Long-run Performance Evaluation of Journalists' Stock Recommendations[♦]

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Abstract. This paper evaluates the long-run performance of buy and sell recommendations issued by journalists at German *Personal Finance Magazines* in the period from 1995 to 2003 for the first time. Contrary to prior research on long-run performance evaluation of recommendations distributed via the business media which documents negative investment value for recommendations, we find evidence for journalists providing significant investment value with their recommendations. Concretely, we find strong evidence for sell recommendations containing high investment value. In contrast, buy recommendations contain generally only little investment value at best. However, we find that journalists have predictive abilities in issuing specific types of buy recommendations. In particular, buy recommendations on value stocks and stocks with a positive performance prior to the publication are associated with significant investment value for readers.

Keywords: Financial experts' recommendations, long-run performance evaluation, business media, journalism, private investors, German stock market

JEL Classification: G11, G14

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1. Introduction

Private investors are having a hard time investing their funds, especially in times when private pension planning is becoming increasingly more important. Not only do private investors usually lack knowledge about capital markets, but also it is difficult to decide when confronted with thousands of different investment opportunities. Therefore, a whole industry providing professional investment advice has been emerging. Private investors can choose between different groups of so-called financial experts like security analysts from brokerage houses or journalists to come up with stock recommendations. Although the immediate market reaction to financial experts' stock recommendations has been extensively analyzed for all groups of financial experts (see, e.g., Stickel, 1995; and Womack, 1996; for security analysts and Pieper *et al.*, 1993; Lidén, 2007; and Kerl and Walter, 2007; for journalists), the question whether they provide valuable advice in the long-run is far less intensely researched. Particularly, the question whether journalists have the ability to predict stock prices and, thus, publish valuable recommendations in the long-run is basically unexplored.

Probably the best way to analyze journalists' predictive ability is to evaluate stock recommendations of *Personal Finance Magazines* (*PFMs*). In addition to publishing general investment related information about capital markets, they often provide direct buy and sell recommendations for stocks based on, as they claim, self-contained research procedures. In the U.S., magazines such as *Barron's*, *Kiplinger* and *SmartMoney* can be classified as *PFMs*. For the British market, *Moneywise* represents this business press branch, and for the German market, the *Effecten-Spiegel* and *Börse Online* serve the same purpose. Selecting German *PFMs* seems to be particularly promising since these magazines have a long tradition in providing investment advice and are important to German private investors. This is largely due to the fact that banks, which control the brokerage business in Germany had been

refraining from issuing direct buy and sell recommendations for specific stocks for a long time because they feared legal action for losses if a stock investment was to fail. Hence, *PFMs* have emerged as one of the primary sources of information for private investors. Regarding the educational and professional background of journalists working for *PFMs,* the editor-in-chief of one German magazine told us that his journalists usually possess university degrees in economics or business. In a number of cases, these journalists have also been former security analysts at brokerage houses. Thus, the educational and professional background of these journalists is similar to the one of security analysts.

Our contribution to the literature is threefold: First, we aim to close the gap in research concerning the long-run performance evaluation of journalists' stock recommendations. Besides the apparent lack of empirical evidence for this group of financial experts for international markets in general and for Germany specifically, analyzing the long-run performance of journalists' recommendations might be particularly interesting since this group of financial experts is, unlike security analysts, free from the usual conflicts of interest. Journalists do not have to consider a company's interests like investment banking activities. Second, prior research on long-run performance evaluation which employs a market index as a benchmark adjustment has been attacked on methodological grounds (see, e.g., Barber and Lyon, 1997; and Lyon *et al.*, 1999). By creating characteristic-adjusted reference portfolios we do not only control for common characteristics of recommended stocks but we also account for the *new listing bias* and the *rebalancing bias*. In addition, we remedy the *skewness bias* by using bootstrapped skewness-adjusted *t*-statistics. Third, we address the question whether self-contained research procedures of journalists work equally well concerning specific characteristics of stocks or during several sub-periods of our investigation period for the first time. E.g., we analyze whether the price-to-book ratio of a stock, i.e.

whether a stock is a value or a glamour stock, is a significant determinant for the investment value of a recommendation.

Analyzing a large sample of buy and sell recommendations in the period from 1995 to 2003, our results indicate that stock recommendations of journalists seem to have substantial investment value for private investors, at least on the sell side. Our results are strikingly similar to prior evidence derived for security analysts at brokerage houses. They clearly contradict, however, the perception that recommendations transmitted through the business media are useless for private investors.[1] Thus, the notion that journalists have an educational and professional background similar to security analysts at brokerage houses leads to similar predictive abilities for both groups of financial experts. Particularly, we find buy recommendations to display significantly positive market-adjusted returns in the long-run when using a broad market index as benchmark (the 24-month market-adjusted return equals 4.83%). However, these profits can be largely explained by common characteristics of the recommended stocks. Hence, they vanish when using a characteristic-adjusted benchmark (the respective characteristic-adjusted return equals insignificant 2.10%). On the contrary, we find strong evidence that journalists generate valuable investment advice when issuing sell recommendations. Independently of the type of benchmark adjustment employed, returns are significant (the 24-month market-adjusted return equals –7.43% and the respective characteristic-adjusted return equals –12.63%). Furthermore, we find evidence that journalists follow momentum investment strategies. Concretely, e.g., the 3-month prior market-adjusted return equals 1.17% for buy recommendations. However, the tendency to act as a momentum

[1] For an excellent review of studies which deal with long-run performance evaluation of stock recommendations distributed via the business media see Schuster (2003). He finds that respective stock recommendations have negative investment value in the long-run. Please note, however, that referenced studies in Schuster (2003) focus on second-hand information re-transmitted via the business media. In contrast, our study analyzes original stock recommendations derived from self-contained research procedures of journalists.

investor is even more pronounced for sell recommendations where recommended stocks take a plunge of market-adjusted –6.91% prior to the publication.

