give room to the suspicion that some journalists or analysts might be tempted to manipulate information in order to bring about price changes. The knowledge about future price surges induced by the media provides an excellent opportunity for front running: The insiders buy before the recommendation is published and liquidate their positions while the general public is still in the market. Evidence of this is always visible when the prices of certain stocks increase immediately *before* they are recommended to the broad public.

Comparable occurences were already documented for an insider trading scandal in the USA in the 1980s, which involved a columnist of the *Wall Street Journal*: R. Foster Winans, co-author of the column "Heard on the Street", passed his information on to stock brokers of the investment company Kidder Peabody before they were published and later shared the illegal profits with them. After the scandal was exposed, Winans and his contact persons were sentenced for fraud. In a study of the stocks concerned, Syed, Liu and Smith (1989) later came to the conclusion that until the publication date, the insider tips facilitated an excess return of 6.25 per cent.

Thus, the phenomenon as such is not new. Price reactions in connection with investment tips were already observed in the USA during the 1970s and 80s. An example is the program "Wall $treet Week", which has run on the *Public Broadcasting System* since 1970: Recommendations published there repeatedly led to price reactions of the relevant stocks. Pari (1987) documents statistically significant excess returns of 0.7 per cent on the first trading day

after the program for the years 1983 and 1984. However, these profits were very short-lived: The over-performance reversed only one day later. In the medium term, the recommended stocks performed well below the market average. After 12 months, the performance of the recommended stocks was 8.95 per cent. The market, on the other hand, had gained 13.05 per cent.[11]

Similar results concerning "Wall $treet Week" are presented in another study: Beltz and Jennings (1997) document a "not very impressive" excess return of 0.52 per cent on the day after the program was shown for the years 1990 to 1992. They demonstrate that the "publicity effect", that means the statistically significant price increase of the recommended stocks, has the strongest effect on the first day after the TV show – and vanishes afterwards. The initially positive price movement is reversed: The stocks enter a phase of under-performance. Six months after the show, the supposed glamor stocks lag far behind the market.

Such price reactions following recommendations can be statistically significant. For the private investor, however, who relies on this public information, it is impossible to benefit from the small and short-term price movements. In practical investment business, excess returns of 0.5 to 1.1 per cent are easily exhausted by transactions fees, such as order and holding charges, and the bid-ask-spread (the difference between the buying and the selling price). Already the attempt to benefit from these price surges will lead to a balanced result at best. But the stocks commented on often begin to develop worse than the comparative index from the second day after the recommendation was published onwards. Thus, a loss is incurred.

This is an unmistakable sign of the publicity effect: If the excess returns disappear quickly, this gives reason to suspect that price reactions are not due to the inherent substance of the recommendations, but to overreactions of uninformed investors provoked by media coverage. The investor who follows such advice falls behind the market: The initial price advance is of no use to him because he does not participate in it. However, he does participate in the decline in prices. Instead of the profit he hoped for, he makes losses relative to the market, sometimes even considerable ones.

*** Insert Table 1 ***

Investment tips published on the Internet can also have a strong publicity effect. An example are publications of the website *Motley Fool*, a leading American finance website: In a study of the behavior of internet investors, Hirschey, Richardson and Scholz (2000) found statistically significant price surges in the stocks discussed on the website. The excess return on the day after the recommendation was 3.36 to 3.72 per cent. In combination with the price movements the day *before* and the day after the recommendation, the result was an average abnormal gain of 6.08 to 6.87 per cent.

Temporarily, the trading volume of the stocks discussed sharply increased as well. In the period around the publication, the average was 568.12 per cent above the normal volume – a serious indication for the fact that publications of gurus can have a strong impact on private investors. The result of the study: "Stock recommendations published on the Internet move prices and trading volumes."[12] The effects were probably intensified by the fact that the majority of the *Motley Fool*'s tips during the study period related to internet companies – a business, as the collapse of the new economy showed, which was, indeed, mainly based on "stock price fantasies".

Similar emprirical evidence has been presented for business publications in the print media. Benesh and Clark (1994) find statistically significant market reactions to recommendations of the finance magazine *Barron's*. Excess returns amount to an average of 1.8 per cent on the event day; afterwards, no unusual price movements can be found. Han and Suk (1996) document price effects after the publication of analysts' recommendations in the column "Research Reports" of *Barron's*. The price movement is 0.54 per cent on the day of the publication; as in other cases, it disappears one day later. The unusual price increase is reversed within five trading days by a significant negative performance.[13]

Such reactions can sometimes be especially conspicuous for smaller stocks which are not so much in the spotlight.[14] In these cases, the media can contribute to short-term overreactions among investors. Trahan and Bolster (1995) show that short-term price surges can be particularly strong for smaller companies: For 144 stocks recommended, the researchers find abnormal returns of 2.1 per cent on average. These gains are not distributed equally over the sample: The sub-group formed by the smallest companies shows the strongest re-

actions to recommendations. The size of a company and the publicity effect are in inverse relation. But such gains are reversed as well: Price adjustments only take a few minutes.[15] Then profits quickly erode.

Trend stocks, which have shown a good performance in the past, can also provoke a marked response – this is one reason why numerous event studies demonstrate abnormal price increases that set in as early as several days before the publication. Many recommendations relate to "hot" stocks which are already on the move and which, according to the hopes of the experts who publish the tips, can be pushed a little further with a carefully devised publication. But most of these stocks usually "cool down" quickly.[16] A more detailed analysis will show: Opinions follow the market, not the other way round.

