Revisions of Earnings Forecasts and Security Returns: Evidence from Three Countries

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Abstract:

Prior evidence has demonstrated that for North American markets EPS forecast revisions are associated with security price changes, although this evidence is much stronger for pre-announcement changes than for post-announcement. As there is considerable interest in using analysts' forecasts for stock selection purposes in Europe, it is clearly of some importance to determine whether forecast revisions are associated with security returns, and whether the revisions can be used to trade successfully. We use a large sample of individual analysts' forecast revisions in Europe's three largest markets - the U.K., France and Germany – and demonstrate that forecast revisions follow significant abnormal returns and can also be used to identify significant, post announcement returns. This result is found in all years bar one, is stronger for the U.K. than the other markets, for downward than for upward revisions, for less researched rather than more researched firms and for forecasts diverging from the consensus rather than converging. Although surprisingly strong evidence against the EMH these results are consistent with certain other studies which also demonstrate delayed market reaction to news.

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I. Introduction.

Despite the extensive resources devoted to the production, dissemination and analysis of financial analysts' earnings forecasts (FAFs) of earnings there is no clear European evidence that these forecasts can be used in stock selection or market timing. In this paper we investigate the security returns observed shortly before and after substantial revisions of individual analysts' forecasts of earnings for firms in the United Kingdom, Germany and France. We also examine whether the returns associated with these revisions are affected by characteristics such as forecast horizon; the number of analysts following the firm; the number of forecasts made by the broker; and whether the revisions is towards or away from the consensus.

We investigate the U.K., France and Germany because, apart from being the three largest securities markets in Europe, they are very different in accounting practices, ownership structures and in styles of financial analysis. Despite these differences we find that in all three markets security prices are associated with significant earnings forecast revisions (for most tests we define significant revisions as changes of greater than plus or minus 10%). This result is stronger for the U.K. sample than for the French or Germany. Most of security returns, positive for positive changes in forecasts and vice versa, occur during the thirty days before the revision is logged on the I/B/E/S database – nevertheless significant post announcement drift occurs after the revision is recorded. Of course it may also be the case that the forecast revisions are available to a privileged group before they are submitted to I/B/E/S. This group would be able to realise even larger abnormal returns. Further analysis suggests that these results hold for raw returns

as well as market adjusted, are to be found in all years studied bar 1987, and are largely true for individual brokers as well as the pooled sample. We do, however, find interesting differences between the returns-revision association for forecasts of firms followed by many and by few analysts, between forecasts made by prolific brokers and others, and for forecasts towards or away from the consensus,.

Although we examine a relatively short window – 30 days before and 60 days after the announcement of the forecast revision – we attempt an estimate of the long run returns from the observed pattern of CARs available within our window. This procedure suggests that the 60-day post event window has captured just about all the abnormal returns available.

The paper continues with a brief discussion of the relevant differences between the three countries; a review of prior literature; an explanation of the research method employed; the results; and finally our conclusions.

II. Earnings Measurement, Forecasting and Agency Relationships.

Firstly, despite the best efforts of the European Union there are still substantive differences between the accounting procedures in Union member countries. Joos and Lang (1994, p. 142) claim that '*Germany and the U.K. are the originators, and arguably the most extreme examples, of the two primary accounting philosophies world-wide, the Anglo-Saxon and Continental models*'. France is seen as a useful intermediate example. These differences might have two effects. If accounting measurement practices effect the time series of earnings, as they almost certainly do, they may affect the difficulty of forecasting earnings. If the accounting impacts on the degree of association between earnings and share value, as again they almost certainly do, then this may affect the utility of earnings forecasts as an investment tool (Alford et al. 1993).

Secondly, the ownership structure of the three markets is very different. Under such circumstances the agency relationships between investors or their fund managers, financial analysts and the management of the firms in question, may differ between the three countries. This could affect the information asymmetries and the utility of earnings forecasts. Individual shareholders are relatively important in France whereas financial institutions dominate in the U.K. and public companies are very influential in Germany (London stock Exchange 1995). It might be a reasonable hypothesis that individual shareholders have the least influence and the least access to information; that fund managers have considerable influence with the firms that they invest in, but as holders of diverse portfolios there may be limited incentive to become involved; and that public companies, which have substantial, relatively un-diversified, shareholdings, may have both the ability and incentive to take an active role in management and in monitoring the firm's performance. The information is incomplete, and the implications tentative, but it might be thought that in Germany and the U.K. powerful investors have ready access to, and influence over, management whereas in France it might be expected that individual, foreign and public sector investors have relatively little power.