Although buy recommendations contain little investment value in general, we find buy recommendations on value stocks to contain significant investment value for readers (24-month characteristic-adjusted return equals 8.65%). However, the investment value of value stocks is even more pronounced when being recommended for sale (respective characteristic-adjusted return equals –21.35%). For glamour stocks, in contrast, journalists show the least predictive ability. Value (glamour) stocks belong to the quintile of recommended stocks with the lowest (highest) price-to-book ratio of the respective group of recommendations (e.g., buy recommendations) in a given year. Another group of buy recommendations which provides investment value are those on stocks with a positive market-adjusted performance prior to the publication. Concretely, buy recommendations which belong to the group of past winners are associated with a significant investment value (24-month characteristic-adjusted return equals 8.07%). Sell recommendations on past losers contain an even higher investment value for investors (respective characteristic-adjusted return equals –18.29%). When analyzing different sub-periods of our investigation period, our results indicate that, with respect to buy recommendations, journalists were only able to generate valuable investment advice from 1995 to 1997 (24-month characteristic-adjusted return equals 9.29%). On the contrary, sell recommendations seem to contain investment value during our entire investigation period.

The remainder of the paper is structured as follows. Section 2 gives a brief review of the related literature. Section 3 describes the database and provides some descriptive statistics. The employed methodology to calculate reference portfolios and abnormal returns is also

characterized in this section. Section 4 presents our empirical findings. Finally, we provide a discussion of our results and conclude in Section 5.

2. Related Literature

The literature on long-run performance evaluation of financial experts' recommendations heavily concentrates on security analysts working for brokerage houses. Since brokerage houses employ huge departments to perform this kind of research for their clients, only significant abnormal returns would justify the costs of preparing the reports. For example, Womack (1996), who researches recommendations issued by U.S. brokerage houses, analyzes abnormal returns up to six months subsequent to the publication of the recommendation. In contrast to modest returns following buy recommendations, he finds a significant negative price drift subsequent to the publication of sell recommendations. In contrast, Barber *et al.* (2001) take a calendar-time perspective. They report that a portfolio comprised of the highest recommended stocks provides significant positive abnormal returns, whereas a portfolio of the least favorably recommended stocks leads to significant negative abnormal returns. Mikhail *et al.* (2004) also analyze stock recommendations of analysts, and they report significant excess returns in the first and third trading months following the revision of a recommendation. Furthermore, they find that returns are positively associated with the analysts' prior performance. Within a cross-country study, Jegadeesh and Kim (2006) find evidence for significant price drifts according to the type of recommendation in almost all countries, over the next two to six months after the publication of the recommendation. In general, it seems as if security analysts do indeed have the ability to predict stock prices and thus create investment value for clients.

As far as stock recommendations distributed via the business media are concerned, one has to distinguish between two strands of literature. First, there exists a number of studies which evaluate the long-run performance of second-hand information re-transmitted through the business media. Those studies do not analyze financial advice generated by journalists themselves, but examine the investment value of re-statements of other financial experts' recommendations like those of security analysts or financial gurus in the business media. These studies (see, e.g., Shepard, 1977; Dimson and Marsh, 1986; and Desai and Jain, 1995) suggest that second-hand information have negative investment value in the long-run. Second, journalists also provide unique stock recommendations based on self-contained research procedures to the market. Whereas some studies exist on the short-run market reaction associated with the initial publication (see for Germany Pieper *et al.*, 1993; Röckemann, 1994; and Kerl and Walter, 2007), very little is known about the long-run investment value. To the best of our knowledge, Lidén (2006) is the only exception analyzing the long-run performance of journalists' stock recommendations. In contrast to the findings for security analysts, he finds that for the Swedish market buy recommendations are misleading investors and thus do not contain investment value at all. Sell recommendations, however, have investment value as stock prices display a continuous negative drift after the recommendations.

3. Data and Methodology

3.1. DESCRIPTION OF DATABASE

We analyze a sample of all German *Personal Finance Magazines* (*PFMs*) which provide direct stock recommendations in an easy-to-see recommendation box. Within our investigation period from 1995 to 2003, we identify five *PFMs* which fulfill this

requirement.[2] With the exception of the *Telebörse*, all these publications have existed within the entire investigation period. Nevertheless, including the *Telebörse* helps to control for survivorship bias with respect to the analyzed sample of magazines. Hence, there will be no upward bias in performance calculations due to the ex-post choice of only surviving *PFMs*.

Within these five *PFMs*, we hand-collected explicit stock recommendations, i.e., direct buy and sell recommendations of stocks with a German *International Securities Identification Number* (*DE-ISIN*).[3] Since one focus of the study is to analyze whether journalists of *PFMs* are prone to momentum investment strategies (i.e., if they recommend past winners for purchase and vice versa), we further restrict our analysis to stocks which have at least a performance history of six months. Additionally, for each recommended stock monthly performance data, market capitalization and the price-to-book ratio has to be available via *Datastream*.

Based on the above-mentioned criteria, we hand-collected 2,637 buy recommendations and 1,168 sell recommendations. Table I displays descriptive statistics for these recommendations with respect to the number of recommendations, the average market capitalization tertile and the average price-to-book tertile of a recommended stock in each year as well as for the entire investigation period. A stock recommendation is, e.g., classified in market capitalization tertile three (one) if it belongs to the tertile of the biggest (smallest) stocks as measured by market capitalization of all listed stocks with a *DE-ISIN* at the beginning of a given year. Accordingly, a price-to-book tertile of, e.g., three (one) is assigned if a stock is part of the tertile with the highest (lowest) price-to-book ratios of all listed stocks with a *DE-ISIN* at the beginning of a given year.

[2] In particular, these are *Wertpapier*, *Effecten-Spiegel*, *Börse Online*, *Telebörse* and *Capital (Capitaldepesche)*.
[3] In order to construct reference portfolios on size and price-to-book ratios, we had to limit our analysis to the homogeneous group of German stocks with a *DE-ISIN*.

[Insert Table I here]

As can be seen in Table I, the number of buy recommendations (2,637) is approximately twice as high as the number of sell recommendations (1,168) for the entire investigation period. Column (3) displays the total number of buy and sell recommendations for each year. This reveals an increasing trend, especially from 1999 to 2001, where the number of recommendations rose from 351 to 552. This might be mainly due to booming stock markets and, hence, increased information needs of private investors around the millennium. Before and after this period, the overall number of recommendations remained roughly constant.

