Does the value of recommendations depend on the level of optimism? A country-based analysis

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Abstract

This paper analyses the investment value of analysts' consensus recommendations and their changes in eight developed stock markets. Results show that analysts are optimistically biased, albeit to a different degree in each country; issuing a much higher number of buy than sell recommendations. Overall, risk adjusted abnormal returns can only be obtained by selling stocks that are unfavourably recommended or with a downward revision. However, the credibility given to recommendations depends on this optimism bias as the risk adjusted returns of the entries/exits of the favourable (unfavourable) category are only significant in countries with a low (high) level of bias.

Key Words: Financial analysis; Value of analysts' recommendations, Performance evaluation of portfolios.

JEL Classification: G10, G14, G20, G24

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1 Introduction

It is widely accepted that the opinions of financial analysts exert a great influence on investors, despite the doubts regarding the lack of objectivity of their investment recommendations. Experience has shown that the conflicts of interest these professionals have with the houses they work for affect their recommendations. The result of this situation is that they issue more buy than sell recommendations and more favourable recommendations for the firms they maintain investment banking relationships with; they can also obtain more revenues through commissions of intermediation in buying/selling assets. Although a high number of countries have recently adopted laws to reduce this problem, it does not seem to have disappeared (Kolasinski, 2006).

This situation casts doubt on whether investment recommendations and their changes contain valuable information about the correct valuation of a stock or, on the contrary, whether they are merely opinions used by brokerage houses as instruments of commercialisation which do not include relevant information not already included in stock prices.

One of the ways the literature has analyzed the value of investment recommendations is according to their origin. It is expected that the informative content of recommendations freely available in economic press (so called second hand recommendations) is lower than those directly received from brokerage houses. In both cases the effect on prices around the publishing date or emission, respectively, is studied. In the latter recommendations, the return of portfolios based on the opinions of all analysts following a firm is also studied.

Research on the usefulness of recommendations is still scarce and is mainly based on the United States, using data from the Zack Investment, First Call and I/B/E/S databases. The general result for this country, once transaction costs are included, is that recommendations

only provide public information, so they have low value as an input of investment decisions (Barber et al., 2001, 2003). However, the opposite seems to occur in other countries such as Italy (Cervellati et al., 2005), or Taiwan (Chang and Seasholes, 2004), where databases free from selection bias and constructed by the authors using mandatory reports of financial analysts available on the website of the Stock Exchange have been used[1]. In these countries recommendations may be valuable as analysts can gain access to private information on firms more easily, or because there is less conflict of interest, or because they know their own stocks better. Papers based on recommendations in an international context are even scarcer and their results, all based on the I/B/E/S database, are similar to those obtained in the United States.

This work extends the literature on recommendations in an international context, using a different database, and with the aim of analysing the value of investment recommendations in eight developed stock markets. Specifically, the FactSet/JCF database is used, which has the advantage of covering more firms in European countries, as besides the large international firms that usually collaborate with I/B/E/S, some domestic firms are also included. In particular, the value of investment strategies based on portfolios formed by both the level and change of recommendations is studied. Additionally, we aim to check the robustness of the results of previous studies in an international context by estimating abnormal returns through a model of risk factors instead of returns in excess of the market (Jegadeesh et al., 2004) or a model based on certain characteristics (Azzi et al., 2004).

The results found in this paper are slightly different to those found in previous literature. First, we find that analysts follow larger sized quoted firms instead of those which provide the highest returns to investors. Second, analysts tend to be optimistic, as they issue

[1] Databases sold by *First Call*, I/B/E/S, etc. are constructed using recommendations sent by brokerage houses that collaborate in a voluntary manner. Therefore, a firm can appear as not covered either because analysts do not send their corresponding recommendations, or because the firm is not really being followed. Databases constructed using mandatory reports sent by brokerage houses to the stock markets are free from this problem.

more buy than sell recommendations and, accordingly, they move their recommendations downward more frequently. Third, the stronger the recommendation, the higher the return obtained, as the return of buy recommendations is higher than that obtained through sell recommendations. Fourth, and after controlling for the tendency of analysts to favourably recommend stocks with certain characteristics, we show that not all recommendations entail value to investors. Finally, we find that there is a relationship between the value of the changes in recommendation and the optimism bias of analysts. It seems that due to the conflicts of interest already mentioned, investors only believe in the entries and exits of the buy category in countries where the ratio between buy and sell recommendations (B/S ratio hereafter) is low, and in the entries and exits of the sell category in countries with a high B/S ratio.

The paper is organised as follows: The second section includes a revision of the literature concerning the consensus of recommendations. The sample and data are described in Section three. The fourth section explains the methodology used to construct the consensus portfolios and evaluate their returns. It also includes the results obtained when investing in these portfolios. The same analysis is carried out in Section five but for portfolios constructed according to the change of consensus, both conditional and unconditional. The last section concludes and presents some lines for future research.

2 Literature review

Investors tend to believe, a priori, that analysts include relevant information in their recommendations, especially those obtained through personal contacts with directors of firms. However, the possibility of gaining returns using these recommendations is widely discussed in literature and there is no unanimity on this issue.

There are two lines of research on the consensus of recommendations: one which studies the returns of portfolios based on consensus and its changes (see Barber et al., 2001; 2003, for example) and another which analyses the relationship between the characteristics of recommended firms and the return of the consensus and its changes (Jegadeesh et al., 2004; Azzi et al., 2004, Azzi and Bird, 2005). Both lines use a calendar time methodology. The former basically uses models of factors to estimate the value of the consensus and its changes in obtaining adjusted risk returns (Barber et al., 2001; 2003). The latter uses characteristics of the recommended firms as benchmarks in a model similar to that of Daniel and Titman (1997). Although the studies are based on different data, periods and methodologies, all of them show that the level of consensus has scarcely any value, especially after including the transaction costs, but that the changes in consensus may be useful to investors.

Now we will review the literature, first considering individual countries, and then including international evidence. In the United States, Barber et al. (2001), using data from Zacks Investment Research for the period 1985-1996, show that portfolios with favourable recommendations generate higher returns than those with unfavourable recommendations. The mean annual return adjusted by the four-factor model of Carhart (1997) is 4% for the former and -5% for the latter. As with Womack (1996), these results are more pronounced for smaller firms. However, after considering transaction costs, the returns of the consensus portfolios are insignificant.

Later on, these authors (Barber et al., 2003), using data from First Call Corporation for the period 1996-2001, showed that favourable recommendations generated good returns until the end of the nineties, and low returns when the trend of the market changed in the year 2000. Coinciding with the downward trend of the market, unfavourably recommended stocks generated an abnormal return of 13%, while favourably recommended stocks yielded -7%.

This result was driven by the tendency of analysts to favourably recommend growth stocks, even after the change of economic cycle and even though ,their prices had fallen.

Loh and Mian (2005) use data from I/B/E/S in the period 1994-2000 and the calendar time methodology of Barber et al. (2001, 2003). They find that portfolios with better recommendations outperform those with worse recommendations but only when analysts' earnings forecasts are considered safe. Ertimur et al. (2006) show that the relationship between safeness of forecasts and returns of recommendations is only significant for firms where earnings are relevant for their valuation.

Jegadeesh et al. (2004) examine recommendations from Zacks Investment Research in the period 1985-1998. They show that stocks with the best consensus gain higher returns than those with worse ratings. However, the difference in returns is not significant once they control for characteristics that predict future returns, such as the momentum factor, the Book-to-Market ratio (BTM hereafter) etc., which shows that analysts tend to favourably recommend stocks with high trading volumes, growth and momentum. They also find that the returns of stocks with a positive change in consensus are higher than those with a negative change. Therefore, it seems that the change of consensus, in contrast to its level, provides more relevant information for investors as it is less dependent on the tendency of analysts to recommend certain stocks.

Von Nandesthadth (2003) analyses the value of recommendations in Finland for the period 1993-2001 and data on I/B/E/S. He shows that the simultaneous strategy of buying the best recommended stocks and selling the worst recommended ones yields an annual return of 6.2%. However, these results are insignificant when transaction costs are considered. As with the case of the United States, he also finds that firms with better recommendations are larger in size, have a low BTM and have generated good returns in previous months.

In the Australian market, Azzi and Bird (2005) use data on I/B/E/S from 1994 to 2003 to examine the value of the level and change of recommendations in two sub-periods: a bullish and a bearish market. Their results are similar to those of Jegadeesh et al. (2004) as the lack of value of consensus recommendations seems also to be due to the favourable recommendations of stocks with similar characteristics of momentum and growth. However, the return of portfolios based on changes in recommendations shows a stock picking ability of analysts. This seems to occur because Australian analysts, in contrast to their American counterparts, do not systematically recommend the same type of stocks in these portfolios, but adjust them according to the characteristics of the economic cycle: stocks with positive momentum in bullish years and value stocks in moments of downturn.