Finally, the structure and practices of the financial analysts' profession are thought to differ (Pike et al. 1993). In the U.K. the analysts are largely U.K. based, working for brokerage houses and following US style working practices; for both French and German firms many of the analysts producing forecasts are London based, those that are not may work for banks with direct shareholdings in the firms being forecasts, and whilst American style working practices are ever more influential, the tradition of fundamental analysis is younger than in the U.K.. Capstaff et al. (1997) examined the accuracy of financial analysts' forecasts of European companies' earnings per share. They analysed 524,411 forecasts of annual earnings for European firms during the years 1987 to 1995. The results showed that forecasts of U.K. firms' earnings were relatively

accurate, and that forecasts of German firms' earnings were relatively inaccurate, although the least biased. For all countries forecasts made within three months of the accounting year-end performed relatively well, whilst forecasts made at longer horizons had moderate or little predictive value. Optimistic forecasting and overreaction to recent information is generic when making forecasts; forecasts based on the firm's share price and the market wide price earnings ratio have incremental predictive value beyond that of the analysts' forecasts; and revisions of forecasts made by analysts show a systematic tendency to reduce previously forecasted changes in earnings.

Implications.

It is not easy to untangle the implications of the differences in accounting practices, firm ownership and the behaviour of financial analysts in the three countries. Briefly the higher the association between earnings and share prices, and the more accurate are analysts forecasts of the earnings, the stronger the expected reaction to forecast revisions. The earnings to price association is apparently highest in the U.K. and lowest in Germany (Alford et al. 1993) and the forecasting error is also apparently lower in the U.K. than in France which also outperforms Germany (Capstaff et al. 1997). Conversely we have suggested that the information asymmetries are probably stronger in France than in Germany and the U.K.. The more pervasive such asymmetries the more valuable will be the work of analysts and hence the reaction to their pronouncements. So we have good reason to suppose that there will be differences in the revision to returns association, but that the direction of these differences is uncertain.

III. Prior Evidence.

A number of studies have investigated the association between earnings forecasts or forecast revisions and security returns. Almost all are restricted to the American market

and most use consensus forecasts. Elton et al. (1981) using I/B/E/S consensus data concluded that investors cannot earn abnormal returns using growth forecasts, but Givoly and Lakonishok (1979), using Standard and Poors Earnings Forecaster data, Abdel-khalik and Ajinkya (1982), using Merril Lynch's Options Alert data, Hawkins et al. (1984), using I/B/E/S consensus data, Freeman and Tse (1989), also using I/B/E/S consensus data, and Beneish (1991), using reports in the Wall Street Journal, all provided evidence that revisions in analysts forecasts could be used to predict abnormal returns.

Although there is a spread of data sources and methods applied the general agreement seems to be that for the U.S. the forecast revisions contain valuable information. However most of these studies are somewhat selective. Givoly and Lakonishok (1980) used monthly re-balanced portfolios for 49 firms from only three sectors during 1967-74 and find excess returns of 4.7 percent over four months. The majority of this return occurs during the month before, and the month of, the revision – identified as those of plus or minus 5%. Abdel-khalik and Ajinkya (1982) using only 288 revisions concentrate on the possibility of exploiting pre-publication information. They show that knowledge of the revision can be used to generate net, after transaction costs, excess returns during the two weeks prior to, and the week of, the publication of the revision - but not subsequently. Hawkins (1983), using only the 20 largest revisions on the I/B/E/S database found that large positive revisions provided over 14 percent annualised excess compared to an annual return on the index of 7 percent. The contrary result from Elton et al. (1981) was based on the forecast not the change in forecast. Perhaps the most interesting study is that of Stickel (1991) who, instead of using published forecasts, updates the analyst's latest prediction using a standard heuristic and finds that this updated forecast can be used to trade profitably.