With regard to market capitalization, journalists focus on rather big stocks when publishing their recommendations. Furthermore, stocks recommended for purchase are considerably larger than stocks recommended for sale (market capitalization tertile 2.62 as opposed to 2.26). Taking the dynamics of the development into consideration, we can perceive a trend towards recommending big stocks for purchase in the course of our investigation period (the mean market capitalization tertile increases from 2.36 to 2.79). A similar trend, however, cannot be found for sell recommendations.

Finally, the table displays results for the mean group allocation in terms of price-to-book ratio. It is a surprising fact that (contrary to anecdotal evidence) buy as well as sell recommendations are not issued on high price-to-book ratio stocks, which are usually associated with fast growing companies. In fact, the mean tertile rank over the entire investigation period is 1.85 (1.95) for buy (sell) recommendations, revealing a slight tendency towards low price-to-book ratio stocks.

3.2. METHODOLOGY

In order to analyze whether journalists have predictive abilities when recommending stocks for purchase and sale, one needs to examine the long-run performance of the recommended stocks measured by buy-and-hold abnormal returns (*BHARs*).[4] As a traditional method, researchers adjust the buy-and-hold return of the recommended stock itself (referred to as 'actual return' in the remainder of the text) by the overall market development to evaluate whether financial experts reveal valuable forecasting abilities in addition to the movement of the market as a whole. To proxy this market development, we choose the Composite DAX (CDAX) and refer to resulting buy-and-hold abnormal returns (*BHARs*) as 'market-adjusted returns'.[5]

However, this practice of using a broad market index as benchmark has been intensively criticized in the literature recently (see, e.g., Barber and Lyon, 1997; and Lyon *et al.*, 1999). Not only does a broad benchmark ignore characteristics of stocks like the size and the price-to-book ratio of a stock, but in addition Lyon *et al.* (1999) name several causes for misspecification in traditional long-run performance measurement. With respect to the misspecification of the benchmark and, thus, the calculation of normal buy-and-hold returns, the authors primarily discuss the *new listing bias* and the *rebalancing bias*.[6] To avoid these

[4] For calculation of returns, we download the datatype *RI* from *Datastream* which includes adjustments for dividends and stock splits. Throughout the paper, we calculate discrete returns. Additionally, when reporting long-run (abnormal) returns, we never include the return of the event month. Although starting return calculations at the day of publication would mirror an investor perspective more closely, we refrained from this procedure for two reasons. First, calculating daily returns for the characteristic-adjusted reference portfolios would be prohibitively cumbersome from an computational point of view. Second and more importantly, prior research by Kerl and Walter (2007) has documented severe non-information based price-pressure effects within the initial market reaction of stock recommendations issued by journalists. Hence, by displaying buy-and-hold returns starting with the first complete calendar month subsequent to the recommendation month, we mostly circumvent the problem of biased results due to price-pressure.

[5] For the calculation of 'actual returns' and 'market-adjusted returns', in the case of a delisting of one of the recommended stocks subsequent to the publication of the recommendation, we replace the missing post-event return of the sample firm by the return of the broad market index Composite DAX (CDAX).

[6] First, the *new listing bias* arises because in event studies of long-run abnormal returns, sample firms are tracked for a long time, but firms that constitute the broad market index typically include firms which went public subsequent to the event. Since IPOs frequently underperform the market (see, e.g., Ritter, 1991), this leads to deflated normal buy-and-hold returns, thus, inflating buy-and-hold abnormal returns and creating a positive bias. Second, the *rebalancing bias* exists because the compound return of a broad market index is typically calculated assuming periodic rebalancing, whereas the return of a sample firm is compounded without rebalancing, creating a negative bias in *BHARs*.

biases, they propose to carefully construct reference portfolios as benchmarks for normal return calculation and thereby obtain well-specified test statistics in random samples. As suggested by the previously mentioned study, we use company size and price-to-book ratios as characteristics for the reference portfolios to control for common characteristics of recommended stocks. The construction of reference portfolios is done as follows.

First, at the beginning of each year in the period from 1995 to 2003, we rank every listed stock with a German *International Securities Identification Number* (*DE-ISIN*) according to its market capitalization. Concretely, we partition our sample in tertiles according to market capitalization. The stocks with a size rank in the first tertile are assigned to the portfolio of small stocks while stocks with a size rank in the second and third tertile belong to the portfolio of medium and big stocks. Second, each size portfolio is further partitioned into three price-to-book ratio tertiles at the beginning of each year. For example, stocks of the small stock portfolio are assigned to three portfolios (small value, small blend and small glamour portfolio) according to their price-to-book ratio. Similar procedures are performed for stocks placed within the medium and big stocks portfolio. For each year, the whole procedure results in nine portfolios of equal numbers of stocks.[7] We then follow Lyon *et al.* (1999) to calculate buy-and-hold returns for each reference portfolio. The return of each portfolio represents a passive, equally weighted investment in all stocks constituting the reference portfolio.

To calculate these *BHARs*, we match each sample (or recommended) stock based on its two-dimensional ranking with the appropriate matching reference portfolio.[8] These *BHARs* will subsequently be called 'characteristic-adjusted returns'. Although this procedure helps to

[7] The type and number of constituents of each of the nine portfolios in each year remains the same, no matter the period *BHAR* is calculated for. Only if stocks are delisted subsequent to their inclusion in the reference portfolio, we assume that the proceeds are invested in an equally weighted reference portfolio which is rebalanced monthly (see Lyon *et al.*, 1999).

[8] In case of one the recommended stocks being delisted subsequent to the publication of the recommendation, we replace the missing post-event return of the sample firm by the return of the matching portfolio. This assumes that investors decide to place the proceeds of a delisted stock in a portfolio of stocks with similar stock characteristics.

control for the *rebalancing* and *new listing bias*, it does not address the *skewness bias*. For example, Barber and Lyon (1997) found that long-run buy-and-hold abnormal returns are positively skewed, which leads to a negative bias in test statistics. To remedy the *skewness bias*, the authors recommend the use of a bootstrapped skewness-adjusted *t*-statistic. Closely following this suggested method, we first calculate a skewness-adjusted *t*-statistic itself. Additionally, we bootstrap these skewness-adjusted *t*-statistics via drawing 10,000 resamples of size *m/2* from the original sample of *m* recommended companies.[9] We then use the percentile confidence intervals of the empirical bootstrapped distribution as critical value for the lower and upper bounds.