3. Stock Recommendations: News, But No New

What are the chances of receiving profitable information from published opinions? Tumarkin and Whitelaw (2001) dealt with this question for Internet message boards. In this context, they analyzed 181.633 contributions to the finance website *RagingBull.com*. In order to test them for their impact on prices, a relationship was established between the numbers and kinds of contributions and the price movements of the stocks mentioned. The result: A high discussion intensity and generally positive opinion coincide with abnormal gains. The more positive the comments on the stocks, the better their development – *in the days before the excited chatter on the internet*.

Positive comments, according to Tumarkin and Whitelaw, are followed by more positive comments. Positive comments are followed by a sharp increase in trading volumes. Positive comments, however, are *not* followed by significant price gains. All things considered, the returns after the event day equal zero.[17] This means that no reliable price predictions can be derived from the public response in these finance forums; the opinions expressed there do not provide forecasts that could be systematically used. Opinions do not make the market, but the market determines opinions. Or to put it differently: For the market, information published on the message boards is not news.[18]

In one of the most interesting studies of the information content of finance websites, Sanjiv Das and Mike Chen (2001) come to similar insights. On the

basis of a statistical evaluation of 85.000 messages on the message boards of *Yahoo!*, they find that the news volume on the internet and the trading volume on the financial markets strongly correlate. They also find a relationship between mood shifts and price fluctuations as well as a volume of news that increases with the degree of price fluctuation. However, according to Chen and Das, market participants behave reactively. The markets are ahead of the opinions. Surprising price changes in particular are hardly ever anticipated. In brief: Information published in internet forums has no predictive value.

Die Telebörse, a German financial magazine that catered to private investors, reported similar findings. Only months before its own, very premature exit from the market after only two years of existence, the magazine carried a story about the limited use of analysts' recommendations published on finance portals on the Internet. The majority of the predictions is wide off the mark and of no use to the investor.[19] Thus, neither opinions of private individuals nor recommendations of investment experts seem to provide the "information lead" for the private investor, for which the internet once was enthusiastically welcomed.

Usually, tips in the print media are a bad deal for their readers as well. This is demonstrated by the stocks which are discussed in the column "Inside Wall Street" in the magazine *Business Week*: Stocks that are commented on positively, according to a study by Mathur and Waheed (1995) show a significant positive price development – *in the days and weeks before such publications*. The abnormal gain begins to accumulate about two months before the publication date. It reaches its high on the day of the publication of the column with an excess return of 1.71 per cent, with sharply increased trading volumes. From the day before to the day after, the average excess return is 2.63 per cent.[20]

But the price effect after the press coverage is only short-lived, one to two days on average. Only large investors and insiders who pay low transaction fees can benefit from these price movements. In the medium term, Mathur and Waheed say, the stocks discussed show a *negative* performance relative to their benchmark indices. The recommendations are of use only to those, if to anyone at all, who already own the stocks before the publication. Those who buy after the publication do not have any benefit – they have acquired an un-

derperformer. The negative return of the recommended stocks, relative to the benchmark index, amounts to an average of 5.33 per cent after six months.[21]

In a study comprising the largest sample of "Inside Wall Street"-articles so far, Sant and Zaman (1996) virtually come to the same conclusion: The majority of the commentaries in this business magazine are positive (8:1). Stocks thus commented on tend to get positive excess returns around the publication date. These excess returns begin to accumulate weeks in advance. On the day the column is published, they reach their high with an excess return of 1.16 per cent. The trading volumes of the stocks concerned are far above average. From the day before to the day after, the average positive excess return is 2.44 per cent. Afterwards, a trend reversal sets in.

The negative return of the recommended stocks adds up to an average of 6.80 per cent after six months.[22] All this indicates that opinions follow the market, not the other way round. The reason is that the relevant information content is exhausted before the articles are published. Analysts would hardly be interested in disseminating insider information without having benefited from it. Price movements in connection with publications are due to the publicity effect. Thus, what happens is nothing but a self-fulfilling prophecy. Sant and Zaman state: "We conclude that Business Week stories are of only limited use to their readers."[23]

The same applies to the *Wall Street Journal*. The leading business newspaper in the USA has received a particularly high degree of scientific attention. There is hardly any department of the newspaper that has not been evaluated for its impact on prices. Such as the column "Investment Dartboard" which is published monthly: It is a stock market game in which four financial managers compete against each other with their tips – and against a random sample of stocks that is selected by throwing darts at the stock market pages of the *WSJ*. After six months, the return of the experts' selection is compared with the return of the random sample. A whole range of studies has dealt with the "Dartboard". They all came to very similar results.

Barber and Loeffler (1993) find an abnormal return of 3.53 per cent at the publication date of the recommendations of the investment experts. In particular, companies with a small number of stocks circulating on the market are

pushed by strongly increased turnovers in connection with the tips.[24] However, a price reversal sets in within a few days. During this phase, the selected stocks accumulate a negative return of 2.08 per cent. Wright (1994) also finds a positive excess return, 3.73 per cent on the publication day, which is almost completely reversed by a negative return during the following trading days: The price advance is followed by a price decline.

Greene and Smart (1999) also observe extraordinary returns accompanied by extraordinary turnovers: Gains of 3.00 per cent on day 0 with turnovers of 140 per cent above average. These gains are realized almost completely in the first minutes of trading, until about one hour after the dissemination of the publication.[25] Those who join in the game afterwards will be among the losers: The price advance is followed by a price decline. The biggest winners among the recommended stocks now turn into the biggest losers. According to Greene and Smart, the excess returns completely disappear within one month. It is obvious that this is another case in which private investors do not have a chance to benefit from the temporary overperformance.