Cervellati et al. (2005) use all the reports that are mandatorily deposited by brokerage houses in the Italian market for the period 1999-2004. They show quarterly excess market returns of 6.92% in the strong buy portfolio, 2.01% in buy, -2.27% in sell and -9.7% in strong sell and thus conclude that investors can follow profitable strategies in the Italian market.

In an international context, Jegadeesh and Kim (2003) examine the value of recommendations for the G7 countries using data from I/B/E/S for the period October 1993-July 2002. They find that portfolios based on the level of consensus do not generate significant abnormal returns, but those based on consensus changes do. While upgrades only generate positive returns in the United States, downgrades entail negative returns in all the countries.

Azzi et al. (2004) examine recommendations in 15 European markets with data from I/B/E/S for the period April 1994 - April 2004. In contrast to the results of Azzi and Bird (2005) for the Australian market, they find that neither the level nor the change in consensus have any value to investors. However, and due to the tendency of analysts to favourably recommend big and growth stocks with high momentum, only the level of consensus has

value during the bullish market period. Conversely, only the changes of consensus entail value during the bearish market period. This could be due to the changes in recommendations to value stocks, which perform better in a bearish market. Finally, they find that the value of recommendations differs among countries.

In summary, the two papers which use an international context to analyze the value of the level and changes in recommendations come to similar results, using the same database, I/B/E/S, and a similar time period. The differences could be due to the use of different countries or methodologies to compute the abnormal returns. In this paper, we use a different database, a sample of countries that is partially similar to previous studies, and a different methodology based on a model of risk factors proposed in Barber et al. (2001). Moreover, we add a comparison between the returns of covered and non-covered firms.

3 Sample and data

3.1 Data

The data used in this study is based on two datasets. The first is the Factset/JCF database, which provides information on investment recommendations from financial analysts, stock market prices, number of shares from quoted companies, and returns on 10-year Treasury bonds. The second is the Global Compustat database, from which we extract data on the book value and market value of equity for each firm.

The main reason to use the Factset/JCF database instead of the I/B/E/S is that it includes more information on quoted stocks for the European markets. Out of the 36 countries included in Factset/JCF, this paper only considers data on the 8 countries where data on recommendations from January 1994 to June 2004 is available: France (FR), Germany (DEU), Netherlands (NL), Spain (ES), the United Kingdom (UK), Switzerland (CH), Japan

(JP) and the United States (USA). For these countries, the firms considered are those with at least one analyst recommendation and, simultaneously, are included in the Global Compustat database.[2] The sample period is the same for all countries and is limited by the availability of information on recommendations, as Factset/JCF began in 1993. There are two facts that characterize the stock markets during this sample period: first, there was a massive entrance of small investors; second, there was an upward tendency until March 2000 and a downward tendency from that date on.

The monthly return of each stock is calculated as the logarithm of two consecutive closing prices (adjusted by dividends, capital increases, splits, etc.). As proxy for the market return for each country, an equally weighted portfolio of all stocks in the market is used instead of the domestic indexes (Standard&Poor's, Nikkei, FTSE, etc.), in order to ensure that the same criteria is used for all countries. The monthly 10-year Treasury Bond is used as the risk-free rate for each country. The BTM variable is the ratio between the book value of equity per share and the closing stock price. The market capitalization is the product of the closing stock price and the number of shares. Both variables are calculated using the end-of-month observations.

3.2 Firms

Table 1 shows some descriptive statistics of the sample by countries, considering mean monthly values. The first two columns show book and market values on listed firms included in the Global Compustat database. This has data on 8,405 listed firms for the eight countries, with a total market capitalization of $18,611,489 billion. Columns (3) to (8) show data on listed firms with at least one analyst recommendation in Factset/JCF. Of the 8,405 firms

[2] Factset/JCF database includes data on firms and mutual funds not quoted on primary stock markets and for which no accounting data is available in the Global Compustat database.

included in Compustat, only 3,436 firms, with a total market capitalization of $15,695,144 billion, meet this criterion. Although covered firms are less than half of the listed firms (40.49%), they represent 84.33% of the total capitalization.

Finally, columns (9) to (14) show information on firms included in Compustat but with no analyst recommendations in Factset/JCF. Although the number of non-covered firms, 5,049, is higher than that of covered firms, their total capitalization is much lower, with a total of $2,916,345 billion, which represents slightly more than 15% of the total capitalization. In fact, the average capitalization of covered firms is $4,568 million, which is eight times the $578 million average of non-covered firms. This shows the preferences of analysts for following larger firms, which offer more benefits to brokerage houses in terms of intermediation or investment banking services (Brennan and Hughes, 1991). However, the data on the BTM ratio in columns (8) and (14) shows that covered firms do not seem to have high opportunities for future growth.

Covered firms represent more than 80% of the total capitalization in every country, with the exception of Japan, with a percentage lower than 55%. Making an analysis by countries, three geographic areas with different characteristics can be observed: the European countries, Japan, and the US. In the European countries the number of covered firms and their capitalization is higher, but the average capitalization per firm is lower, with a total of $2,817 million. The percentage of capitalization covered in the US is similar to that of the European countries, but the percentage of covered firms is lower and the average capitalization per firm is higher, with a total value of $6,235 million. Finally, Japan has the lowest percentage of covered firms, but the highest average capitalization per firm.

The sample analyzed in this paper includes 732 more European firms than that of Jegadeesh and Kim (2003), with a similar number for Japan but 1,696 fewer US firms. In the case of the US, the total capitalization considered here is only reduced by about $275,210

million, so the advantage of the sample used in this paper over that of Jegadeesh and Kim (2003) is obtained at the expense of a higher sample selection bias in the case of the US sample, where smaller firms are excluded.

[TABLE 1]

3.3 Recommendations

Factset/JCF classifies recommendations received from brokerage houses on a five-point scale, where low values correspond to the most favourable recommendations and vice versa, so that 1 corresponds to a strong buy; 1.5, a buy; 2, a hold; 2.5, a sell; and 3, a strong sell.[3]

Table 2 shows some descriptive statistics on analysts' recommendations. The first column registers data on the number of recommendations issued for all firms during the sample period. A total of 23,655 recommendations were issued by analysts collaborating with Factset/JCF, of which 7,503 (31%) were issued in the US and 15,232 (64%) in European countries. According to data shown in Azzi et al. (2004), Factset/JCF covers many more stocks than I/B/E/S in Europe. These authors show that 11,537 recommendations were issued between April 1994 and April 2004 in 15 European countries, which include all the countries in our sample except Switzerland. Specifically, Factset/JCF includes 2,787 more recommendations in France, 4,438 in the United Kingdom and 839 in Germany.

The second column shows that the mean number of analysts issuing recommendations is much higher in the European countries, with twice as many as the United States and three times that of Japan. The cross-section distribution of recommendations for each country is shown in columns (3) to (8). Buy and sell recommendations represent 52% and 12%, respectively, of the total number.

[3] This scale is different to that of I/B/E/S, which takes values from 1 to 5 with a distance of 1 point between consecutive recommendations.

The B/S ratio is shown in column (9). This variable is a measure of the optimism bias of financial analysts.[4] In the United States, analysts issue 14 buy for each sell recommendation. This trend is also shown in the United Kingdom, with a B/S ratio of 4.28, and 3.41 for Japan. In Europe, the number of buy recommendations is three times that of sell recommendations. These figures are similar to the evidence in Jegadeesh and Kim, 2003; Malmendier and Shanthikumar, 2004; Lee et al., 2004; etc. and show the tendency of analysts to issue more buy than sell recommendations, probably under pressure from certain conflicts of interest.

Column (10) shows the mean recommendation of covered firms per country. In all countries this variable takes a value lower than 2, which points to the existence of an optimism bias. The minimum value is for the United States with 1.50, which is near the value of a strong buy. In the remaining seven countries this variable is between a hold and a buy.

The frequency with which analysts revise their recommendations is in column (11). Whereas in Japan around 30% of recommendations are revised each month, this takes a value of 42% in the United States and more than 50% in the remaining countries. Finally, column (12) shows that the change in consensus is positive in all cases, showing that analysts tend to downgrade their recommendations more frequently than upgrade them. On average, the downgrade is higher in the United States, with the only exception of Germany. This again shows the existence of an optimism bias: initially recommendations are favourable and later on analysts tend to downgrade them.

In summary, the results of Table 2 point to the existence of an optimism bias of analysts, which is present in all countries in the sample and is consistent with previous literature (Jegadeesh and Kim, 2003; Ivkovic and Jegadesh, 2004). This bias is particularly high in the United States, the United Kingdom and Japan.

[4] Countries are ordered from low to high B/S ratio in all tables in this paper.