4. Empirical Results

4.1. INVESTMENT VALUE OF STOCK RECOMMENDATIONS

Table II displays (adjusted) returns for several periods prior and past to the publication of a recommendation. The first vertical panel addresses actual returns, whereas the second and the third panel address market-adjusted and characteristic-adjusted returns, respectively.

[Insert Table II here]

We first discuss some interesting findings regarding the prior performance of recommended stocks. Therefore, we focus on the second vertical panel of Table II where market-adjusted returns for both, buy and sell recommendations, are displayed for the 6-month period and 3-

[9] Lyon *et al.* (1999) state that the sample size of *m/4* and *m/2* yield well-specified results. However, in absolute terms, they use a sample size ranging from 200 to 4,000. Thus, for computing the bootstrapped *t*-statistics we use the sample size of *m/2* or at least 200.

month period prior to the month of publication. For buy recommendations, the table reveals a tendency for journalists to recommend those stocks for purchase which performed better compared to the market in the months prior to publication. For example, the 6-month market-adjusted return prior to the publication is significantly positive with 1.79%.[10] The analogous tendency of the editorial staff to put underperforming stocks on the sell list is even more explicit. Referring to the 6-month market-adjusted return prior to the publication, journalists recommend stocks for sale which underperform the market by significant 11.03%. Thus, we find evidence for editors following momentum investment strategies while recommending stocks both for purchase and sale. However, this tendency is much more pronounced for sell recommendations.

When looking at market-adjusted returns subsequent to the publication, we observe, for buy recommendations, a modest but significant market-adjusted return of 4.83% in the long-run, i.e., in the 24-month period after the publication. Thus, unlike the finding in Lidén (2006), who documents negative market-adjusted returns while employing value-weighted industry indexes as benchmarks, we document a positive investment value when calculating market-adjusted returns. Thus, German journalists seem to be more capable in predicting stock prices on the buy side than their Swedish colleagues. For sell recommendations, we calculate strictly negative market-adjusted returns for all investigated periods. In particular, the market-adjusted return in the long-run displays a statistically significant -7.43%. In addition, all market-adjusted returns between three and 18 months are similar in magnitude and statistically significant. Thus, our results support the finding in Lidén (2006) that sell recommendations do contain investment value when investment value is measured by market-adjusted returns.

[10] For the remainder of the text, we will refer to a return as being statistically significant if the respective skewness-adjusted *t*-statistics is statistically significant at least at the 10%-level (two-tailed test) when comparing it to the bootstrapped, empirical distribution.

However, as mentioned before, abnormal return calculations using a broad market index are subject to several biases discussed above. Thus, in the remainder of the paper we focus exclusively on characteristic-adjusted returns proposed by Lyon *et al.* (1999) to measure the investment value of journalists' recommendations. For buy recommendations, we observe less pronounced characteristic-adjusted returns in the long-run compared to market-adjusted returns. In particular, e.g., the 24-month characteristic-adjusted return drops to 2.10% compared to the market-adjusted return of 4.83%. In addition, characteristic-adjusted returns are now, although still mostly positive, statistically insignificant for the majority of analyzed periods (with the exception of the 12-month and 18-month period after publication). Hence, we now find much weaker evidence for an investment value in buy recommendations compared to a naïve benchmark adjustment with a broad market index. With regard to sell recommendations, employing characteristic-adjusted returns emphasizes that sell recommendations contain tremendous investment value, hence, that journalists have predictive abilities when issuing sell recommendations. In particular, characteristic-adjusted returns in all analyzed periods display large negative and statistically significant returns with a climax in the long-run corresponding to -12.63%.

One might wonder why the usage of characteristic-adjusted returns lowers the investment value for buy recommendations and increases the investment value for sell recommendations. This is due to the fact that the value-weighted broad market index CDAX is heavily dependent on large capitalized stocks. As small stocks perform better than large stocks during our investigation period, returns of characteristic-adjusted reference portfolios are usually higher than respective returns of the CDAX. Thus, employing characteristic-adjusted returns affect abnormal returns for buy and sell recommendations diametrically.

4.2. DETERMINANTS OF CHARACTERISTIC-ADJUSTED RETURNS

In this section, we analyze the determinants of characteristic-adjusted *BHAR*s. This might not only be a decisive question from an academic point of view. Moreover, identifying characteristics of stocks for which journalists show the most predictive ability might help investors to make more educated investment decisions. In addition, although journalists are unable to generate investment value with their buy recommendations generally, it might be interesting to explore whether journalists show predictive abilities with respect to specific types of buy recommendations. This section is organized as follows. First, in a univariate analysis in Table III, we present *BHARs* for the 6-, 12- and 24-month period for specific sub-groups (with regard to company size, price-to-book, prior performance and sub-periods) in order to determine the magnitude and significance of characteristic-adjusted returns. Second, results derived from the univariate analysis are complemented with evidence from a multivariate regression which can be found in Table IV.

Company Size

As has been shown in numerous previous studies (see, e.g., Banz, 1981; Fama and French, 1993) company size plays a decisive role in explaining (abnormal) returns. Thus, we partition our sample into SMALL stocks and BIG stocks, whereas SMALL stocks are defined as stocks belonging to the smallest quintile in terms of the market capitalization of the respective group of recommendations (e.g. buy recommendations) in a given year. Analogously, BIG stocks belong to the quintile with the largest market capitalization.

[Insert Table III here]

As displayed in Panel A of Table III, we find mixed evidence for buy recommendations concerning company size as a determinant for *BHARs*. In the first year after the publication, abnormal returns are slightly lower for SMALL stocks than for BIG stocks. However, in the long-run we report a positive but insignificant $BHAR_{24}$ for SMALL stocks with 3.69%, whereas buy recommendations on BIG stocks are associated with a significant negative $BHAR_{24}$ of -4.52%. Interestingly, the three remaining quintiles (Others) display a similarly positive $BHAR_{24}$ with 3.76% compared to SMALL stocks, which is statistically significant. Multivariate results emphasize the finding that BIG stocks are associated with mediocre returns. As can be seen from Table IV, the respective coefficient is significantly negative for the 12-month and 24-month horizon.