All the above studies are based on data from the United States. To date we have only come across one study that has investigated abnormal returns associated with

forecast revision in other economies. L'Her and Suret (1991) track between 159 and 188 firms on the Toronto stock exchange during 1985-87. This constitutes approximately 80 percent of that market's capitalisation. By allocating each firm month into one of five portfolios by size of revision they perform an event study which demonstrates that strong pre-event returns are positively associated with the revision, but, more significantly, post-event returns are also positively associated. In the six months following the month of revision the portfolio of the most negative changes experienced –3.0 percent abnormal return and the most positive changes a +3.1 percent excess.

Thus, while Brown (1993) in his influential review article concludes that '*analyst forecast revisions can be used to predict subsequent abnormal returns*', it should be noted that the studies he examines are rather particular in coverage and, in the main, demonstrate that forecast revisions are associated with pre-disclosure returns. As far as we know there is no reliable evidence that these results pertain to any European markets. L'Her and Suret (1991) suggest that the differences in the results with regards to the ability of forecast revisions to predict excess returns are influenced a) by the sample, which has rarely been comprehensive; b) by the selection of those revisions to identify as triggers, and studies which have tried to use other than extreme revisions have tended to fail to find post-event excess returns; c) by the method used to identify abnormal returns – Jensen's alpha for Hawkins et al. (1983), event study methodology L'Her and Suret (1991), and control portfolios in Givoly and Lakonishok (1980) and Abdel-khalik and Ajinkya (1982); and finally, by d) the forecast horizon of the revisions.

IV. Research Method.

As changes in analysts' forecasts are, *prima facie*, changes in market expectations we expect analysts revisions to be associated with changes in security prices. This is our first

hypothesis, H01a, below. However, it is unclear whether these changed expectations, thought to be reflected in both the price and the forecast, will appear in the price first - for which we have plenty of robust North American evidence, or whether at least some element will appear first in the forecasts - for which the available evidence is much less secure. It is only in this second case that published revisions might obviously be used to outperform the market. Thus our second, H01b, and third, H01c, hypotheses test the association between security returns, in thirty day windows, both before and after publication, plus a further thirty 30 days following that, with analysts' revisions.

In the second set of hypotheses, H02a-e, we test whether certain variations in the characteristics of the sample affect the association between security returns and forecast revisions. We suggest that the ease of forecasting and value of forecasts will be affected by their characteristics. The first of these is the hypothesis regarding country differences, H02a. This may be due to, amongst other possible causes, the differences in the accounting systems, the variation in the ownership structure of the firms, and the financial analysis practices in each country. In H02b we presume that the information environment is different for different size firms, and that for smaller firms information from analysts, including of course the forecast revisions, may be more valuable. Size could be measured by a number of dimensions but we believe the most pertinent is the number of analysts following the firm. In hypothesis H02c we also expect that forecast revisions by market leaders are likely to be more influential than those of followers. We use a simple differentiation that assumes that revisions towards the consensus are less likely to be innovative than revisions away from the consensus. Previous evidence, e.g. Capstaff et al. (1997), has shown that forecasts for long horizons tend to be inaccurate. As the replacement of one inaccurate forecast with another is unlikely to convey much information to the market we suggest in hypothesis H02d that revisions at longer horizons will be less influential than those at shorter horizons. Finally in H02e we

examine whether those brokerage firms which issue many forecasts are more influential than those which issue few.

Hypotheses.

H01 The announcement of large revisions in FAF has no significant association with a) changes in security prices, b) preceding changes in security prices, and c) subsequent changes in security prices.

H02 The association between large revisions in FAF and security prices is not different for a) different countries, b) firms with different analyst followings, c) different directions of revision relative to consensus, d) different forecast horizons, and e) the number of forecasts issued by the forecasters' firms.

Sample Details.

The sample is drawn from I/B/E/S research data as at June 1999 which covers the years 1988 to 1998 inclusive. The sample is restricted to forecasts of EPS for British, French and German firms where a) the forecast represents a change in earnings expectations of at least 10 percent (a sub-sample of 20 percent revisions is also examined), and b) that daily returns data is available from Datastream for 90 days before and after the event date. The second restriction is necessary to produce returns for the primary event window (-30 to +30 days), an estimation period on which to base the statistical tests (-90 to –31), and a secondary event window to examine whether market reaction is short lived or long run (+31 to +90).