[TABLE 2]

4 Consensus Portfolios

The aim of this section is to analyse the value of investment recommendations as an input of investment decisions. All recommendations for covered firms are considered. According to Elton et al., (1986) the level of consensus contains more information than individual recommendations, as the former aggregates the implicit information of all analysts following a given firm. Moreover, it has the advantage of eliminating the noise of individual recommendations and can be considered as a proxy of the stock picking ability of analysts as a group.

The level of consensus of a given stock each month is calculated as the arithmetical mean of the last recommendation of each analyst following the firm in the last 180 days. This period of time is wider than the daily period used in Barber et al. (2001, 2003), the monthly period of Boni and Womack (2006), and the quarterly period of Jegadeesh et al. (2004) and Cervellatti et al. (2005).

Considering all the quoted stocks with accounting data in Global Compustat, two portfolios are constructed: one of non-covered firms, which is made up of firms with no analyst recommendations, and another of covered firms, which includes all firms with recommendations included in the Factset/JCF database. In turn, covered firms are ordered each month by the level of consensus and assigned to three portfolios using the Factset/JCF classification (Buchalet, 2004): the best recommendations portfolio includes stocks with a consensus in the interval [1-1.6], hold recommendations (1.6-2.1] and sell recommendations

(2.1,3].[5] The three portfolios are equally weighted in order to avoid big firms dominating the results and therefore correctly measure the contribution of analysts. The return of each portfolio is calculated in the following month, so that by rebalancing the portfolios each month a time series of 126 monthly returns for each portfolio is available.

To evaluate the performance of the portfolios, we use the mean monthly return and the Fama and French (1993) and Carhart (1997) multifactor models, which are used in the following way:

$$r_{p,t} = \alpha_p + \beta_p r_{M,t} + s_p r_{SMB,t} + h_p r_{HML,t} + w_p r_{WML,t} + e_{p,t}$$

where, $r_{pt} = R_{pt} - r_{ft}$ is the excess return of portfolio p over the risk free asset r_{ft} in month t, $r_{Mt} = R_{Mt} - r_{ft}$ is the excess return of the market portfolio proxy over the risk free asset in t, $r_{SMB,t}$ and $r_{HML,t}$ are Fama-French factors to capture the effects of size and BTM, respectively,[6] and $r_{WML,t}$ is the return of the momentum factor in t, calculated as the difference in month t between the returns on the portfolio of winners and losers. The portfolio of winners (losers) is the equally weighted portfolio containing 30% of the stocks with the highest (lowest) returns in the previous period beginning in month t-12 and ending in t-2, and e_{pt} is the error term.

4.1 Covered and Non-Covered Firms

Table 3 shows the mean return and the adjusted risk return using the four factor model for the portfolios of covered (C) and non-covered (NC) firms. Also, the strategy of buying non-covered firms by short-selling covered firms is shown. If analysts' recommendations are

[5] A sell recommendation should be in the interval (2.5, 3]. However, the lower limit is widened to (2.1, 3] because there is a low number of sell recommendations and because we consider that, due to the existence of the optimism bias, some hold recommendations could in fact be sell recommendations.
[6] Details on how the SMB and HML factors are constructed are in Fama and French (1993).

valuable, then portfolio C should outperform portfolio NC. Contrary to the expected results however, column (1) shows that although the mean monthly return of portfolios NC and C are positive in 7 out of the 8 countries, the return of the former is higher than that of the latter, except for Japan. The return of non-covered firms is significant in 4 out of the 5 European Union countries and its monthly value is higher than 1%. It is also significant in the United States, 1.60% and Switzerland, 0.80%. The return of covered firms is only significant in Spain and the United States, with a monthly value higher than 1% in both cases.

This pattern is no longer accomplished after using the four factor model. In the five continental European countries, the alphas are positive for the non-covered firms and negative for the covered firms, but they are only significant in the case of France. The opposite is true for the United Kingdom, Japan and the United States: the alphas are positive (negative) for the covered (non-covered) firms, but they are only significant in the case of covered firms in Japan and non-covered firms in the United States. Consistent with these results, the intercept of the strategy of buying non-covered firms and simultaneously selling covered firms yields positive returns only in France and negative results in Japan and the United States. Therefore, the risk adjusted returns of covered firms are not consistently higher than those of non-covered firms. This suggests that the analysts' decision to analyse a firm could depend on factors that are different from the mere valuation of the assets.

With regard to the risk factors, the coefficient on SMB is significant in all countries, being positive for non-covered firms and negative for covered firms, which shows that the latter are always larger firms. Among non-covered firms, the coefficient on HML is positive in 6 out of the 8 countries, but only significant in France, Switzerland and Japan. In the case of covered firms, this is always negative and significant in Spain, the United Kingdom and Japan. In this way, non-covered firms are more value focused while covered firms are more growth oriented. Finally, the coefficient on WML is positive for non-covered firms in all

countries and it is always significant, except for Spain and France. This coefficient is negative for covered firms and significant in the three countries that are not in continental Europe and also in Germany.

Therefore, in continental Europe the abnormal returns of non-covered firms are higher than those of covered firms, but this is only significant in France. In Japan and the United States the opposite is true. In general, the returns of covered firms show a higher sensitivity to market risk, and part of it can be attributed to being focused on large and growth firms with negative momentum.

[TABLE 3]

4.2 The Level of Consensus

Table 4 presents, for all countries, the characteristics and returns of the three portfolios into which covered firms are assigned: favourable recommendations (portfolio 1, P1 hereafter), neutral (P2) and unfavourable (P3). Also the strategy of buying favourably recommended stocks and simultaneously short-selling unfavourably recommended stocks (P1-P3) is presented.

Columns (1) to (5) show several characteristics of the three portfolios. It can be seen that in all countries the mean recommendation of P1 is higher than a buy recommendation. The P2 mean recommendation is higher than a hold recommendation and P3 is near a sell recommendation. These portfolios constitute a better representation of the scale of recommendations than those of Chen and Cheng (2005), Barber et al. (2001, 2003) and Jegadeesh et al. (2004), whose scale only covers the range from a buy/strong buy to a hold recommendation. This optimism bias of analysts is also represented in the number of assets

per portfolio, as this number is higher in P1 than in P3, as shown in column (2), although P2 contains more assets.

The third column shows that there is an inverse relationship between consensus and capitalization, except in Germany, the Netherlands and the United Kingdom. The relationship between consensus and BTM is positive, as shown in column (4). However, the BTM ratio is always lower in P1 than in P3, with the exception of the Netherlands and Spain. The number of recommendations is always higher in P1 than in P3, with the exception of Japan and the United Kingdom. In summary, analysts tend to favourably recommend assets that are of larger size and followed by a higher number of analysts. Moreover, better recommendations are given to growth assets in the United Kingdom and in the countries outside the European Union.

[TABLE 4]

The remaining columns of Table 4 are aimed at analysing the value of analysts' recommendations. If they entail value, we should expect positive returns in P1, zero in P2 and negative in P3. The mean return results are shown in column (6). It can be seen that the mean return of P1 is higher than P2, and that the latter in turn is higher than that of P3. The exceptions are the Netherlands, where the returns of P2 and P3 are similar, and the United States, where this is the case between P1 and P2. The return of P1 is always positive but only significant in France, Spain and the United States. Although the return of P2 is positive in 7 out of the 8 countries (it is negative in Germany), this is only significantly different from zero in Spain. Finally, and contrary to expectations, the return of P3 is only negative in Germany and the United Kingdom, but not significant.

With regard to the results of the adjusted risk return, that is, the alpha of the multifactor model, there are several implications. First, it still retains the decreasing relationship between recommendations and returns, so that the most favourable recommendations show the highest returns. Although the returns of P1 are always positive, with the exception of Switzerland, this is only significant in two cases. P3 always presents negative returns except in Japan, and they are significant in four cases. P2 shows positive (negative) returns in 5 (3) cases, but we can only accept in four cases that returns are not significantly different from zero. Three of the significant returns in P2 are negative, so this portfolio is seen as unfavourable, which is the same result observed in Italy (Cervellati et al., 2005). Overall, there is a low number of significant alphas (6 out of the 16 cases), so it seems that investors can not obtain significant abnormal returns by following analysts' recommendations. However, the strategy P1-P3 yields abnormal positive returns that are significant in all the European countries except the Netherlands.