[Insert Table IV here]

We find even clearer evidence in favor of small stocks for sell recommendations. As can be seen from Panel B of Table III, the investment value for BIG stocks is negligible compared to SMALL stocks for all analyzed periods. Surprisingly, the long-run $BHAR_{24}$ is positive with 2.57% for BIG stocks. SMALL stocks, however, experience large negative but insignificant $BHAR_{24}$ with -16.63%. Similar evidence can also be documented for the three remaining quintiles (Others).[11] The key finding that BIG stocks do not have investment value is also supported by multivariate regression results where the coefficient for BIG stocks is significantly positive for most analyzed periods.

[11] Due to the higher number of constituents, the results of this group, although similar in the level of return compared to SMALL stocks, are found to be significant.

Price-to-Book

Previous research has documented a decisive role of the price-to-book ratio in explaining (abnormal) returns (see, e.g., Fama and French, 1993; Fama and French, 1995). Thus, we separate recommendations according to whether they belong to the group of VALUE stocks or GLAMOUR stocks. VALUE stocks belong to the smallest quintile in terms of the price-to-book ratio of the respective group of recommendations (e.g. buy recommendations) in a given year. Analogously, GLAMOUR stocks belong to the quintile with the largest price-to-book ratio.

For buy recommendations, Panel A of Table III documents strong evidence in favor of a superior investment value for recommended VALUE stocks. In particular, *BHARs* for VALUE stocks are consistently positive and statistically significant for all analyzed periods. In the long-run an average $BHAR_{24}$ of 8.65% is found for buy recommendations. In contrast, recommended GLAMOUR stocks do not offer comparable returns, since respective buy recommendations earn an insignificant -3.02% in the long-run. Analogous results can be found for the three remaining quintiles (Others). The finding that recommendations on VALUE stocks exclusively earn positive characteristic-adjusted returns is supported by multivariate results. In particular, the coefficient on VALUE is significantly positive for all analyzed periods.

With regard to sell recommendations, we find complementing evidence for a superiority of VALUE stocks over GLAMOUR stocks. For example, going short in sell recommendations on VALUE stocks will result in an average $BHAR_{24}$ of 21.35% in the long-run. This figure is, however, statistically insignificant due to the small sample size. In contrast, executing sell recommendations on GLAMOUR stocks will result in a respective characteristic-adjusted

return of 4.73%. However, alongside short-selling recommended VALUE stocks, the remaining three quintiles (Others) are also associated with high negative $BHAR_{24}$ of -12.37% in the long-run. Consistently, according to multivariate regression results, sell recommendations on VALUE stocks are associated with negative but insignificant coefficients for all analyzed periods.

Prior Performance

The literature on the momentum effect (see, e.g., Jegadeesh and Titman, 1993; Rouwenhorst, 1998) shows that stock prices seem to be exposed to short-term and medium-term price drifts. As discussed in Section 4.1 of the paper, journalists seem to follow momentum investment strategies when deciding on stock recommendations, i.e., they have a tendency to recommend past winners for purchase and past losers for sale. Thus, we partition our sample into two sub-groups according to whether a stock has a positive (POSPERF) or negative (NEGPERF) market-adjusted return in the 6-month period prior to the month of publication.

Notably, past performance is a highly selective criterion for buy recommendations. Whereas buy recommendations on past winners are associated with significantly positive characteristic-adjusted returns for all analyzed periods, buy recommendations on past losers are associated with significantly negative returns for all periods. In particular, buy recommendations of stocks with a positive prior market-adjusted return earn a $BHAR_{24}$ of 8.07%, whereas we document a respective value of -3.67% for stocks with a negative prior performance. This result is supported by multivariate regression results, which reveal consistently positive and statistically significant coefficients for the dummy variable POSPERF.

Analogously, past performance also serves as selection criterion with respect to the predictive ability of journalists for sell recommendations. For recommendations on past losers, we document both, economically and statistically significant characteristic-adjusted returns for all analyzed periods with a peak for the 24-month period following the event. The respective $BHAR_{24}$ is -18.29%. For sell recommendations on past winners, however, characteristic-adjusted returns are close to zero and turn even positive in the long-run with a $BHAR_{24}$ of 3.95% but stay insignificant. Results are again backed by multivariate regressions as the dummy variable NEGPERF takes on negative and statistically significant coefficients for all analyzed periods.

Sub-periods

In order to assess temporal stability of our results, we partition our nine-year investigation period into three distinct sub-periods; from 1995 to 1997, from 1998 to 2000, and from 2001 to 2003. The first two sub-periods encompass bull markets, whereas the third sub-period is characterized by a bear market.

For buy recommendations, we exclusively observe strictly positive and statistically significant *BHARs* for the first sub-period from 1995 to 1997. In particular, buy recommendations in this period are associated with a large $BHAR_{24}$ of significant 9.29% in the long-run. For the two remaining sub-periods, however, Panel A of Table III does not display any statistically or economically significant characteristic-adjusted returns, indicating that buy recommendations in general do not contain investment value past 1997. As previously mentioned, buy recommendations in our first sub-period display particularly high *BHARs*; a fact also supported by multivariate regression results. Whereas the coefficient for the period from 1998

to 2000 is positive but mainly insignificant, the coefficient for the first sub-period from 1995 to 1997 displays significant positive values for all analyzed *BHAR*s.

A different picture emerges when we analyze sell recommendations. Here, we observe high buy-and-hold abnormal returns especially in the second sub-period from 1998 to 2000, a period of extreme market volatility. For this period, Table III displays a statistically significant $BHAR_{24}$ of -25.29%. This is around three times higher than for the remaining sub-periods which display -7.75% (-8.62%) within the first (third) sub-period. Multivariate results underline the perception that we find most pronounced returns for sell recommendations in the sub-period from 1998 to 2000, since respective coefficients appear to be significantly negative for most analyzed *BHAR*s.