The sample selection procedure identifies a total of 79,047 events in the U.K., 24,306 buy indicators and 54,741 sell; 43,606 events in the France, 16,183 buy indicators and 27,423 sell; and 35,746 events in the Germany, 13,823 buy indicators and 21,912 sell.

Calculation of Returns, Abnormal Returns and Test Statistics.

Daily security returns, calculated as P_t-P_{t-1}/P_{t-1}, are based on information from Datastream. The tests are conducted on raw returns and market adjusted returns where the market is assumed to be the FT All Share Index. No adjustment is made for risk. The primary event window is short and the observed abnormal returns are large. It is unlikely that these results are sensitive to differences in risk. Moreover, since Fama and French (1992) it is not clear how risk should be measured. Market model or CAPM betas seems to have little association with observed returns and it is not clear how, under such circumstances, they can be proxying for risk. Additionally measuring market betas for daily returns is problematical and places further data restrictions on the sample. It is not clear that attempts to explicitly include risk adjustments into the model do not introduce more bias than they eliminate. Nevertheless we do/will examine the sensitivity of our results to differences in risk relevant dimensions such as the association with market movements, size etc.

The expected or normal return is defined as the observed market return and hence the abnormal return (A_{it}) is the difference between the company return (R_{it}) and market return (R_{mt}).

$$A_{it} = R_{it} - R_{mt}$$

By implication this is a special case of market model where the values of α and β are imposed to be 0 and 1 respectively. This is useful in an event study where there are no sufficient observations in the estimation window to estimate the market model parameters.

In an event study the aggregation of abnormal returns should be done across the sample firms and over-time. One approach of aggregation is to follow the procedure suggested by Brown and Warner (1985, section 3.3)

Estimate the average abnormal return ($\overline{A}_t$) for each day (assuming you are using daily data) in the sample (estimation window as well as event window) as follows:

$$\overline{A_t} = \frac{1}{N}\sum_{t=1}^{N_t} A_{i,t}$$

Where N is the number of sample securities whose abnormal returns (A) are available at day t. Note that this is a cross sectional average for each day.

Statistical test of significance of abnormal return (significantly different from zero) for time t (usually for the event day) is carried out with a T-statistic estimated as follows:

$$T = \frac{\overline{A_t}}{S(\overline{A_t})}$$

Where ($\overline{A}_t$) is defined as above and S($\overline{A}_t$) is defined as:

$$S(\overline{A_t}) = \sqrt{\left(\sum_{t=-90}^{-31}\left(\overline{A}_t - \overline{\overline{A}}\right)^2\right)/60}$$

and

$$\overline{\overline{A}} = \frac{1}{60}\sum_{t=-90}^{t=-31}\overline{A_t}$$

(note: t = -90 to -31 refers to estimation period relative to the event day 0 i.e. $S\left(\overline{A_t}\right)$ is estimate using the data from the estimation period.

If the measures of ($\overline{A}_t$) are independent, identically distrib uted (IID), and normal, the test statistic is distributed Student-t under the null hypothesis. The null being that the mean day '0' abnormal return is not different from zero. If the event has a significant impact on the returns of the sample companies we expect the null to be rejected.

The next step is to cumulate the average abnormal return ($\overline{A}_t$) over longer interval during the event window i.e. to estimate the Cumulative Abnormal Return (CAR):

$$CAR_t = \overline{A}_t + CAR_{t-1}$$

For test over multi-day intervals (say -5 to +5 days relative to the event day), the test statistic (T) is estimated as follows (see Brown and Warner, 1985, A3).

$$T = \frac{\sum_{t=-5}^{+5} \overline{A_t}}{\left(\sum_{t=-5}^{+5} S^2\left(\overline{A_t}\right) \right)^{1/2}}$$

The $S(\overline{A}_t)$ is defined as above. The test statistic is assumed unit normal in the absence of abnormal performance.

V. Results.

Country Comparisons – Market Adjusted Returns.

The preliminary results are reported in table 1, and presented graphically in figure 1. These results are market adjusted and the events are selected using a 10% trigger. For all three markets the analysts' forecast revisions are associated with statistically significant CARs across the 91-day window. This is strongest for the U.K. where positive revisions are associated with a CAR of 2.34 percent and negative revisions are associated with more than –10.83 percent. These are large abnormal returns for 91 working days – about four months. The CARs for the French market are somewhat smaller – 0.20 percent for buy signals and –6.68 for sell. Only the sell CARs are significantly different from zero. For German revisions the 91-day CAR for positive revisions is 0.56 percent and for negative revisions –8.49 percent. Both are statistically significant.