Similar results can be found in a study of the "Dartboard" by Allen and Awang-Damit (1998): They find an excess return of about 3.0 per cent on the publication date and show that the positive trend already sets in before the publication of the tips.[26] However, the gains disappear within a few days. The authors suppose that analysts pass the tips on to their clients before they publish them. Metcalf and Malkiel (1994) as well as Thomas and Ghani (1997) draw similar conclusions. Liang (1999), who studied almost five years of the stock market game, confirms these results: The experts' selection, according to Liang, generates a remarkable price pressure, which causes a gain of 2.84 per cent on the publication date. The trading volume is 144 per cent above average.[27] Both the excess returns and the high trading volumes set in several days before the publication.

However, the price advance is not a permanent one. The short-term excess return is followed by a price reversal within a few days. If the tips had an information content, the price increase would be more permanent. But precisely this is not the case: The quick increase in returns is followed by an immediate price decline – and a continuous deterioration of prices afterwards. For the public, this return carousel is not neutral at all: Investors who follow the rec-

ommendations lose 3.8 per cent in six months on average.[28] The conclusion of all seven studies is the same: Price pressure is generated by reactions of "naive" investors. The information content of the recommendations only plays a marginal role – if any role at all. Albert and Smaby (1996) are the only ones to find no indications of a return reversal. They do not find any sign of significant returns either, though.

Not only the "Dartboard", but also the column "Heard on the Street", which has been published in the *Wall Street Journal* since 1969, has been subject to various effects studies. In their pioneering study in the 1970s, Davies and Canes (1978) obtained results which were replicated several times in later research: The publication of analysts' opinions, according to the authors, measurably interacts with stock prices. The overwhelming majority of price movements is anticipated during the days before the publication of the information. In comparison, the price movement on the event day is relatively low. This case is not an opportunity to outperform the market either.

These findings are generally confirmed by Syed, Liu and Smith in follow-up studies of "Heard on the Street". They observe excess returns on the day of the publication and earlier, a price reversal afterwards.[29] Lloyd Davies and Canes had found only weak indications of a price reversal after the price advance. They concluded that reactions to the column were not mere self-fulfilling prophecies. However, this early study already shows that information published in the column is very quickly reflected in stock prices. Despite a supposed information content, there is therefore no chance of making an excess return after transaction costs. Even the most vigilant investor will not manage to transform the theoretical gains into a real appreciation in value of his deposit. In brief: De facto, the market is efficient.

Beneish (1991) replicates important aspects of Lloyd Davies' and Canes' study: He shows, that considerable gains are recorded in the two days before the publication of the column. He finds hints that insiders, the authors of "Heard on the Street" or their contact persons in the finance industry, become active before the publication date of the recommended stocks and trigger early price reactions. After the publication, only slight price increases are observed, which means at best small theoretical excess returns for the outsiders.[30] It is

the same old story: After transaction costs, nothing is left of these purely arithmetical gains.[31]

In many cases, statistical post-hoc analyses do not even indicate theoretical gains: Pound and Zeckhauser (1990) demonstrate that it is impossible to obtain excess returns with the help of takeover rumors published in "Heard on the Street". The market reacts efficiently to the rumors spread in the business paper: They are correct in less than 50 per cent of all cases and thus do not have any predictive value. They are not systematically reflected in stock prices. In fact, they usually do not have any effect on the stock market at all.[32] In other words: This information is no news for the market.

Other parts of the *Wall Street Journal* do not have a relevant impact on stock prices either – at least not a positive one. Ferreira and Smith (1999), for instance, do not find any significant excess returns for the stocks discussed in the column "Small Stock Focus". This column focuses on news about smaller companies whose stocks stood out for considerable price surges on the previous day. On the day the column is published, there are no unusual positive price movements. On the following day, however, a price reversal sets in: Return rates go down. Thus, readers who react to the information do not make any abnormal profit – since the profit occured on the day before the publication. However, they run the risk of obtaining abnormal losses – since these occur from the day after the publication onwards.

Even the leading minds in the world of finance do not shine with superior performance. This is the result of Desai's and Jain's (1995) study of 1.599 stock recommendations mentioned in the annual "Roundtable" by *Barron's* between 1968 and 1991: The "Roundtable" is a meeting of eight to twelve "Wall Street Superstars" (according to *Barron's*) that the magazine invites on an annual basis. But the history of the recommendations of the money managers is hardly impressive. The study, which has analyzed the most comprehensive sample with reports from a quarter of a century, demonstrates: The annual selection of stocks obtains an excess return of 1.04 per cent on the publication day.[33] Afterwards, very little happens.

Desai and Jain come to a clear result: "For the most part, excess returns equal zero for holding periods of one to three years after the publication."

From this, they conclude: "An investor who reads the recommendations in Barron's and invests accordingly would not benefit from them if he follows the buy recommendations of the Roundtable." Even the supposedly brightest minds in the investment industry thus on average do not beat the market in the long term: "All in all," Desai and Jain say, "our results indicate that the so-called 'Superstar' money managers on average do not seem to have superior qualities for recommending stocks."[34]

4. Performance Disturbances: Reflexive Return-Reduction

The results from these event studies can be condensed into a model: In the case of stocks with a high market capitalization and an appropriate market breadth, that is to say stocks of companies whose development is observed by many analysts, stock recommendations are rarely accompanied by substantial, if any, price reactions. The good news has already been anticipated. Again and again, stock prices move up before the recommendations are published, which gives cause to the conclusion that the tips in the media are based on the good performance of the past. In such cases, no significant price reactions occur, probably also because a possible price pressure from naive investors is counterbalanced by the reactions of informed investors.