5. Discussion and Concluding Remarks

One of our key findings is that on the one hand journalists do extremely well in issuing sell recommendations. On the other hand, however, they generate negligible investment value when recommending stocks for purchase. In fact, this result parallels the evidence from stock recommendations issued by security analysts. For example, Womack (1996), when analyzing recommendations of 14 major U.S. brokerage houses in the sample period from 1989 to 1991, reports size-adjusted returns for the 6-month period after the event of 0.09% for buy recommendations, whereas sell recommendations are associated with a respective value of -5.50%. More recent evidence is provided by Fang and Yasuda (2005), who analyze security analysts' recommendations provided by I/B/E/S in the period from 1994 to 2003. They find that high-profile All-American analysts who also work for top-tier banks are exclusively able to consistently earn abnormal returns with their buy recommendations, whereas all different kinds of analysts earn significant abnormal returns on their sell recommendations.

Interestingly, the literature on security analysts' recommendations (see also, e.g., Dugar and Nathan, 1995; Lin and McNichols, 1998; Michaely and Womack, 1999; and Agrawal and Chen, 2005) frequently explains higher abnormal returns for sell recommendations by 'conflicts of interest'. E.g., Agrawal and Chen (2005) state that returns for sell recommendations are higher for analysts with investment banking relations since respective sell recommendations tend to be more credible if they are willing to voice an unfavorable opinion. However, the 'conflicts of interest' argument does not apply to our sample, since journalists of *PFMs* do not have to account for company's interests like investment banking. Thus, the usual rationale cannot explain our findings.

One possible explanation could be found in the rather infrequent occurrence of sell recommendations. As can be seen in Table I, the number of sell recommendations is much smaller compared to the number of buy recommendations. Hence, each rare sell recommendation potentially contains more information value. Besides, the documented long-term investment value for sell recommendations can also be interpreted as an initial underreaction. An explanation for this initial underreaction might be found in the circumstance that private investors are exposed to short sale constraints.[12] Hence, implementing sell recommendations is only possible if a stock is part of an existing portfolio which might only be the case for a rather restricted number of investors. Thus, prices might adjust slowly to new information, since private risk arbitrageurs are restricted in their trading opportunities. This is supported by a model of Diamond and Verrecchia (1987) who show the effects of short-sale constraints on the speed of adjustment to private information on stock prices. They find that these constraints reduce the adjustment speed of prices, especially with respect to bad news. Hence, information efficiency is reduced. Hong *et al.* (2000) explain the

[12] We checked both, online brokerage houses and commercial banks, but found only one single offer for private investors to engage in short-selling activities. Hence, we conclude that within the analyzed period, from 1995 through 2003, short-selling was not a realizable option for a common private investor.

obvious asymmetry between buy and sell recommendations through the analyst-coverage of stocks. They say that low-coverage stocks react slower to bad news than to good news since the former will only be revealed by analysts, whereas the latter will also be made public via increased disclosures, e.g., by the company itself.

One of our most striking results is that stock recommendations on value stocks are particularly valuable. For example, buy recommendations on value stocks contain a long-run investment value of close to ten percent, whereas respective sell recommendations earn above twenty percent. One might find a reason for the superiority of value stocks over glamour stocks in the information environment of a firm. In particular, value stocks were quite out of favor during our investigation period, whereas glamour stocks attracted most of the attention from the financial community. Therefore, our results contradict the anecdotal evidence that profit opportunities arose for biotech and internet stocks. In fact, our results indicate quite the opposite. A reader of the analyzed magazines was well advised not to invest in glamour stocks but rather in value stocks, because the advice from journalists was particularly predictive for this sub-group.

Another key finding of our study is the fact that the prior performance appears to be a decisive factor in determining whether buy and sell recommendations will outperform the benchmark after a recommendation is published. In particular, only buy recommendations on past winners earn abnormal returns, whereas sell recommendations are only profitable if a stock performed below average prior to the publication. This finding might indicate a very pronounced momentum effect for the German stock market. A number of papers has documented a momentum effect in terms of price drifts for the German market (see, e.g., Schiereck *et al.*;1999; Glaser and Weber, 2003). In particular, Schiereck *et al.* (1999) state that results for the German stock market are closely matching the findings for other markets

documented by Jegadeesh and Titman (1993) and Rouwenhorst (1998). However, the general momentum effect is very unlikely to explain our result, since we document differences of more than ten percent for buy recommendations and well above 20 percent for sell recommendations for the sub-groups constructed on prior performance for the 24-month period. As a possible remedy to control for the momentum effect, one could construct reference portfolios about price-to-book ratio and company size as well as on momentum characteristics. However, we refrained from this three-factor approach for a simple reason: employing a momentum factor would have resulted in 27 reference portfolios instead of nine, hence, this procedure would clearly reduce the validity of results since the potential impact of outliers increases with the decreasing number of stocks in each portfolio.[13]

For future research our results emphasize the importance of distinguishing financial advice derived from journalists themselves on the one hand and second-hand information re-transmitted through the business media on the other hand. Unlike prior findings for the latter group which indicate that respective recommendations do contain negative investment value, we find journalists to provide valuable investment advice for their readers, at least on the sell side. Thus, results for long-run investment value for journalists' recommendations are similar to the findings of security analysts and not to the respective findings for the literature on business media. As security analysts at brokerage houses share the educational and professional background with journalists, it is not surprising that they are equally capable to issue recommendations with an investment value for recipients.

[13] Increasing the number of portfolios by adding momentum as a third factor would result in 27 portfolios with a number of constituting stocks of each portfolio as low as 19.