Second, the fact that there are more significant alphas in P3 than in P1 indicates that investors seem to rely more on sell recommendations. This is in line with Ramnath et al. (2006) who argue that given analysts' incentives to bias recommendations upward, investors may attach more credibility to analysts' arguments in support of hold and sell recommendations. Also, Francis and Soffer (1997) find that because analysts bias recommendations upward, investors turn to earnings forecast revisions for more information when analysts issue buy or strong buy recommendations. We find that whereas buy recommendations are only valuable in Germany and Japan, sell recommendations entail value in four countries, especially in the European countries. Apparently, and with the exception of Japan, the greater the optimism bias of analysts measured by the B/S ratio, the lower the reliability of their recommendations. In this way analysts show a greater ability to identify ex ante overvalued stocks than to generate abnormal negative returns ex post. This result differs

from that of Jegadeesh and Kim (2003) who found that this strategy was not profitable in any of the G7 countries.

The coefficients associated with the four risk factors are presented in columns (10) to (17). All portfolios exhibit a positive and significant coefficient related to MKT, which are higher than one in almost all cases. The beta of the SMB factor is always negative and significant in P1 and P2. However, in P3 it is only significant in 1 out of the 5 cases (the Netherlands), where it is positive; and in 2 out of the 3 cases (Japan and the United Kingdom) where it is negative. Therefore, analysts issue the best recommendations for the larger assets and the worst for the smaller assets, which is contrary to the evidence of Barber et al. (2001) and Jegadeesh et al. (2004) in the United States.

The coefficient of the HML factor is always negative in P1 but only significant in France, Germany, the Netherlands, Switzerland, Japan and the United States. In the case of P2, there are only five negative coefficients, but this is only significant for Japan. The bulk of coefficients in P3 are positive, but only significant in France, Germany and the Netherlands. Therefore, with the exceptions of Spain and the United Kingdom, there is a tendency for analysts to favourably recommend growth assets, while unfavourable recommendations are focused on value assets.

The coefficient of the WML factor is positive and significant in P1 in four cases: France, the Netherlands, Spain and Switzerland. In P3 it is always negative and is significant in six countries. Therefore, the assets that receive the best recommendations are those which have evolved well in the past. However, the tendency of analysts to unfavourably recommend assets that have performed badly in the past seems even stronger.

Overall, the results of the four factor model suggest that analysts tend to follow patterns in their recommendations: they issue better recommendations for larger firms, growth assets and positive momentum. Portfolios associated with these assets have performed well

due to their own characteristics, and not to the recommendations made by analysts. The worst recommendations are focused on smaller firms, value assets and negative momentum, which is contrary to the evidence of Azzi and Bird (2005) in Australia and Azzi et al. (2004) in the European countries.

In summary, the results show that not all analysts' recommendations are valuable in making investment decisions. In particular, investors seem to be aware of the existence of an optimism bias, as they tend to rely more on sell than on buy recommendations, which do in fact provide abnormal positive returns. Moreover, the results show that, contrary to the evidence of Azzi et al. (2004), there are no differences among countries in the characteristics of the assets recommended.

5 Change of Consensus Portfolios

The fact that recommendations based on the level of consensus are not valuable could be the result of the aggregation of a large number of recommendations that are not always recently issued and based on new data. Usually analysts do not change their recommendations over long periods of time (especially in the case of smaller assets), so they become less and less informative. In order to solve this problem, the change in the level of consensus can be used (Jegadeesh et al., 2004) to take into account the effect of recently issued recommendations that may contain new information not included in the level per se.

However, the literature has shown arguments both in favour and in opposition to the use of the level and the consensus changes. Chang and Seasholes (2004) suggest that the level is more useful as changes can contain both negative and positive information about an asset. Even the reiteration of a given recommendation may contain information (for example that a given stock is undervalued when recommending a strong buy again). Conversely, Jegadeesh

and Kim (2003) argue in favour of the changes in recommendations as a way to partially avoid the bias in favour of growth assets found when using the level of consensus.

The change in consensus is calculated as the variation between two consecutive months of the level of consensus of a given firm. A positive (negative) change or upgrade (downgrade) indicates that the recommendation has worsened (improved). Three portfolios are constructed with these changes. The first (change 1, C1 hereafter) includes assets whose mean recommendation is the best, the second (C2) those that maintain their recommendation, and the third (C3) the assets with the worst recommendation. If the change in consensus entails value, then we should expect a positive return for C1, zero for C2 and negative for C3.

Table 5 provides information on the characteristics of these portfolios. It can be seen that the magnitude of all possible changes, which could take values between -2 and +2 in the extreme cases, is small in all countries. Japan exhibits the greatest width of change (-0.26 to 0.27), while in the remaining countries the range is from -0.15 to 0.15.

The second column shows the number of assets in each portfolio. The bulk of the assets are in C2, and there are more assets with downgrades than upgrades. As can be observed in column (3), C2 contains the smaller assets, while there are no appreciable differences between assets included in C1 and C3. With regard to the BTM ratio, there are no significant differences among the portfolios. Finally, and as expected, column (5) shows that the portfolio with no changes is the least followed by analysts.

[TABLE 5]

Columns (6) to (18) show the mean return and the abnormal return estimated with the four factor model. With regard to the latter, almost all the alphas in C1 are positive, but only significant in the United Kingdom and the United States. Conversely, six alphas are negative

in C3, and significant for Spain, France, Switzerland and the Netherlands. Only two alphas are significant in C2, one positive and the other negative. Therefore, investors seem to consider upgrades more than downgrades, which implies that they are aware of the existence of the optimism bias. This evidence is consistent with the results of Womack (1996), Barber et al. (2001) Jegadeesh et al. (2004) and Hsieh et al. (2005), who find more value in recommendations that worsen.

With regard to the coefficients related to the risk factors, the coefficient associated to MKT is positive and significant for the three portfolios. Both the coefficients on SMB of C1 and C3 are negative and significant, so they are focused on larger assets, and there are no remarkable differences in their magnitudes between both portfolios. However, there is no pattern for value or growth assets. Finally, analysts show a tendency to downgrade assets whose prices have fallen in the last year. Overall, the trend to recommend assets with certain characteristics is lower in the change than in the level consensus portfolios, as in Azzi et al. (2004).

In all the previous analyses it is important to acknowledge that investors will only sell those assets whose level of consensus changes from buy to sell, and not from buy to hold. In the same manner they will only buy an asset when the consensus changes from sell to buy. Therefore, and in order to take into account the final level of consensus after a given change, in the following analysis four portfolios are formed by using a double criteria: the change in consensus of the asset (downgrade or upgrade) and its final level of consensus. Portfolio P1/C1 represents assets with downgrades and a final buy recommendation (similar to an entry to the buy category); P2/C1 is a hold recommendation after a downgrade (similar to an exit of sell); P2/C3 is a hold recommendation but after an upgrade (similar to an exit of buy); P3/C3 is a sell recommendation after an upgrade (similar to entry to sell).

The results of the analysis of the conditional changes are shown in Table 6. The change in consensus ranges from -0.10 in the Netherlands to -0.27 in Japan so the final recommendation enters a buy category. In a similar manner, the change takes values from 0.22 in the Netherlands to 0.50 in the United States to enter a sell recommendation. The latter magnitudes are similar to those needed to enter the hold recommendation from a sell one. However, the upgrade needed to enter the hold recommendation is much lower than that needed to enter the sell recommendation.

With regard to the risk adjusted returns, the alphas of an entry to buy after a downgrade (P1/C1) are positive and significant in three cases, and those of an exit of buy after an upgrade (P2/C3) are negative and significant in four cases. The significant alphas correspond to those countries with lower B/S ratios, that is, when investors perceive a lower optimism bias. However, in countries with high B/S ratios, the exits (P2/C1) and entries (P3/C3) to the sell category should be more valuable to investors. The alphas of P2/C1 are positive in six cases but just significant in the three countries with high B/S ratios. In the case of P3/C3, the alphas are negative and significant in three cases. Finally, and with regard to the coefficients related to the risk factors, columns (6) to (13) show that the portfolios of conditional changes do not exhibit a clear pattern for assets of certain characteristics.

In summary, it seems that unconditionally, upgrades are more useful to investors than downgrades. However, once the conditional change is taken into account, the value of the final recommendation seems to be related to the optimism bias shown by analysts. In this way, entries/exits of the buy (sell) category are more useful the lower (higher) this bias is.

[TABLE 6]

6. Conclusions

The aim of this work is to examine the value of the level and the change in consensus in making investment decisions in eight developed countries from January 1994 to June 2004, with data from Factset/JCF. The results show, in the first place, that analysts tend to be optimistic, as they frequently issue more buy than sell recommendations. The existence of this optimism bias suggests that the information conveyed in recommendations could be biased, and therefore investors should be careful when using this information in their portfolio decisions.

Second, it is shown that covered firms do not provide significantly higher returns than non-covered firms. This result suggests that the decision to cover a firm and the recommendation issued may be guided by other incentives to analysts which are not related to providing profitable investment strategies to investors.

Third, buy recommendations do not seem to provide significant positive returns to investors after adjusting by risk. On the contrary, sell recommendations prove to be much more useful. The former result could be driven by the tendency of analysts to issue favourable recommendations too frequently, so that buy recommendations are not useful in most of the countries analysed. However, this can not be interpreted as a valuable contrary signal.