For stocks with a low market capitalization and little market breadth, things can be different: In these cases, prices also move before the dissemination of the recommendations, if at all – this again indicates that the tips follow good performances in the past.[35] Sometimes, particularly intense price adjustments can be noticed before the publication date, which suggests that insiders are active among those close to the tipsters. However, it also happens to companies which are less in the spotlight that considerable abnormal returns are documented after the publication of the recommendations. Excess returns primarily occur on the publication day, often in connection with strongly increased turnovers of the recommended stocks. But usually, the excess returns do not stick with the prices: Prices return to normal and fall until they reach their average level within a few days. Often, they fall even lower.[36]

In sum, this process of price reactions induced by the media and the subsequent price reversal constitutes a permanent stable pattern. In the press, on

television or on the Internet, on Wall Street or at the stock exchanges of Amsterdam, Frankfurt, London or Istanbul, in the 70s, 80s or 90s – reversals of price reactions have been documented in connection with various news media, in different countries, at different times.[37] Opinions follow the market, which, for a very short time, seems to follow the opinions, but then quickly returns to its initial status. What is much more interesting than the many buy recommendations, however, is the small number of sell recommendations: They sometimes seem to lead to permanent price changes.[38]

The problem is that these price movements are only visible in retrospect, but that they cannot be forecast systematically. In fact, it is impossible to say with certainty whether they are direct reactions to the contents published in the media: The case studies only provide correlations which are sometimes more, often less significant. It would be an inadmissible causal conclusion to interpret them as immediate effects of the news content. Quite frequently, price reactions are statistically significant, but to such a small degree that no clear connection can be deduced.[39] Probably the supposed price movements frequently are only artefacts.[40] In many cases, it is even impossible to predict the general tendency of future reactions. Almost identical pieces of information can trigger diametrically opposed price movements.[41] Often, there is probably nothing more than pure coincidence.[42]

For example, no unusual excess returns were found for recommendations of leading money managers published within a quarter of a century in *Barron's*. However, such excess returns were recorded for recommendations of leading money managers in the *Wall Street Journal* – within a period of time of only three years.[43] As soon as the numbers seem to indicate significant excess returns, these have already disappeared again.[44] But from the point of view of the private investor, this does not make any difference, even if the reactions seem to show the "right" tendency. He or she cannot even benefit economically from positive anomalies:[45] Price reactions set in too quickly, and transaction costs exceed cumulative excess returns.

Even a specific search for the economic benefits of the recommendations of finance commentators thus leads to disappointing results. Lee (1986) explains: "Some finance columns may be capable of giving useful advice, but no finance column can permanently provide useful advice."[46] No doubt, stock rec-

ommendations can also be correct.[47] Successful streaks necessarily occur by chance. What is decisive is their probability: It is certainly not a coincidence that out of all studies, the case studies with the longest sample periods come to the conclusion that it is impossible to outperform the market with the help of financial advice published in the media.[48]

Nine out of ten studies considered in this article show that no publication manages to maintain successful streaks over an extended period of time (confer table 2). Shephard (1977) examined 1.008 recommendations in seven publications over a period of six years. He writes: "36 months after their publication, the recommendations of six of the seven publications had suffered relative losses between 7 and 13 per cent."[49] Dimson and Marsh (1986) sum up: "Despite substantial differences in the performance of different publications, none of them manages to achieve a statistically significant overperformance in the period of one and two years after the publication of the recommendations."[50] Studies of the performance of investment newsletters do not come to any other conclusion.[51]

The media like to quote individual success stories and short-term anomalies in their self-advertising. Often, the impression of a systematic overperformance is generated because of pre-selected samples which focus on the winners. But they do not contradict our conclusion: The longer the study period and consequently the reliability of the data, that means, the lower the probability that periodic deviations from the norm are recorded, the clearer the result: The returns of the stock recommendations are not due to the know-how of their authors, but to a random distribution.[52]

Dimson and March are thus correct in stating: "It would be inappropriate to claim that an advice column with a good success rate can be expected to repeat its investment success."[53] The explanation for this is obvious: In highly competitive markets, a profitable information lead on the basis of public sources can only be short-lived. For this successful method immediately attracts imitators. This is particularly true for the media market, where competitors are very closely watched. Promising sources of information quickly become worthless. Their way of analysing and presenting information will soon be copied. Possible information asymmetries will thus disappear rapidly.

As the exclusiveness of media contents declines, so does their expected benefit: “Insider tips” that are generally known are useless. Any systematic information lead is lost in no time: The bigger an opportunity, the quicker this gap is taken advantage of. By taking advantage of this gap, the conditions necessary for its existence are eliminated. With the help of digital communication tools and computer-based analysis methods, opportunities to obtain abnormal gains are detected and seized more and more quickly. Comparative information leads are thus rapidly reduced.

*** Insert Table 2 ***

This does not exclude the possibility that individual publications can obtain a temporary lead.[54] But the success turns into its opposite: Publications that offer a valuable product will attract more and more clients - and this is exactly why they lose their information lead. If a business magazine manages to temporarily outperform the market with its recommendations, this will arouse the attention of the public – when the magazine advertises this achievement to attract new readers, at the latest. However, the comparative advantage is thus lost: The more a piece of information is disseminated, the lower its economic benefit. In the long term, it is almost impossible for a business publication to supply its audience with a consistent, let alone a considerable profit.

In fact, business magazines geared to the capital market mainly do their users a disservice with their stock recommendations. Those case studies which did not only examine the events in a very short period around the publication date, but evaluated the long-term performance of recommended stocks, come to a clear conclusion (confer table 2). Whether the period considered is six months or one year, two or three years: The returns either almost equal zero or are clearly negative. There are hardly any positive exceptions. The figures leave no doubt: The majority of stock recommendations in the media make a medium-term underperformance compared to a passive investment strategy highly probable.