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Table I. Descriptive Statistics for Buy and Sell Recommendations

For each year from 1995 to 2003 and for the overall period, column (1) through column (3) give the number of buy and sell recommendations and the sum of all recommendations in a given year. Column (4) and column (5) display the mean market capitalization tertile individually for both, buy and sell recommendations. Column (6) and column (7) display the mean price-to-book tertile for both, buy and sell recommendations. Stocks classified in group three reveal the highest values, hence, recommendations of high market capitalization or high price-to-book ratio. On the contrary, stocks classified in group one contain the lowest market capitalization or lowest price-to-book ratio each year.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	No. of Recommendations			Market Cap. Tertile		Price-to-Book Tertile	
	Buys	Sells	All	Buys	Sells	Buys	Sells
1995	225	117	342	2.36	2.42	1.97	2.06
1996	247	107	354	2.32	2.26	1.98	1.95
1997	267	100	367	2.48	1.93	1.74	1.68
1998	229	95	324	2.62	2.22	1.84	1.95
1999	259	92	351	2.68	2.24	1.83	2.10
2000	349	111	460	2.67	2.31	1.74	2.14
2001	394	158	552	2.74	2.27	1.85	2.01
2002	346	199	545	2.75	2.24	1.94	1.83
2003	321	189	510	2.79	2.37	1.79	1.91
1995 - 2003	2637	1168	3805	2.62	2.26	1.85	1.95

Table II. Long-run Investment Value for Buy and Sell Recommendations

This table displays 'actual returns' (assuming that after the delisting of a recommended stock, the proceeds are invested in the Composite DAX (CDAX)), 'market-adjusted returns' (where market-adjustment is based on the CDAX) and 'characteristic-adjusted returns' based on size and price-to-book ratio matched reference portfolios. For the computation of market-adjusted returns and characteristic-adjusted returns, we assume that after a delisting of a recommended stock, the proceeds are invested in the CDAX or the corresponding reference portfolio, respectively. Additional to buy-and-hold (abnormal) returns for 3-, 6-, 12-, 18- and 24-month period we also report actual and market-adjusted buy-and-hold (abnormal) returns for the event month itself, hence, from the day of publication to the end of the calendar month of the publication (called 'Eventmonth'). Furthermore, we also display actual and market-adjusted returns for the 3- and 6-month period prior to the official publication month. All types of return calculations are based on 2,637 buy recommendations and 1,168 sell recommendations. We closely follow Lyon *et al.* (1999) to calculate statistical significance. First, we calculate skewness-adjusted *t*-statistics. Second, we draw 10,000 bootstrapped resamples from the original sample of size *m/2* or at least of a sample size of 200 to calculate skewness-adjusted *t*-statistics for each resample. From this transformed, empirical distribution we calculate critical values for a 90%, 95% and 99% interval. ***, **, * indicate statistical significance at the 1%-, 5%-, 10%-level (two-tailed test), observable within the column marked as '*bs*'.

	Actual Returns			**Market-Adjusted Returns** (CDAX)			**Characteristic-Adjusted Returns** (Size, Price-to-book)		
	Mean	*t* -skew	*bs*	Mean	*t* -skew	*bs*	Mean	*t* -skew	*bs*
Panel A: Buy Recommendations									
6-Month Period Before Event	4.03%	7.02	***	1.79%	3.41	***	n/a	n/a	
3-Month Period Before Event	2.41%	6.04	***	1.17%	3.26	***	n/a	n/a	
Eventmonth	1.12%	6.48	***	0.96%	6.03	***	n/a	n/a	
3-Month Period After Event	0.61%	1.45		-0.91%	-2.38	**	-0.19%	-0.49	
6-Month Period After Event	1.98%	3.11	***	-1.04%	-1.84	*	0.22%	0.42	
12-Month Period After Event	7.39%	7.76	***	0.80%	0.91		1.66%	1.96	**
18-Month Period After Event	13.38%	11.23	***	3.60%	3.12	***	2.29%	2.03	**
24-Month Period After Event	20.05%	14.53	***	4.83%	3.24	***	2.10%	1.42	
Panel B: Sell Recommendations									
6-Month Period Before Event	-9.83%	-2.42	**	-11.03%	-2.50	**	n/a	n/a	
3-Month Period Before Event	-5.84%	-2.03		-6.91%	-2.14		n/a	n/a	
Eventmonth	-2.13%	-4.07	***	-2.04%	-4.13	***	n/a	n/a	
3-Month Period After Event	-5.38%	-4.42	***	-6.81%	-5.85	***	-6.32%	-5.69	***
6-Month Period After Event	-5.67%	-3.32	***	-8.86%	-5.26	***	-8.34%	-5.19	***
12-Month Period After Event	-1.19%	-0.48		-8.86%	-3.52	***	-9.24%	-3.78	***
18-Month Period After Event	4.14%	1.42		-8.62%	-2.51	**	-11.41%	-3.22	***
24-Month Period After Event	13.06%	4.03	***	-7.43%	-2.01	*	-12.63%	-3.35	***

Table III. Characteristic-adjusted *BHAR* for specific sub-groups

For both, buy recommendations (Panel A) and sell recommendations (Panel B), the table shows *BHARs* for the groups of SMALL and BIG stocks, and for VALUE and GLAMOUR stocks. SMALL (BIG) stocks are stocks belonging to the quintile of recommended stocks with the lowest (highest) market capitalization of the respective group of recommendations (e.g. buy recommendations) in a given year. VALUE (GLAMOUR) stocks are stocks belonging to the quintile of recommended stocks with the lowest (highest) price-to-book ratio of the respective group of recommendations (e.g. buy recommendations) in a given year. Furthermore, the table shows *BHARs* for stocks with a positive (POSPERF) and negative (NEGPERF) prior performance (in terms of market-adjusted *BHARs* in the six months prior to the month of the official release of the recommendation). The table also charts *BHARs* for three different three-year periods from 1995 to 1997, from 1998 to 2000, from 2001 to 2003. We closely follow Lyon *et al.* (1999) to calculate statistical significance. First, we calculate skewness-adjusted *t*-statistics. Second, we draw 10,000 bootstrapped resamples from the original sample of size *m/2* or at least of a sample size of 200 to calculate skewness-adjusted *t*-statistics for each resample. From this transformed, empirical distribution we calculate critical values for a 90%, 95% and 99% interval. ***, **, * indicate statistical significance at the 1%-, 5%-, 10%-level (two-tailed test), observable within the column marked as '*bs*'.