As discussed previously we do not know when the analysts' forecasts become available to investors. Day 0 is the date that I./B/E/S record the forecast as being submitted to them. Clearly if the analysts believe that their forecasts are valuable they may use them before publicising them. However even if we only assume that investors have the forecasts available from day zero there are abnormal returns in the following sixty days. The buy and sell portfolios in the U.K., France and Germany demonstrate a further CAR of 0.07% and –4.60%; -0.99% and –2.97%; and –0.79 and –4.13% percent

respectively between day zero and day +60. It is apparent then that post-event returns are largely confined to the sell portfolios. In most cases the buy portfolios are insignificantly different from zero. However if we assume zero investment hedge portfolios (see figure 2) we find that the full window and all segmentations thereof reported in table 1 are significant. The buy and sell signals always discriminate significantly between subsequent returns.

Table 1 and figures 1 and 2 about here.

A casual examination of figures 1 and 2 suggests firstly that there is a substantial difference between the returns available on UK investments than on France or Germany, and that abnormal returns may continue after the event window especially with regard to the sell portfolios. We leave the examination of this latter point until the end of the results section. However the comparison between countries can be addressed directly. If we simplify the analysis by concentrating only on the hedge portfolios we find that UK returns are higher than in France, and significantly so, for all the windows reported in Table 1. The same applies for the comparison between the UK and Germany except for the +31,+60 event window where the difference is not significant. For each event window the larger CARs observed in the German sample are significantly different from those found in the French.

Country Comparisons – Unadjusted Returns - 10% Trigger.

The ability of forecast revisions to identify raw returns is shown in figures 3 and 4. This is of importance as it may well be expected that analysts' revisions will be valuable for market timing as well as stock selection. However on balance the returns over various windows for raw returns are much the same for raw returns as for adjusted returns for all three markets. As can be seen from a comparison between figures 1 and 3 the pattern has shifted, as would be expected. However the hedge returns, figures 2 and 4 are much the

same. At this stage it appears that raw returns offer little over adjusted returns as a basis for analysis and are not investigated further.

Figures 3 and 4 about here.

Country Comparisons – Unadjusted Returns - 20% Trigger.

Clearly if abnormal returns are associated with forecast revisions of greater than 10% it may be that even larger returns are associated with larger revisions. In table 2 a set of results for those cases where the revision is greater than 20% are given. In all three countries the patter is unchanged although both pre and post revision returns are slightly increased. As no substantive change has been noticed we no longer deal with this reduced sample.

Table 2 about here.

Country Comparisons – Annual Adjusted Returns.

We also examine the abnormal returns available from the investment strategy in each year within the sample. This is reported in table three. If we concentrate on the 0,+60 window we see that the buy strategy fails in 5, 7 and 6 cases out of the 12 for the UK, France and Germany respectively, the sell strategy fails in 1, 2 and 1 cases, and the hedge portfolio only fails in 1 case each for France and Germany. This occurs in 1987 the year with the smallest sample. Three things are obvious. There is temporal instability in the returns, this is much more apparent in the unreliable buy portfolio than in the sell, and the hedge and sell strategies produce abnormal returns and there is no evidence of these returns fading. From here onwards we pool the sample and ignore temporal differences.

Table 3 about here.

Distinctions between CARs Segmented by Forecast Characteristics.

Tables 4, 5, 6 and 7 contain the results of segmenting the sample by the direction of the forecast revision – if away from the consensus it is expected to be more influential; by the number of analysts following the firm – revisions for relatively ignored firms are expected to be more influential; by forecast horizon – the revisions made at longer horizons when forecasts tend to be inaccurate are expected to be less influential; and by number of forecasts made by the issuing broker – more prestigious (more active) brokers are expected to be more influential. The first, second and forth of these hypotheses are consistent with the evidence although it should be acknowledged that the differences are relatively small, albeit statistically significant. The supposition that long horizon forecasts revisions will be ineffective, because of their known inaccuracy, is clearly not supported by the evidence. Indeed the shortest horizon forecasts tend to be among the least productive.