This really is the most realistic scenario for the private investor: For the most part, the tips obtain an abnormal negative return in the medium term, even on paper. The stock prices lag far behind in comparison to the bench-

mark indices. The losses in the available case studies were between –0.71 and –6.8 per cent after six months. After one year, negative returns come to up to –7.23 per cent. Before transaction costs. If we add these fees to come to a more realistic picture, the losses increase even further.[55] Even in cases in which the returns are close to or slightly above zero, the final balance is negative.

It is therefore fair to say that in the long run, investors either do not benefit from the financial advice published in the media or are even adversely affected. The tips do not offer the public the opportunity to outperform the market systematically. This opportunity is only available to those insiders, analysts and journalists as well as people close to them, who put the recommendations into action before their publication. The logic behind this situation is that the potential systematic gain of the insiders is derived from the potential systematic loss of the outsiders. Therefore, it would not be surprising if, in most cases, the private investor is left with a negative balance in the end. For him, the net effect equals zero at best. Most probably, however, his chances are even worse than fifty-fifty.

5. Summary

Stock recommendations in the business media can under certain circumstances influence stock prices. But if price movements occur, the rise in market prices is usually short-lived. Study after study proves: Price movements after tips published in the media are followed by price reversals. As soon as public attention decreases, prices move into the opposite direction and the excess returns tend towards zero, or even below. This is always a sign for the fact that prices are not influenced by fundamental factors, but rather by publicity in the media.

It is impossible for the private investor to benefit systematically from such U-turns in stock prices: The increases in return on the publication day are practically irrelevant for him, since they are in most cases already reflected in the opening prices. There is therefore no chance to participate in them. What is decisive is the price trend from the day after onwards. But the excess returns of various holding periods, from very short periods to time frames of several years, are close to zero or even lower. As a consequence, there is no reason to

believe that journalists or their informants do have the ability to systematically make a superior stock selection.[56]

Alfred Cowles already pointed out in his talk at the Econometric Society in December 1932 that some tipsters have the tendency to emphasize particularly successful stock recommendations. They simply conceal less successful tips.[57] These, however, are quite numerous: Even the best forecasters, as Cowles points out concerning the performance of financial publications, are hardly ever better than chance.[58] Many of those who do not have a feel for the right choice – and they are the majority – systematically come up with wrong tips. In this regard, nothing has changed.

In fact, an underperformance in the medium term compared with the market average is the most probable scenario: Medium-term excess returns of stocks recommended in the media are exceptional. Most tips are not only not better than the market, they even systematically fall behind. After transaction costs at the latest, the investment conditions of private investors are such that they generate a loss. Those who fall for the tricks of the noise makers systematically lose their money.

Finance commentator Jane Bryant Quinn remarks on this issue: "The articles sound as if the journalist knew which stocks or mutual trusts to buy. In fact, we do not."[59] Finance studies are therefore correct in suspecting that the overwhelming majority of recommendations is based on mere noise production and thus is without any information content.[60] Under pressure to comment on short-term developments, journalists pretend to be competent even if they are not.

It is therefore fair to say that the business media's claim in their advertising that they provide a benefit by offering an advantage to the majority of investors, does not stand up to systematic examination. The opposite is true: Each Dollar an investor spends on the business media diminishes his profit and constitutes a setback relative to the market. For the sake of honesty, financial advice in the business media should bear the following warning: "Attention: Profits obtained by following our stock recommendations are purely accidental."

6. Coda

17.457 stock forecasts in 67 years. This is the end result of the "virtual" William Peter Hamilton, who was designed by three finance experts in their computer in order to save the reputation of the "real" William Peter Hamilton: As we know, Alfred Cowles, the business man from Colorado, had come to a critical evaluation of the *Wall Street Journal* columnist's balance in his paper "Can Stock Market Forecasters Forecast?". The accuracy of Hamilton's predictions, Cowles said, did not differ much from a random distribution. A portfolio with the stocks he recommended on average would have lagged behind more than three per cent per annum with regard to the benchmark index.

Brown, Goetzmann and Kumar (1998) carried out a secondary analysis of Cowles' data and tried to revise his findings. For this purpose, they used his 255 editorials to train a neuronal network on his forecasting technique and constructed a "Hamilton-machine" by imitating his decision-making processes. Their goal was to put the hit rate and durability of his investment strategy to a long-term test. The result: In the re-interpretation of Brown, Goetzmann and Kumar, the annual performance of the portfolio between 1902 and 1929 comes to 10.73 per cent – with a lower risk in comparison with the benchmark index. Its performance is 10.75 per cent annually.

The long-term test of the "Hamilton-machine" for the period from 1930 to 1997 leads to the following result: Under realistic market circumstances, his strategy would not generate any considerable excess returns. Since an occasional lead over the benchmark index disappears if transaction costs and the delay between the publication of the recommendation and its implementation are taken into account. If one calculates the return from the day after the recommendation onwards, which is the most realistic scenario for small investors, the performance is worse than the index. All in all, the return of the method developed by this master of pattern recognition is barely distinguishable from the market return.