		$BHAR_6$			$BHAR_{12}$			$BHAR_{24}$		
	N	Mean	*t*-skew	*bs*	Mean	*t*-skew	*bs*	Mean	*t*-skew	*bs*
Panel A: Buy Recommendations										
SMALL	523	-1.79%	-1.32		-1.79%	-0.75		3.69%	0.77	
BIG	523	0.62%	0.68		-0.26%	-0.19		-4.52%	-2.34	**
Others	1591	0.75%	1.07		3.42%	3.14	***	3.76%	2.17	**
VALUE	521	3.26%	2.77	***	4.70%	2.54	**	8.65%	2.88	***
GLAMOUR	521	-1.50%	-1.08		-0.46%	-0.19		-3.02%	-0.85	
Others	1595	-0.21%	-0.31		1.35%	1.33		1.63%	0.84	
POSPERF	1296	3.23%	4.36	***	6.42%	5.16	***	8.07%	3.61	***
NEGPERF	1341	-2.68%	-3.48	***	-2.94%	-2.66	***	-3.67%	-1.94	*
1995-1997	739	2.50%	3.17	***	7.08%	4.85	***	9.29%	3.04	***
1998-2000	837	-0.79%	-0.80		1.42%	0.96		-0.03%	-0.01	
2001-2003	1061	-0.56%	-0.60		-1.94%	-1.40		-1.23%	-0.48	
Panel B: Sell Recommendations										
SMALL	230	-6.51%	-1.40		-9.12%	-1.54		-16.63%	-1.47	
BIG	230	-3.34%	-1.75	*	-2.11%	-0.85		2.57%	0.60	
Others	708	-10.55%	-5.14	***	-11.59%	-3.24	***	-16.27%	-3.29	***
VALUE	227	-11.51%	-2.33	**	-14.73%	-2.37	**	-21.35%	-1.75	
GLAMOUR	227	-5.71%	-1.79	*	-5.92%	-1.42		-4.73%	-0.67	
Others	714	-8.16%	-4.38	***	-8.54%	-2.62	**	-12.37%	-2.80	***
POSPERF	297	-2.23%	-0.80		1.30%	0.34		3.95%	0.56	
NEGPERF	871	-10.42%	-5.35	***	-12.83%	-4.08	***	-18.29%	-4.41	***
1995-1997	324	-4.36%	-2.01	**	-6.50%	-2.08	**	-7.75%	-1.45	
1998-2000	298	-12.51%	-2.90	**	-18.62%	-3.44	***	-25.29%	-3.26	***
2001-2003	546	-8.42%	-3.41	***	-5.74%	-1.46		-8.62%	-1.37	

Table IV. Multivariate Regression Results for Buy and Sell Recommendations

This table analyzes determinants of *BHARs* via multivariate OLS regressions. As dependent variables we choose the 6-, 12- and 24-month characteristic-adjusted return for both buy and sell recommendations. As explanatory variables, we include dummy variables for SMALL and BIG stocks and for VALUE and GLAMOUR stocks. SMALL (BIG) are dummy variables for stocks belonging to the quintile of recommended stocks with the lowest (highest) market capitalization of the respective group of recommendations (e.g. buy recommendations) in a given year. VALUE (GLAMOUR) represent dummy variables for stocks belonging to the quintile of recommended stocks with the lowest (highest) price-to-book ratio of the respective group of recommendations (e.g. buy recommendations) in a given year. Furthermore, we include in the regressions a dummy for a positive (negative) prior performance - called POSPERF (NEGPERF). This dummy is based on the market-adjusted *BHAR* of the six months prior to the month of the official release of the recommendation. Finally, we include dummy variables for stock recommendations dating from 1995 to 1997 and 1998 to 2000. ***,**,* indicate statistical significance at the 1%-, 5%-, 10%-level (two-tailed test) according to the parametric *t*-test. We employ robust standard errors (White heteroscedasticity-consistent standard errors).

	$BHAR_6$		**$BHAR_{12}$**		**$BHAR_{24}$**	
	Coefficient	*t*-stat	Coefficient	*t*-stat	Coefficient	*t*-stat
Panel A: Buy Recommendations						
SMALL	-0.0331	-2.20 **	-0.0597	-2.33 **	-0.0148	-0.26
BIG	-0.0034	-0.29	-0.0423	-2.42 **	-0.0893	-3.39 ***
VALUE	0.0423	3.05 ***	0.0430	1.92 *	0.0671	1.66 *
GLAMOUR	-0.0181	-1.20	-0.0279	-1.13	-0.0564	-1.43
POSPERF	0.0670	6.17 ***	0.1160	6.46 ***	0.1461	4.51 ***
1995-1997	0.0468	3.74 ***	0.1183	5.40 ***	0.1405	3.15 ***
1998-2000	0.0118	0.88	0.0579	2.84 ***	0.0424	1.36
C	-0.0451	-3.53 ***	-0.0747	-3.88 ***	-0.0851	-2.49 **
N	2637		2637		2637	
R^2	2.23%		2.76%		1.52%	
Adj. R^2	1.97%		2.50%		1.26%	
Prob(F-statistic)	0.0000		0.0000		0.0000	
F-statistic	8.94		11.12		6.49	
Panel B: Sell Recommendations						
SMALL	0.0635	1.29	0.0581	0.90	0.0367	0.38
BIG	0.0487	1.80 *	0.0597	1.58	0.1341	2.03 **
VALUE	-0.0404	-0.83	-0.0575	-0.90	-0.0554	-0.55
GLAMOUR	0.0085	0.25	0.0002	0.00	0.0254	0.33
NEGPERF	-0.0746	-2.22 **	-0.1259	-2.42 **	-0.1868	-1.92 *
1995-1997	0.0465	1.52	0.0026	0.06	0.0240	0.32
1998-2000	-0.0383	-1.05	-0.1241	-2.45 **	-0.1598	-2.08 **
C	-0.0467	-1.31	0.0204	0.35	0.0193	0.18
N	1168		1168		1168	
R^2	1.34%		1.56%		1.42%	
Adj. R^2	0.74%		0.97%		0.83%	
Prob(F-statistic)	0.0026		0.0003		0.0001	
F-statistic	3.16		3.93		4.35	