Perhaps one further comment might be appropriate from this section. Of all the segmentations made and reported in these tables only one out of 33, the month 1 to 3 forecast revisions made for French firms, does not report a positive return for the market adjusted hedge portfolio.

Tables 4, 5, 6 and 7 about here.

Asymptotic estimates of abnormal returns.

If investors absorb the full value implications of a forecast revision only gradually they will impound this into prices only after some time. It would appear from figures 1 to 4 that CARs may still be increasing at +60. By observing the patter of the CARs within our 91-day event window we try and predict at what point the CARs will be flat. We construct our estimates of asymptotic exposure by proposing a particular but flexible functional relationship between the window length and the CAR for the market adjusted

hedge portfolio. The functional form chosen for this purpose may be overly flexible for what appears to be a straight forward relationship but has the ability to model monotonically increasing or decreasing and U-Shaped relationship.

In our chosen model let $CAR_{ij}(x)$ denote market i's CAR over the returns window of length x. We estimate the horizon dependence of $CAR_{ij}(x)$ with the parametric equation:

$$b_{ij}(x) = a_{ij} + b_{ij} \cdot \frac{x}{t_{ij}} \cdot \exp\left(-\frac{x}{t_{ij}}\right) + g_{ij} \cdot \exp\left(-\frac{x}{t_{ij}}\right)$$

This function is similar to the one used by Rees and Unni (2000) to model the response to exchange rate changes. It allows us to capture the slope, curvature and asymptotic convergence of $CAR_{ij}(x)$ through just four parameters, a_{ij}, b_{ij}, g_{ij} and t_{ij} which are obtained through an iterative estimation procedure.

The limiting behaviour of exposure at extreme returns horizons is dictated entirely by two parameters, a_{ij} and g_{ij}. At short windows (i.e. as $x \to 0$), $CAR_{ij}(x)$ converges to $a_{ij} + g_{ij}$. At the other end, as x tends to infinity it converges to a_{ij}, at a speed that is determined by the scaling parameter t_{ij}. Therefore, the parameter a_{ij} gives us an estimate of the long run response to forecast revisions. The results of this estimation for the three samples are given in table 8.

Table 8 about here.

As can be seen from the R^2 values the fitted curve maps very closely onto those observed. A comparison of the estimated a's with the full 91 day window CARs implies that small additional returns are available in the UK (0.63=13.80-13.17) and Germany (0.45=9.55-9.05) and that a slight decline might be expected in France (-0.10=6.77-6.87). If this tentative estimate is taken at face value it suggests that the returns from a hedge

portfolio may have been all but captured by the end of the 60 days following the forecast revision.

VI. Conclusion.

In this paper we have examined the security price returns associated with revisio ns of analysts' forecasts of earnings in three European countries. The paper, in using a large sample, individual rather than consensus forecasts, and in explicitly investigating key characteristics of the revisions and the firms involved, extends the rather uncertain results from previous, mostly North American, studies. We find clear evidence that revisions may be associated with abnormal returns in the period immediately before and after the announcement of the revision. The post announcement returns, those that are obviously open to capture, are approximately 4.7% in the UK, 2% in France and 3.3% in Germany. Whilst these may not be large returns in the latter two countries after trading costs are accounted for, they appear considerable in the UK. The abnormal returns are concentrated in the sell portfolios, but otherwise seem pervasive. According to our estimate little is left in the hedged abnormal returns after the 91 day window, although it simple observation of the sell portfolios suggests that they may not have finished generating returns by that time.

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Table 1. Cumulative Market Adjusted Returns – Full Sample – 10% Trigger