The fourth result shows that investing in assets whose recommendation has improved provides higher returns than those generated by assets whose recommendation has worsened. However, downgrades in unconditional changes seem to be more useful to investors. Nevertheless, once the conditional changes are considered, entries/exits to the buy category are useful in countries with the lowest optimism bias shown by analysts, while entries/exits to the sell category entail more value in countries with the highest optimism bias.

In summary, this work has shown that recommendations can be profitable to investors when the information they convey is properly analysed. The probability of obtaining returns

by considering sell recommendations is higher than by using buy recommendations. In fact, positive returns can not be obtained by buying assets with better recommendations. An investor is more likely to gain returns by selling assets with worse recommendations and buying them at a lower price later on. The strategy of buying favourably recommended assets and simultaneously selling unfavourably recommended assets yields positive abnormal returns in most of the countries analysed.

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Table 1: Descriptive Statistics on sample

This Table offers mean monthly values. Quoted Firms refers to those included in Global Compustat database. Covered Firms are firms included in Global Compustat with at least one investment recommendation in Factset/JCF database. Non-Covered Firms are firms included in Global Compustat with no investment recommendations in Factset/JCF database. Market Capitalization is the market value of stocks in US million dollars. % of Quoted Firms is the percentage of Covered and Non-Covered Firms relative to the Quoted Firms included in Global Compustat. % of Market Capitalization is the percentage of Covered and Non-Covered Firms relative to total Market Capitalization.

	Quoted Firms		Covered Firms						Non-Covered Firms					
	# Firms (1)	Market Capitalization (2)	# Firms (3)	Market Capitalization (4)	As % of Quoted Firms (5)	As % of Market Capitalization (6)	Mean Size of Firms (7)	Ratio BTM (8)	# Firms (9)	Market Capitalization (10)	As % of Quoted Firms (11)	As % of Market Capitalization (12)	Mean Size of Firms (13)	Ratio BTM (14)
Germany (DEU)	563	965,244	242	808,917	42.98	83.80	3,343	1.31	321	156,327	57.02	16.20	487	1.11
Spain (ES)	144	291,805	107	283,147	74.31	97.03	2,646	0.66	37	8,658	25.69	2.97	234	1.12
France (FR)	632	765,053	424	729,485	67.09	95.35	1,720	0.71	208	35,568	32.91	4.65	171	1.11
Switzerland (CH)	224	558,018	124	477,518	55.36	85.57	3,851	1.30	100	80,500	44.64	14.43	805	1.67
Netherlands (NL)	191	476,208	124	434,802	64.92	91.31	3,506	0.72	67	41,406	35.08	8.69	618	0.77
Japan(JP)	2,784	4,103,219	337	2,316,909	12.10	56.47	6,875	0.73	2447	1,786,310	87.90	43.53	730	1.24
United Kingdom (UK)	1,357	2,314,102	718	2,164,576	52.91	93.54	3,015	2.02	639	149,526	47.09	6.46	234	1.27
United States (USA)	2,590	9,137,840	1,360	8,479,790	52.51	92.80	6,235	1.33	1230	658,050	47.49	7.20	535	1.01
Total or mean (All countries)	8,485	18,611,489	3,436	15,695,144	40.49	84.33	4,568	1.10	5,049	2,916,345	59.51	15.67	578	1.16

Table 2: Descriptive Statistics on Recommendations

This Table offers mean monthly values. Mean Coverage is the mean number of recommendations per firm issued by analysts. Recommendations per Category include the number of recommendations and its percentage over the total per category: Buy/Strong Buy, Hold, Sell/Strong Sell. Ratio B/S represents the ratio between the numbers of positive (Buy/Strong Buy) and negative (Sell/Strong Sell) recommendations. Mean Rating is the mean recommendation issued by analysts. % Change Consensus shows how frequently recommendations are changed. Mean Variation is the magnitude of the consensus change.

			Recommendations per Category						Consensus			
	# Recommendations (1)	Mean Coverage (2)	# Buy/ Strong Buy (3)	% of Buy/ Strong Buy (4)	# Hold (5)	% of Hold (6)	# Sell/ Strong Sell (7)	% of Sell/ Strong Sell (8)	Ratio B/S (9)	Mean Rating (10)	% Change Consensus (11)	Mean Variation x 100 (12)
Germany (DEU)	2,103	8.45	897	42.65	814	38.71	392	18.64	2.29	1.83	54.44	0.49
Spain (ES)	1,413	13.08	681	48.20	470	33.26	262	18.54	2.60	1.80	67.58	0.34
France (FR)	4,695	11.00	2,644	56.32	1,175	25.03	877	18.68	3.01	1.69	53.27	0.35
Switzerland (CH)	1,078	8.56	443	41.09	490	45.45	145	13.45	3.06	1.81	54.77	0.27
Netherlands (NL)	1,446	11.57	653	45.16	590	40.80	204	14.11	3.20	1.79	63.93	0.29
Japan(JP)	920	2.68	406	44.13	395	42.93	119	12.93	3.41	1.78	30.98	0.32
United Kingdom (UK)	4,497	6.19	2,272	50.52	1,694	37.67	531	11.81	4.28	1.64	51.15	0.30
United States (USA)	7,503	5.44	4,416	58.86	2,773	36.96	314	4.18	14.06	1.50	42.71	0.36
Total or mean (All countries)	2,957	6.79	1,552	52.47	1,050	35.51	356	12.02	4.36	1.73	52.35	0.34

Table 3: Covered and Non-Covered Firms

Each month quoted firms are classified as covered or non-covered if analysts in Factset/JCF have issued or not, respectively, recommendations about them. The mean monthly equally weighted return of each portfolio is obtained from January 1994 to June 2004. Column (1) shows the mean monthly returns of covered and non-covered firms. The coefficients in (3) to (13) are calculated by regressing the excess return of each portfolio over the risk free asset on four risk factors: the excess return of the market portfolio; the effect of size (SMB); the ratio Book-To-Market (BTM); and the momentum factor (WML). P-values are shown in the right column of the corresponding coefficient. Standard errors are consistent to heteroskedasticity and autocorrelation (Newey-West).

				Adjusted Risk Returns (3 factors Fama-French + Momentum)										
	Portfolios	Mean Return (1)	p-value (2)	α_p(%) (3)	p(α) (4)	β_p (5)	p(β) (6)	s_p (7)	p(s_p) (8)	h_p (9)	p(h_p) (10)	w_p (11)	p(w_p) (12)	R^2 ad (13)
DEU	Non-Covered (NC)	0.54	0.33	0.14	0.49	**0.79**	0.00	**0.24**	0.00	0.02	0.52	**0.11**	0.02	0.89
	Covered (C)	-0.01	0.99	-0.20	0.37	**1.24**	0.00	**-0.38**	0.00	-0.00	0.94	**-0.08**	0.07	0.94
	NC-C	0.55	0.12	0.33	0.42	**-0.45**	0.00	**0.62**	0.00	0.02	0.71	**0.20**	0.03	0.51
ES	Non-Covered (NC)	**1.40**	0.02	0.08	0.72	**0.77**	0.00	**0.52**	0.00	0.11	0.23	0.05	0.36	0.74
	Covered (C)	**1.11**	0.04	-0.13	0.18	**1.05**	0.00	**-0.20**	0.00	**-0.07**	0.02	-0.00	0.94	0.97
	NC-C	0.29	0.39	0.20	0.45	**-0.28**	0.00	**0.73**	0.00	**0.19**	0.10	0.06	0.49	0.47
FR	Non-Covered	**1.74**	0.00	**0.55**	0.00	**0.68**	0.00	**0.60**	0.00	**0.14**	0.01	0.08	0.17	0.82
	Covered (C)	0.76	0.22	**-0.29**	0.00	**1.13**	0.00	**-0.29**	0.00	-0.04	0.12	-0.03	0.25	0.98
	NC-C	**0.98**	0.02	**0.84**	0.00	**-0.44**	0.00	**0.90**	0.00	**0.18**	0.02	0.12	0.20	0.64
CH	Non-Covered (NC)	**0.80**	0.06	0.08	0.37	**0.78**	0.00	**0.16**	0.00	**0.06**	0.06	**0.07**	0.00	0.93
	Covered (C)	0.62	0.31	-0.14	0.12	**1.11**	0.00	**-0.19**	0.00	-0.02	0.41	-0.02	0.11	0.97
	NC-C	0.18	0.48	0.22	0.16	**-0.32**	0.00	**0.36**	0.00	0.09	0.14	**0.10**	0.00	0.61
NL	Non-Covered (NC)	**1.06**	0.08	0.12	0.50	**0.95**	0.00	**0.48**	0.00	0.04	0.60	**0.11**	0.00	0.86
	Covered (C)	0.68	0.25	-0.06	0.45	**0.99**	0.00	**-0.23**	0.00	-0.01	0.32	-0.02	0.23	0.97
	NC-C	0.38	0.16	0.18	0.43	**-0.04**	0.50	**0.71**	0.00	0.05	0.50	**0.14**	0.00	0.41
JP	Non-Covered (NC)	0.45	0.51	-0.02	0.40	**1.01**	0.00	**0.10**	0.00	**0.04**	0.00	**0.03**	0.00	1.00
	Covered (C)	0.46	0.39	**0.53**	0.00	**0.84**	0.00	**-0.67**	0.00	**-0.28**	0.00	**-0.10**	0.07	0.90
	NC-C	-0.01	0.99	**-0.55**	0.00	**0.17**	0.00	**0.77**	0.00	**0.33**	0.00	**0.13**	0.03	0.64
UK	Non-Covered (NC)	**1.37**	0.04	-0.05	0.62	**1.01**	0.00	**0.29**	0.00	**-0.09**	0.08	**0.13**	0.00	0.97
	Covered (C)	0.59	0.23	0.02	0.86	**0.89**	0.00	**-0.40**	0.00	**-0.08**	0.08	**-0.07**	0.03	0.94
	NC-C	**0.78**	0.02	-0.07	0.66	**0.11**	0.03	**0.69**	0.00	0.00	0.91	**0.20**	0.00	0.70
USA	Non-Covered (NC)	**1.60**	0.01	**-0.35**	0.01	**0.85**	0.00	**0.52**	0.00	0.03	0.19	**0.13**	0.00	0.96
	Covered (C)	**1.26**	0.01	0.15	0.18	**1.01**	0.00	**-0.28**	0.00	-0.00	0.59	**-0.06**	0.01	0.96
	NC-C	0.34	0.20	**-0.50**	0.01	**-0.16**	0.00	**0.80**	0.00	0.04	0.18	**0.19**	0.00	0.66