TABLE 1

Survey: Literature on the Effects of Stock Recommendations in the Business Media

- Buy Recommendations -

	Researcher	Publication	Period	Sample	Excess Return[a]
[1]	Yazici and Muradoglu (2001)	*Moneymatik* "Investor Ali"	1993-98	199	2.49
[2]	Desai, Liang and Singh (2000)	*Wall Street Journal* All-Star Analysts	1993-96	1,157	0.42
[3]	Ferreira and Brooks (2000)	*Wall Street Journal* "Insider Trading Spot-light"	1994-95	268	0.63
[4]	Hirschey, Richardson and Scholz (2000)	*The Motley Fool* "Rule Breaker"	1994-98	21	1.60
[5]	Ferreira and Smith (1999)	*Wall Street Journal* "Small Stock Focus"	1993	398	-0.36
[6]	Greene and Smart (1999)	*Wall Street Journal* "Dartboard"	1988-92	199[b]	3.00
[7]	Liang (1999)	*Wall Street Journal* "Dartboard"	1990-94	208	2.84
[8]	Allen and Awang-Damit (1998)	*Wall Street Journal* "Dartboard"	1990-91	90	2.60 – 3.28
[9]	Beltz and Jennings (1997)	*PBS* "Wall $treet Week"	1990-92	734	0.52
[10]	Martin and Ghani (1997)	*Wall Street Journal* "Dartboard"	1990-92	66	2.99
[11]	Albert and Smaby (1996)	*Wall Street Journal* "Dartboard"	1988-91	140	3.2
[12]	Han and Suk (1996)	*Barron's* "Research Reports"	1991	521	0.54
[13]	Sant and Zaman (1996)	*Business Week* "Inside Wall Street"	1976-88	328	1.16
[14]	Desai and Jain (1995)	*Barron's* Annual Roundtable	1968-91	1,599	1.04
[15]	Mathur and Waheed (1995)	*Business Week* "Inside Wall Street"	1981-89	233	1.71
[16]	Trahan and Bolster (1995)	*Barron's*	1988	144	2.1
[17]	Benesh and Clark (1994)	*Barron's*	1987-88	258	1.80
[18]	Metcalf and Malkiel (1994)	*Wall Street Journal* "Dartboard"	1990-92	120	n.a.

[19]	Palmon, Sun and Tang (1994)	*Business Week* "Inside Wall Street"	1983-89	280	1.91
[20]	Röckemann (1994)	*Actien-Börse* *Börse Online* *CC-Brief* *Effecten-Spiegel* *Swingtrend*	1989-91	276	0.15
[21]	Wright (1994)	*Wall Street Journal* "Dartboard"	1988-90	76	3.73
[22]	Barber and Loeffler (1993)	*Wall Street Journal* "Dartboard"	1988-90	95	3.53
[23]	Huth and Maris (1992)	*Wall Street Journal* "Heard on the Street"	1986	111	0.62
[24]	Liu, Smith and Syed (1992)	*Wall Street Journal* "Heard on the Street"	1982-85	566	1.87 1.09
[25]	Beneish (1991)	*Wall Street Journal* "Heard on the Street"	1978-79	286	0.90
[26]	Liu, Smith and Syed (1990)	*Wall Street Journal* "Heard on the Street"	1982-85	566	1.54
[27]	Poand and Zeckhauser (1990)	*Wall Street Journal* "Heard on the Street"	1983-85	42	0.07
[28]	Wijmenga (1990)	*Elseviers Magazine* *Beleggers Belangen* *de Financiele Koerier*	1978-83	160 42 127	n.a.
[29]	Syed, Liu and Smith (1989)	*Wall Street Journal* "Heard on the Street"	1983-84	16[c]	2.97 0.97
[30]	Pari (1987)	*PBS* "Wall $treet Week"	1983-84	349	0.66
[31]	Dimson and Marsh (1986)	British Finance Press	1975-82	792	n.a.
[32]	Lee (1986)	*Forbes* Heinz Biel Column	1962-79	374	0.87[d]
[33]	Lloyd Davies and Canes (1978)	*Wall Street Journal* "Heard on the Street"	1970-71	597	0.92

[a] abnormal gain at the publication date in per cent

[b] including nine sell recommendations

[c] including seven sell recommendations

[d] cumulative excess return from day –3 to +5

The table comprises event studies concerning the publication of stock recommendations in the business media. Articles on the tips of stock market services were not taken into consideration. In the majority of cases, the common event study method is used. Its goal is to establish abnormal returns around an event: For this purpose, deviations of the realized returns from the expected returns are measured. The excess returns are calculated by substracting the market returns. The reference model which is used to generate the expected returns plays a decisive role. Partly, there are considerable differences in the works cited concerning the reference model and the estimate period which is used.

TABLE 2

Long-term Performance of Buy Recommendations
– Cumulative Excess Returns -

	Researcher	Publication	6 Months	1 Year	2 Years	3 Years
[1]	Desai, Liang and Singh (2000)	*Wall Street Journal*	1.77	4.02	6.04	n.a.
[2]	Liang (1999)	*Wall Street Journal*	-3.80	n.a.	n.a.	n.a.
[3]	Beltz and Jennings (1997)	*PBS*	-1.03	n.a.	n.a.	n.a.
[4]	Martin and Ghani (1997)	*Wall Street Journal*	4.66	n.a.	n.a.	n.a.
[5]	Sant and Zaman (1996)	*Business Week*	-6.80	n.a.	n.a.	n.a.
[6]	Desai and Jain (1995)	*Barron's*	n.a.	0.21[ab]	-0.38[ab]	-0.71[ab]
[7]	Mathur and Waheed (1995)	*Business Week*	-5.33	n.a.	n.a.	n.a.
[8]	Trahan and Bolster (1995)	*Barron's*	-2.30[a]	-6.92[a]	n.a.	n.a.
[9]	Benesh and Clark (1994)	*Barron's*	-4.69	-1.65[a]	n.a.	n.a.
[10]	Wijmenga (1990)	*Elseviers Magazine* *Beleggers Belangen* *de Financiele Koerier*	-2.65 0.16 -2.67	n.a.	n.a.	n.a.
[11]	Pari (1987)	*PBS*	-4.18	-7.23	n.a.	n.a.
[12]	Dimson and Marsh (1986)	British Finance Press	n.a.	-0.4	-1.3	n.a.
[13]	Shepard (1977)	*Barron's* *Forbes* *Wall Street Journal*	2.92[a] 1.08[a] -0.71[a]	3.41 -1.87 -3.25	n.a.	-8.00 -2.65[a] -7.86

This table gives an overview of the cumulative excess returns of stock recommendations published in the media (relative to the publication date) after 6 months, 1 year, 2 and 3 years.