Country		Cases	CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
UK	Positive	24306	0.0234	0.0227	0.0035	0.0007	-0.0028
	T-Statistic		11.80	19.94	3.06	0.44	-2.49
	Negative	54741	-0.1083	-0.0623	-0.0254	-0.0460	-0.0205
	T-Statistic		-32.02	-32.09	-12.88	-16.60	-10.58
	Hedge	79047	0.1317	0.0850	0.0290	0.0467	0.0177
	T-Statistic		30.00	33.73	11.31	12.99	7.03
France	Positive	16183	0.0020	0.0118	-0.0041	-0.0099	-0.0058
	T-Statistic		0.92	9.76	-3.32	-5.71	-4.77
	Negative	27423	-0.0668	-0.0371	-0.0183	-0.0297	-0.0113
	T-Statistic		-26.18	-25.35	-12.31	-14.20	-7.74
	Hedge	43606	0.0687	0.0490	0.0142	0.0198	0.0055
	T-Statistic		17.79	22.07	6.31	6.25	2.50
Germany	Positive	13834	0.0056	0.0135	-0.0033	-0.0079	-0.0046
	T-Statistic		2.55	10.72	-2.60	-4.40	-3.64
	Negative	21912	-0.0849	-0.0436	-0.0217	-0.0413	-0.0196
	T-Statistic		-32.59	-29.14	-14.29	-19.37	-13.10
	Hedge	35746	0.0905	0.0571	0.0184	0.0334	0.0150
	T-Statistic		28.30	31.09	9.86	12.76	8.17

Table 2. Cumulative Market Adjusted Returns – Full Sample – 20% Trigger

		Cases	CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
UK	Positive		0.0250	0.0236	0.0022	0.0013	-0.0009
	T-Statistics		8.0400	13.2587	1.2096	0.5219	-0.4854
	Negative		-0.1403	-0.0839	-0.0309	-0.0564	-0.0255
	T-Statistics		-31.4942	-32.8098	-11.8680	-15.4578	-9.9779
	Hedge		0.1653	0.1076	0.0331	0.0577	0.0247
	T-Statistics		27.7374	31.4387	9.5045	11.8307	7.2084
France	Positive		-0.0055	0.0079	-0.0065	-0.0134	-0.0069
	T-Statistics		-1.9345	4.8199	-3.9087	-5.7430	-4.2159
	Negative		-0.0801	-0.0461	-0.0212	-0.0340	-0.0128
	T-Statistics		-24.2751	-24.3290	-11.0028	-12.5879	-6.7651
	Hedge		0.0746	0.0540	0.0147	0.0206	0.0059
	T-Statistics		15.8304	19.9650	5.3362	5.3340	2.1815
Germany	Positive		0.0144	0.0150	0.0001	-0.0005	-0.0006
	T-Statistics		4.6479	8.3924	0.0502	-0.2086	-0.3485
	Negative		-0.0984	-0.0561	-0.0293	-0.0423	-0.0129
	T-Statistics		-22.0733	-21.9306	-11.2732	-11.5806	-5.0538
	Hedge		0.1128	0.0711	0.0294	0.0417	0.0123
	T-Statistics		18.9262	20.7695	8.4559	8.5510	3.5976

Table 3. Market Adjusted CARs by Year of Forecast.