Table 4: Consensus Portfolios: Characteristics, Mean Return and Adjusted Risk Return

The level of consensus is calculated each month as the mean of the last recommendation issued by the analysts following a firm, using the scale of Factset/JCF: 1=strong buy, 1.5 =buy, 2= hold, 2.5= sell y 3 = strong sell. Each month covered firms are classified according to their level of consensus: favourable if consensus is [1, 1.6]; neutral if (1.6, 2.1], and unfavourable (2.1, 3]. The mean monthly equally weighted return of each portfolio is calculated from January 1994 to June 2004. Columns (1) to (5) show several characteristics of the portfolios: mean level of consensus, number of assets per portfolio, size, mean Book-To-Market, and the number of recommendations issued by analysts. Column (6) shows the mean monthly returns of consensus portfolios. The coefficients in (8) to (18) are calculated by regressing the excess return of each portfolio over the risk free asset on four risk factors: the excess return of the market portfolio; the effect of size (SMB); the ratio Book-To-Market (BTM); and the momentum factor (WML). P-values are shown in the right column of the corresponding coefficient. Standard errors are consistent to heteroskedasticity and autocorrelation (Newey-West).

		Characteristics							Risk Adjusted Returns (3 factors Fama-French + Momentum)										
	Portfolios	Consensus (1)	# Stocks (2)	Size (3)	BTM (4)	# Analysts (5)	Mean Return (6)	p-value (7)	α_p(%) (8)	p(α_p) (9)	β_p (10)	p(β_p) (11)	s_p (12)	p(s_p) (13)	h_p (14)	p(h_p) (15)	w_p (16)	p(w_p) (17)	R^2 ad (18)
DEU	P1 (Best)	1.33	85	3.77	1.26	7.74	0.62	0.46	**0.54**	0.04	**1.36**	0.00	**-0.41**	0.00	**-0.23**	0.00	-0.04	0.32	0.92
	P2	1.87	104	4.96	0.89	10.93	-0.05	0.94	**-0.45**	0.05	**1.20**	0.00	**-0.49**	0.00	**0.13**	0.00	-0.03	0.48	0.92
	P3(Worst)	2.49	53	1.30	1.79	6.67	-0.70	0.35	**-0.70**	0.10	**1.06**	0.00	-0.04	0.83	**0.17**	0.02	**-0.28**	0.02	0.83
	P1-P3						**1.32**	0.00	**1.24**	0.00	**0.29**	0.00	**-0.37**	0.07	**-0.41**	0.00	**0.24**	0.01	0.49
ES	P1 (Best)	1.38	36	4.11	0.68	13.68	**1.46**	0.01	0.18	0.19	**1.05**	0.00	**-0.22**	0.00	-0.02	0.59	**0.12**	0.02	0.90
	P2	1.83	50	2.78	0.69	14.55	**0.98**	0.07	**-0.28**	0.06	**1.04**	0.00	**-0.32**	0.00	-0.05	0.15	0.03	0.28	0.93
	P3(Worst)	2.45	21	1.05	0.61	8.11	0.79	0.22	**-0.49**	0.06	**1.10**	0.00	0.14	0.15	-0.05	0.69	-0.14	0.22	0.74
	P1-P3						0.67	0.11	**0.67**	0.06	-0.04	0.66	**-0.36**	0.00	0.02	0.85	**0.26**	0.08	0.17
FR	P1 (Best)	1.30	206	2.52	0.67	11.46	**1.11**	0.09	0.10	0.41	**1.09**	0.00	**-0.42**	0.00	**-0.17**	0.00	**0.06**	0.02	0.96
	P2	1.84	148	2.17	0.64	13.25	0.48	0.42	**-0.56**	0.00	**1.11**	0.00	**-0.28**	0.00	0.03	0.25	**-0.09**	0.00	0.96
	P3(Worst)	2.50	70	0.46	0.82	8.21	0.09	0.89	**-1.16**	0.00	**1.17**	0.00	0.12	0.17	**0.23**	0.00	**-0.14**	0.07	0.86
	P1-P3						**1.02**	0.02	**1.26**	0.00	-0.07	0.23	**-0.54**	0.00	**-0.40**	0.00	**0.20**	0.01	0.57
CH	P1 (Best)	1.39	30	7.52	0.95	10.70	0.99	0.15	-0.05	0.73	**1.21**	0.00	**-0.35**	0.00	**-0.18**	0.01	**0.09**	0.06	0.92
	P2	1.85	73	3.23	1.26	8.90	0.64	0.27	-0.09	0.46	**1.05**	0.00	**-0.28**	0.00	-0.05	0.43	-0.03	0.40	0.94
	P3(Worst)	2.33	21	0.81	1.68	6.48	0.04	0.95	-0.27	0.34	**1.09**	0.00	0.14	0.29	0.15	0.20	**-0.23**	0.00	0.78
	P1-P3						**0.94**	0.02	0.22	0.53	0.11	0.15	**-0.50**	0.00	**-0.33**	0.03	**0.32**	0.00	0.33
NL	P1 (Best)	1.39	39	4.77	0.63	12.21	0.94	0.12	0.12	0.46	**1.00**	0.00	**-0.28**	0.00	**-0.17**	0.00	**0.06**	0.10	0.89
	P2	1.84	59	5.07	0.92	12.08	0.59	0.30	-0.17	0.19	**0.95**	0.00	**-0.35**	0.00	-0.00	0.93	0.00	0.90	0.92
	P3(Worst)	2.43	26	0.68	0.61	7.61	0.59	0.47	-0.24	0.47	**1.02**	0.00	**0.24**	0.04	**0.25**	0.01	-0.14	0.11	0.78
	P1-P3						0.38	0.52	0.36	0.38	-0.02	0.81	**-0.54**	0.00	**-0.43**	0.00	**0.20**	0.04	0.45
JP	P1 (Best)	1.28	121	8.19	0.61	2.85	0.75	0.14	**0.87**	0.00	**0.78**	0.00	**-0.62**	0.00	**-0.35**	0.00	-0.02	0.71	0.81
	P2	1.90	168	8.25	0.73	3.22	0.32	0.54	**0.36**	0.01	**0.82**	0.00	**-0.61**	0.00	**-0.24**	0.00	**-0.11**	0.04	0.89
	P3(Worst)	2.55	48	4.19	0.86	2.85	0.21	0.74	0.20	0.28	**1.02**	0.00	**-0.60**	0.00	**-0.21**	0.00	**-0.16**	0.01	0.88
	P1-P3						**0.54**	0.05	**0.66**	0.00	**-0.23**	0.00	-0.01	0.99	**-0.13**	0.05	**0.13**	0.04	0.40
UK	P1 (Best)	1.34	362	3.41	0.87	5.78	0.76	0.14	0.09	0.53	**0.89**	0.00	**-0.34**	0.00	-0.10	0.18	-0.02	0.66	0.90
	P2	1.84	308	3.86	1.00	8.15	0.50	0.28	0.03	0.78	**0.87**	0.00	**-0.47**	0.00	-0.04	0.33	**-0.12**	0.00	0.93
	P3(Worst)	2.36	47	1.78	4.19	7.06	-0.03	0.96	**-0.47**	0.05	**0.87**	0.00	**-0.39**	0.00	0.00	0.97	**-0.19**	0.06	0.71
	P1-P3						**0.79**	0.01	**0.56**	0.03	0.01	0.81	0.00	0.97	-0.11	0.44	0.16	0.11	0.12
USA	P1 (Best)	1.29	755	9.99	0.64	5.66	**1.20**	0.02	0.16	0.24	**1.00**	0.00	**-0.36**	0.00	**-0.12**	0.00	-0.03	0.44	0.94
	P2	1.83	538	6.13	0.73	5.46	**1.20**	0.02	0.06	0.68	**0.99**	0.00	**-0.18**	0.01	**0.20**	0.00	**-0.09**	0.01	0.94
	P3(Worst)	2.36	43	2.58	2.39	4.18	0.38	0.67	-1.00	0.18	**0.90**	0.00	0.27	0.33	-0.07	0.67	**-0.30**	0.03	0.56
	P1-P3						0.77	0.23	1.11	0.13	0.10	0.35	**-0.63**	0.01	-0.04	0.79	**0.27**	0.09	0.14