[a] statistically not significant [b] from the day after the publication date

Endnotes

[1] Cowles (1933), 315.

[2] Cf. Schuster (2000a) and (2001).

[3] Kepplinger and Ehmig (2001 and 2002). On the basis of a study of eleven German business magazines, Kepplinger's and Ehmig's 2002 study comes to the following conclusion: "Almost half of all articles deal with financial products, that means concrete investment opportunities." Kepplinger and Ehmig (2002), 15. The number of contributions on investment topics decreased slightly after the stock market crash. However: "Contributions which are relevant for private money and investment questions have the highest status among business magazines." More than 60 per cent of the contents dealt with these topics. Kepplinger and Ehmig (2002), 56. The analyzed magazines are: *Börse Online*, *Capital*, *DMEuro*, *Euro am Sonntag*, *Finanzen*, *Focus Money*, *Geldidee*, *Impulse*, *Managermagazin*, *Wertpapier* and *Wirtschaftswoche*.

[4] For the term "economization of the public sphere" cf. in more detail Schuster (2001), 33-53 and passim.

[5] According to Barber, Lehavy, McNichols and Trueman (2001) the proportion of sell recommendations dropped from 3.4 (N=19.999) to 1.8 per cent (N=39.722) between 1996 and 2000.

[6] Wolf (2001), 70, 74, 76, 80. In an analysis of the coverage of the German Neuer Markt-Index, Wolf demonstrates that in the phase of stock market depression, the business media still stood by their policy of disseminating stock recommendations. 60 per cent of the overall coverage were allotted to investment recommendations and stock price forecasts. This means that "investment tips occur more frequently than any other content form." And further: "The results show that [...] coverage was optimistic for the most part and the 'over-optimism' in business coverage was confirmed." Wolf 2001, 84, 112.

[7] For a general introduction to empirical capital market research cf. Möller and Hüfner (2001).

[8] The vast majority of the studies considered use variations of the following event study-method: In the time around the publication of the stock recommendations – the event date – "abnormal" returns are measured. This is done by calculating an "expected" return, usually with a version of the market model, which is assumed to be constant. Afterwards, the actual returns of the recommended stocks around the date of the event are determined. The difference between the actual and the experted returns constitutes the abnormal return.

[9] An early discussion of such media effects can be found in Ruff (1963). He writes: "The pattern of the means shows an initial impulse for the stock price due to the recommendation, a decreasing effect as time passes and finally a waning interest in the stock." Ruff (1963), 43.

[10] Gerke (2000), 162ff.

[11] Pari (1987), 75.

[12] Hirschey, Richardson and Scholz (2000), 62.

[13] Han and Suk (1996), 31.

[14] In particular, stocks recommended by market letters are on average much smaller than the benchmark indices. Metrick (1999), 1748; Jaffe and Mahoney (1999), 293; Röckemann (1994), 839.

[15] Cf. Antunovich and Sarkar (2001).

[16] Cf. Beltz and Jennings (1997), 24 as well as Dimson and Marsh (1986), 125.

[17] Tumarkin and Whitelaw (2001), 47. Antweiler and Frank (2001), who examined more than 1.5 million contributions, find correlations between the intensity of the discussions in the internet forums and trading volumes. They do not find significant excess returns either: "The message boards do not successfully forecast stock gains." Antweiler and Frank (2001), 18. Wysocki (1999) finds an excess return on the day of the event of 0.18 per cent after a 100 per cent increase in the number of messages. The author rightly asks "whether this result implies a feasible trading strategy" and immediately answers the question himself by saying that this is probably not the case. Wysocki (1999), 20.

[18] Probably, the people who run these services also know this quite well. Asked about the benefit of the information published on his website, the managing director of *Wallstreet Online*, the biggest German finance community, answered: "No idea." Cf. Schuster (2000b).

[19] Müller (2001).

[20] For comparison: The cumulative positive excess return of a period of six months before the discussions amounts to 4.74 per cent. This means that the decisive stock price increase occurs before the publication. Mathur and Waheed (1995), 591. Palmon, Sun and Tang (1994) find even higher excess returns (3,25 per cent from day –1 to day +1), but no signs of a reversal.

[21] Mathur and Waheed (1995), 595.

[22] Sant and Zaman (1996), 625.

[23] Sant and Zaman (1996), 632.

[24] However, the most part of the abnormal gain, according to Barber and Loeffler, is anticipated *before* the stock market opens. The actual price increase during the trading day is 1.54 per cent on average.

[25] Greene and Smart point out that the recommendations are "priced in" within one hour and that hardly any excess returns are found afterwards: "The Dartboard Column generates a temporary price pressure...The excess returns on the event day are most often realized within the first trading hour." Greene and Smart (1999), 1892. The turnovers of the recommended stocks, on the other hand, remain above average for a longer period of time: Those who trade at these exaggerated prices will lose in the long run.

[26] Albert and Smaby (1996) also observe unusual excess returns that set in before the publication.

[27] Liang's data are almost identical to those of Greene and Smart.

[28] Liang (1999), 120.

[29] Syed, Liu and Smith (1989); Liu, Smith and Syed (1990); Liu, Smith and Syed (1992).