Tabla 5: Consensus Change Portfolios

The change of consensus is calculated as the variation between two consecutive months of the level of consensus of each firm. Portfolio C1 includes those assets whose recommendation has improved; C2 those that have maintain its recommendation; C3 those which have worsened it. The mean monthly equally weighted return of each portfolio is calculated from January 1994 to June 2004. Columns (1) to (5) show several characteristics of the portfolios: mean change of consensus, number of assets per portfolio, size, mean Book-To-Market, and the number of recommendations issued by analysts. Column (6) shows the mean monthly returns of consensus changes portfolios. The coefficients in (8) to (18) are calculated by regressing the excess return of each portfolio over the risk free asset on four risk factors: the excess return of the market portfolio; the effect of size (SMB); the ratio Book-To-Market (BTM); and the momentum factor (WML). P-values are shown in the right column of the corresponding coefficient. Standard errors are consistent to heteroskedasticity and autocorrelation (Newey-West).

		Characteristics							Risk Adjusted Returns (3 factors Fama-French + Momentum)										
	Portfolios	Consensus (1)	# Stocks (2)	Size (3)	BTM (4)	# Analysts (5)	Mean Return (6)	p-value (7)	αp(%) (8)	p(α) (9)	βp (10)	p(β) (11)	sp (12)	p(sp) (13)	hp (14)	p(hp) (15)	wp (16)	p(wp) (17)	R2 ad (18)
DEU	C1	-0.140	55	5.64	1.21	13.47	0.40	0.57	-0.03	0.91	**1.23**	0.00	**-0.73**	0.00	0.07	0.27	-0.05	0.41	0.88
	C2	0.000	122	1.59	1.13	4.65	-0.12	0.87	-0.25	0.20	**1.16**	0.00	-0.11	0.13	-0.00	0.94	**-0.10**	0.05	0.94
	C3	0.150	61	5.37	1.35	13.19	-0.18	0.82	-0.45	0.20	**1.34**	0.00	**-0.53**	0.00	0.05	0.42	**-0.10**	0.05	0.86
	C1-C3						**0.58**	0.05	0.42	0.16	-0.11	0.23	-0.19	0.19	0.01	0.78	0.04	0.36	0.12
ES	C1	-0.110	33	3.80	0.63	16.32	**1.09**	0.07	0.04	0.86	**1.02**	0.00	**-0.39**	0.00	-0.17	0.03	-0.06	0.30	0.86
	C2	0.000	37	1.28	0.74	7.47	**1.40**	0.02	0.25	0.16	**0.98**	0.00	0.10	0.26	-0.08	0.41	-0.02	0.72	0.87
	C3	0.110	36	3.87	0.65	16.32	0.55	0.29	**-0.60**	0.00	**1.12**	0.00	**-0.41**	0.00	**-0.08**	0.07	-0.01	0.69	0.94
	C1-C3						**0.54**	0.08	**0.64**	0.07	-0.09	0.17	0.01	0.90	-0.08	0.43	-0.05	0.53	0.00
FR	C1	-0.130	103	3.36	0.63	16.90	**1.05**	0.10	0.18	0.19	**1.11**	0.00	**-0.44**	0.00	**-0.07**	0.02	**-0.09**	0.01	0.94
	C2	0.000	205	0.68	0.47	5.71	0.81	0.18	**-0.36**	0.00	**1.13**	0.00	-0.05	0.51	0.04	0.29	**0.07**	0.00	0.95
	C3	0.140	111	3.35	0.93	16.76	-0.05	0.94	**-0.71**	0.00	**1.13**	0.00	**-0.63**	0.00	**-0.19**	0.00	**-0.23**	0.00	0.95
	C1-C3						**1.10**	0.00	**0.89**	0.00	-0.02	0.52	**0.18**	0.02	0.11	0.01	**0.14**	0.00	0.14
CH	C1	-0.110	29	6.67	1.01	12.66	0.95	0.15	0.18	0.25	**1.15**	0.00	**-0.42**	0.00	-0.09	0.25	-0.04	0.30	0.90
	C2	0.000	63	1.66	1.37	5.84	0.47	0.43	-0.24	0.26	**1.03**	0.00	-0.06	0.46	0.01	0.71	0.01	0.68	0.87
	C3	0.110	30	6.47	1.22	12.61	0.32	0.65	**-0.40**	0.01	**1.27**	0.00	**-0.26**	0.00	0.02	0.75	**-0.07**	0.09	0.91
	C1-C3						**0.63**	0.01	**0.58**	0.02	-0.12	0.03	-0.16	0.19	-0.12	0.28	0.03	0.56	0.04
NL	C1	-0.100	36	6.16	0.87	14.64	**1.08**	0.08	0.19	0.33	**1.08**	0.00	**-0.30**	0.00	0.07	0.22	**0.06**	0.09	0.88
	C2	0.000	49	2.41	0.69	7.30	0.69	0.25	-0.07	0.65	**0.97**	0.00	-0.04	0.56	-0.02	0.65	0.04	0.39	0.83
	C3	0.110	38	5.82	0.66	14.80	0.12	0.84	**-0.35**	0.03	**0.97**	0.00	**-0.45**	0.00	-0.06	0.22	**-0.15**	0.00	0.89
	C1-C3						**0.99**	0.00	**0.59**	0.06	0.09	0.33	0.15	0.22	0.13	0.15	**0.20**	0.00	0.05
JP	C1	-0.260	43	10.5	0.67	4.37	0.24	0.68	0.32	0.24	**0.81**	0.00	**-0.70**	0.00	-0.19	0.09	-0.03	0.73	0.74
	C2	0.000	236	6.03	0.72	2.59	0.46	0.38	**0.56**	0.00	**0.84**	0.00	**-0.66**	0.00	**-0.24**	0.00	-0.07	0.17	0.90
	C3	0.270	46	9.40	0.61	4.22	-0.06	0.93	0.21	0.53	**0.84**	0.00	**-0.75**	0.00	**-0.42**	0.00	**-0.19**	0.06	0.73
	C1-C3						0.30	0.33	0.11	0.75	-0.03	0.58	0.05	0.65	**0.23**	0.10	0.16	0.11	0.02
UK	C1	-0.140	149	5.09	0.96	9.74	0.78	0.11	**0.37**	0.00	**0.90**	0.00	**-0.53**	0.00	-0.02	0.74	-0.10	0.03	0.92
	C2	0.000	394	2.00	1.44	4.94	0.53	0.31	-0.12	0.47	**0.88**	0.00	**-0.29**	0.00	-0.09	0.22	-0.04	0.38	0.88
	C3	0.150	163	4.98	1.48	9.65	0.22	0.66	-0.12	0.41	**0.91**	0.00	**-0.53**	0.00	-0.10	0.12	**-0.16**	0.00	0.92
	C1-C3						**0.56**	0.00	**0.49**	0.01	-0.01	0.76	0.00	0.99	0.08	0.26	0.06	0.27	0.04
USA	C1	-0.130	251	12.49	0.55	7.36	**1.34**	0.01	**0.36**	0.01	**1.00**	0.00	**-0.41**	0.00	0.00	0.74	-0.03	0.19	0.93
	C2	0.000	771	6.56	0.74	4.62	**1.27**	0.01	0.06	0.69	**1.02**	0.00	**-0.20**	0.00	-0.01	0.70	-0.02	0.37	0.93
	C3	0.140	297	12.13	0.69	7.31	**1.07**	0.03	0.23	0.14	**1.01**	0.00	**-0.44**	0.00	-0.02	0.44	**-0.17**	0.00	0.93
	C1-C3						**0.33**	0.02	0.20	0.22	-0.02	0.51	0.04	0.36	0.02	0.55	**0.12**	0.01	0.12

Table 6: Conditional Consensus Change Portfolios

Portfolio P1/C1 includes assets with downgrades and a final buy recommendation; P2/C1 is a hold recommendation after a downgrade; P2/C3 is a hold recommendation but after an upgrade; P3/C3 is a sell recommendation after an upgrade. The coefficients in (4) to (14) are calculated by regressing the excess return of each portfolio over the risk free asset on four risk factors: the excess return of the market portfolio; the effect of size (SMB); the ratio Book-To-Market (BTM); and the momentum factor (WML). P-values are shown in the right column of the corresponding coefficient. Standard errors are consistent to heteroskedasticity and autocorrelation (Newey-West).