[30] Huth and Maris (1992) come to similar results.

[31] This statement also applies to those studies which find the highest statistically significant excess returns on the publication day and interpret them as if they contradicted the semi-strong version of the Efficient Market Hypothesis. For instance Ferreira and Brooks (2000) with average abnormal returns at the publication date of 0.63 per cent: Economically, that means after transaction fees, these excess returns are not significant.

[32] Pound and Zeckhauser (1990), 299.

[33] Desai and Jain (1995), 1264.

[34] Desai and Jain (1995), 1257, 1271, 1265.

[35] Pieper, Schiereck and Weber write in their study of the effects of buy recommendations of an investment newsletter: "In almost all samples, the biggest proportion of the abnormal performance is achieved before and on the day of the publication [...]." Pieper, Schiereck and Weber (1993), 500.

[36] Also for companies with little stock market capitalization, a non-reaction concerning the published stock recommendations is likely to be the most realistic scenario. Explanation: The studies considered here probably include a publication bias in that studies which find significant results are more likely than studies where this is not the case.

[37] For Great Britain, Dimson and Marsh (1986) state: "Any potential short-term profit from the recommendations of the tipster would be more than compensated by the usual transaction fees in England." And they continue: "The empirical conclusion is that stock recommendations published in England possibly are of no use to anyone at all." For the Netherlands, Wijmenga (1990) points out: "In so far as abnormal gains follow recommendations, they are positive for a short period of time and negative in the long run." For Turkey, Yazici and Muradoglu (2001) state: "The results of this study show that investment advice published in a magazine is not a helpful service to the average private investor, but a lucrative deal for its 'preferred investors'."

[38] Cf. Foster (1979, 1987) as well as Desai and Jain (2000). The data of Gerke and Oerke (1998) show individual, but no systematic reactions to buy recommendations. Sell recommendations, on the other hand, lead to obvious and systematic price movements.

[39] In addition, Röckemann (1994) observes that the impact of stock recommendations "is very obvious in an aggregated form, but in the results for the individual stock market services, effects are found to be very confusing". Röckemann (1994), 821.

[40] Heinz Sahner (1979) rightly points out that scientific periodicals are full of empirical studies which show errors type I: They dismiss the null hypothesis although it is correct. Too often, Sahner says, people overlook that "non-relations can adequately describe reality". Sahner (1979), 269. Krämer and Runde write: "At a significance level of 5%, one will 'discover' on average five 'effects' in 100 trials even if none is really there. This problem has long been known in applied statistics under the heading of 'data mining'." Krämer and Runde (1996), 293.

[41] Cf. Pound and Zeckhauser (1990), passim.

[42] In fact, the method provides an essential contribution to the production of the results. Dimson and Marsh (1986) deal in detail with the importance of the measuring method and the benchmark index for the evaluation of the results of event studies. The longer the time period during which the performance of stock recommendations is measured, the more significant mis-specifications become. Dimson and Marsh (1986), 135 and passim; cf. also Albert and Smaby (1996), 60ff. Salinger (1992) shows that an insufficient consideration of standard deviations can lead to distorted results of event studies and a false assessment of the level of significance.

[43] Desai and Jain (1995); Desai, Liang and Singh (2000). As in many other cases, nothing is left of the excess returns after transaction fees.

[44] Barber, Lehavy, McNichols and Trueman (2001) find statistically significant, but for the private investor economically irrelevant excess returns in the estimates of investment analysts for the years 1986 to 1996. Barber, Lehavy, McNichols and Trueman (2002) find *no* statistically significant excess returns in the estimates of investment analysts for the years 2000 and 2001. On the contrary: What occurs are economically highly relevant losses. The stocks the analysts most warmly recommended strongly underperform the market.

[45] And in many cases institutional investors neither, even if they bear low transaction costs.

[46] Lee (1986), 38.

[47] Cf. Glascock, Henderson and Martin (1986).

[48] Sant and Zaman (1996) examined a sample from 1976 to 1988. They write: "The information published in Business Week is already 'used up' and exploited by informed traders." Desai and Jain (1995) studied a sample from 1968 to 1991. They write: "Someone who invests according to the recommendations of the Roundtable published in Barron's would not benefit from this advice." Mathur and Waheed (1995) studied a sample from 1981 to 1989. They write: "Investors who buy in the long run on the basis of secondary information in general get returns that are below the market average." Lee (1986) examined a sample from 1962 to 1979. He writes: "My empirical evidence shows that investors were not able to obtain consistent excess returns, less transaction fees, by blindly following the advice of a finance column in the media."

[49] Shepard (1977), 35.

[50] Dimson and Marsh (1986), 131.

[51] Andrew Metrick writes: "There is no evidence that stock market letters make a superior stock selection, no matter whether in the short or in the long run." Metrick (1999), 1770. Cf. also Graham and Harvey (1996 and 1997).

[52] On small sample bias cf. Krämer (1995).

[53] Dimson and Marsh (1986), 131.

[54] Cf. Foster (1979).

[55] Jaffe and Mahoney (1999) point out that the stock recommendations of investment newsletters are particularly cost intensive since they require high turnovers of stocks. This alone considerably worsens the investment performance. Jaffe and Mahoney (1999), 296.

[56] Thus, it is in no way justified to postulate the dependence of stock prices from analysts' recommendations. Cf. Medien Tenor (2002).

[57] Cowles (1933), 310.

[58] Cowles (1933), 324.

[59] "Good Investing Isn't Sexy. A Conversation With Jane Bryant Quinn."
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[60] Bank (2001), 277. For more details see Schuster (2001), 114-118 and passim.

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