	Portfolios Consensus/Change Consensus	Change Consensus (1)	Mean Return (2)	p-value (3)	Risk Adjusted Returns (3 factors Fama-French + Momentum)										
					α_p(%) (4)	p(α) (5)	β_p (6)	p(β) (7)	s_p (8)	p(s_p) (9)	h_p (10)	p(h_p) (11)	w_p (12)	p(w_p) (13)	R^2 ad (14)
DEU	P1/C1	-0.16	1.19	0.18	**1.23**	0.00	**1.23**	0.00	**-0.93**	0.00	**-0.30**	0.01	**-0.26**	0.01	0.72
	P2/C1	-0.12	0.27	0.70	-0.33	0.24	**1.25**	0.00	**-0.69**	0.00	**0.19**	0.00	0.02	0.68	0.85
	P2/C3	0.13	-0.12	0.87	-0.41	0.26	**1.27**	0.00	**-0.62**	0.00	0.04	0.58	**-0.11**	0.05	0.83
	P3/C3	0.34	-0.95	0.46	-1.20	0.26	**1.46**	0.00	-0.15	0.79	0.40	0.19	-0.25	0.29	0.44
	P1/C1-P3/C3		**2.05**	0.02	**2.29**	0.02	-0.26	0.48	-0.76	0.22	**-0.62**	0.03	-0.00	1.00	0.10
ES	P1/C1	-0.13	**1.90**	0.00	**0.74**	0.02	**1.01**	0.00	**-0.28**	0.01	-0.00	0.99	0.00	0.92	0.67
	P2/C1	-0.10	0.86	0.16	-0.30	0.28	**1.06**	0.00	**-0.42**	0.00	**-0.17**	0.04	0.00	0.88	0.85
	P2/C3	0.10	0.58	0.27	**-0.57**	0.00	**1.13**	0.00	**-0.42**	0.00	-0.08	0.24	-0.00	0.87	0.91
	P3/C3	0.28	0.98	0.27	-0.41	0.61	**0.96**	0.00	-0.22	0.46	-0.29	0.22	-0.10	0.65	0.23
	P1/C1-P3/C3		1.13	0.21	0.94	0.30	0.07	0.75	0.00	1.00	0.34	0.17	0.12	0.63	-0.03
FR	P1/C1	-0.14	**1.27**	0.07	**0.52**	0.03	**1.06**	0.00	**-0.64**	0.00	**-0.26**	0.00	-0.03	0.47	0.89
	P2/C1	-0.12	0.98	0.13	0.06	0.75	**1.14**	0.00	**-0.40**	0.00	0.00	0.94	**-0.11**	0.01	0.90
	P2/C3	0.13	-0.25	0.71	**-0.92**	0.00	**1.14**	0.00	**-0.61**	0.00	**-0.14**	0.00	**-0.25**	0.00	0.93
	P3/C3	0.36	-1.15	0.23	**-1.88**	0.01	**1.06**	0.00	-0.05	0.82	0.18	0.24	**-0.51**	0.01	0.51
	P1/C1-P3/C3		**2.45**	0.00	**2.40**	0.00	0.00	1.00	**-0.58**	0.00	**-0.44**	0.01	**0.48**	0.02	0.28
CH	P1/C1	-0.11	0.99	0.23	-0.32	0.46	**1.33**	0.00	**-0.41**	0.02	0.14	0.44	**0.30**	0.00	0.66
	P2/C1	-0.10	0.92	0.17	0.24	0.26	**1.12**	0.00	**-0.48**	0.00	-0.14	0.22	**-0.10**	0.08	0.85
	P2/C3	0.10	0.38	0.57	**-0.39**	0.01	**1.26**	0.00	**-0.35**	0.00	-0.01	0.91	**-0.08**	0.08	0.92
	P3/C3	0.26	-2.14	0.23	-1.70	0.14	**1.15**	0.00	0.82	0.42	0.08	0.89	-0.64	0.14	0.14
	P1/C1-P3/C3		**3.01**	0.05	1.04	0.43	0.21	0.58	-1.39	0.21	0.34	0.64	**1.01**	0.03	0.06
NL	P1/C1	-0.10	0.96	0.23	0.20	0.62	**1.08**	0.00	**-0.36**	0.00	-0.12	0.18	0.05	0.49	0.69
	P2/C1	-0.10	**1.05**	0.08	**0.67**	0.01	**1.01**	0.00	**-0.35**	0.00	0.01	0.71	0.03	0.40	0.85
	P2/C3	0.10	0.14	0.82	**-0.38**	0.05	**1.00**	0.00	**-0.44**	0.00	-0.05	0.37	**-0.12**	0.00	0.87
	P3/C3	0.22	-1.17	0.57	0.42	0.76	**0.57**	0.18	0.37	0.52	-0.22	0.78	**-1.08**	0.05	0.37
	P1/C1-P3/C3		1.81	0.34	0.19	0.90	0.44	0.32	-0.71	0.20	0.15	0.83	1.09	0.04	0.22
JP	P1/C1	-0.27	0.31	0.63	0.40	0.23	**0.79**	0.00	**-0.97**	0.00	-0.22	0.13	0.18	0.18	0.57
	P2/C1	-0.24	0.13	0.82	0.35	0.34	**0.77**	0.00	**-0.66**	0.00	**-0.26**	0.03	-0.14	0.04	0.65
	P2/C3	0.27	-0.20	0.77	0.11	0.76	**0.80**	0.00	**-0.75**	0.00	**-0.47**	0.00	**-0.22**	0.02	0.65
	P3/C3	0.47	0.15	0.88	0.33	0.68	**0.93**	0.00	**-0.79**	0.01	-0.32	0.25	-0.29	0.11	0.48
	P1/C1-P3/C3		0.25	0.72	0.22	0.74	-0.13	0.41	-0.20	0.52	0.00	0.98	**0.45**	0.06	0.16
UK	P1/C1	-0.17	0.86	0.12	0.32	0.12	**0.91**	0.00	**-0.42**	0.00	-0.03	0.72	-0.06	0.27	0.81
	P2/C1	-0.12	0.75	0.12	**0.39**	0.00	**0.91**	0.00	**-0.59**	0.00	-0.02	0.79	**-0.12**	0.02	0.91
	P2/C3	0.15	0.18	0.73	-0.07	0.60	**0.91**	0.00	**-0.60**	0.00	**-0.13**	0.05	**-0.20**	0.00	0.92
	P3/C3	0.40	**-3.58**	0.01	**-4.96**	0.00	**1.28**	0.00	0.32	0.42	**0.78**	0.09	-0.15	0.55	0.31
	P1/C1-P3/C3		**4.53**	0.00	**5.20**	0.00	-0.36	0.17	**-0.70**	0.08	**-0.79**	0.08	0.09	0.72	0.09
USA	P1/C1	-0.13	**1.11**	0.02	0.30	0.16	**0.98**	0.00	**-0.52**	0.00	**-0.17**	0.01	-0.06	0.23	0.90
	P2/C1	-0.13	**1.46**	0.00	**0.56**	0.00	**0.94**	0.00	**-0.38**	0.00	**0.14**	0.00	-0.05	0.12	0.90
	P2/C3	0.16	**0.98**	0.05	0.14	0.44	**1.02**	0.00	**-0.39**	0.00	**0.08**	0.05	**-0.15**	0.00	0.92
	P3/C3	0.50	**-4.47**	0.05	**-4.28**	0.06	**1.10**	0.04	0.24	0.76	-0.10	0.85	-0.2	0.56	0.30
	P1/C1-P3/C3		**4.47**	0.02	**4.54**	0.05	-0.10	0.84	-0.77	0.34	-0.08	0.87	0.20	0.66	0.03