		Buy			Sell			Hedge	
UK	-30,-1	0,+30	0,+60	-30,-1	0,+30	0,+60	-30,-1	0,+30	0,+60
87	-0.014	0.030	0.044	-0.011	0.031	0.042	-0.002	-0.002	0.003
88	0.011	0.000	0.000	-0.021	-0.007	-0.020	0.031	0.007	0.020
89	0.012	-0.005	-0.012	-0.044	-0.029	-0.058	0.057	0.024	0.046
90	0.008	-0.008	-0.021	-0.064	-0.035	-0.061	0.073	0.027	0.040
91	0.014	-0.007	-0.026	-0.052	-0.026	-0.049	0.066	0.019	0.023
92	0.031	0.009	0.011	-0.065	-0.032	-0.055	0.096	0.041	0.067
93	0.049	0.021	0.033	-0.066	-0.020	-0.027	0.116	0.041	0.060
94	0.034	0.011	0.014	-0.056	-0.006	-0.011	0.090	0.018	0.025
95	0.018	0.003	0.001	-0.063	-0.015	-0.033	0.081	0.018	0.034
96	0.024	0.004	0.004	-0.057	-0.019	-0.037	0.081	0.023	0.041
97	0.019	-0.001	-0.008	-0.070	-0.029	-0.055	0.089	0.028	0.047
98	0.009	-0.005	-0.017	-0.100	-0.041	-0.078	0.109	0.036	0.061
	0.018	0.004	0.002	-0.056	-0.019	-0.037	0.074	0.023	0.039
		Buy			Sell			Hedge	
France	-30,-1	0,+30	0,+60	-30,-1	0,+30	0,+60	-30,-1	0,+30	0,+60
87	0.074	0.012	-0.019	0.010	0.018	0.005	0.064	-0.007	-0.024
88	0.010	0.003	0.002	-0.014	0.004	0.000	0.023	-0.001	0.002
89	0.017	0.005	0.008	-0.014	-0.011	-0.025	0.031	0.016	0.033
90	0.008	-0.001	-0.004	-0.046	-0.021	-0.032	0.054	0.020	0.027
91	0.012	0.006	0.011	-0.033	-0.012	-0.015	0.045	0.018	0.025
92	0.022	0.002	0.004	-0.034	-0.012	-0.016	0.056	0.015	0.020
93	0.018	0.006	0.007	-0.028	-0.008	-0.003	0.045	0.014	0.010
94	0.007	-0.007	-0.006	-0.024	-0.014	-0.015	0.032	0.007	0.010
95	0.006	-0.007	-0.014	-0.036	-0.017	-0.034	0.042	0.010	0.020
96	0.006	-0.005	-0.014	-0.037	-0.019	-0.038	0.044	0.014	0.024
97	0.015	-0.006	-0.009	-0.041	-0.028	-0.045	0.057	0.022	0.035
98	0.014	-0.005	-0.025	-0.059	-0.041	-0.051	0.073	0.036	0.026
	0.017	0.000	-0.005	-0.030	-0.013	-0.022	0.047	0.014	0.017
		Buy			Sell			Hedge	
Germany	-30,-1	0,+30	0,+60	-30,-1	0,+30	0,+60	-30,-1	0,+30	0,+60
87	0.009	0.016	0.017	-0.008	0.022	0.030	0.017	-0.006	-0.013
88	0.015	0.008	0.010	-0.019	-0.007	-0.007	0.034	0.015	0.018
89	0.020	0.013	0.023	-0.025	-0.008	-0.021	0.045	0.021	0.044
90	0.027	0.005	0.008	-0.025	-0.016	-0.025	0.052	0.021	0.033
91	0.018	0.003	-0.014	-0.046	-0.026	-0.041	0.064	0.028	0.028
92	0.009	-0.001	-0.010	-0.044	-0.025	-0.044	0.053	0.024	0.034
93	0.017	0.004	0.007	-0.033	-0.011	-0.016	0.050	0.016	0.022
94	0.015	0.003	0.004	-0.022	-0.008	-0.014	0.037	0.011	0.018
95	0.003	-0.008	-0.020	-0.052	-0.027	-0.058	0.055	0.019	0.038
96	0.003	-0.007	-0.021	-0.063	-0.035	-0.073	0.066	0.028	0.052
97	0.018	-0.013	-0.016	-0.056	-0.028	-0.056	0.074	0.015	0.040
98	0.022	-0.005	-0.013	-0.053	-0.041	-0.049	0.075	0.036	0.036
	0.015	0.001	-0.002	-0.037	-0.017	-0.031	0.052	0.019	0.029

Table 4. Cumulative Abnormal Returns – Segmented by the Direction of Revision

	cases	CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
UK-Towards the mean						
Positive	13866	0.0186	0.0207	0.0030	-0.0021	-0.0051
T-Stat.		7.83	15.18	2.16	-1.09	-3.75
Negative	29651	-0.0984	-0.0547	-0.0247	-0.0437	-0.0189
T-Stat.		-29.33	-28.42	-12.63	-15.90	-9.83
Hedge	43517	0.1170	0.0754	0.0277	0.0416	0.0138
T-Stat.		27.00	30.32	10.96	11.72	5.57
UK -Away from the Mean						
Positive	10440	0.0298	0.0253	0.0043	0.0045	0.0002
T-Stat.		11.28	16.68	2.82	2.08	0.11
Negative	25090	-0.1200	-0.0713	-0.0263	-0.0487	-0.0224
T-Stat.		-32.30	-33.41	-12.14	-16.01	-10.49
Hedge	35530	0.1498	0.0966	0.0307	0.0532	0.0225
T-Stat.		28.88	32.43	10.13	12.53	7.57
Fr –Towards the mean						
Positive	8082	0.0001	0.0107	-0.0044	-0.0106	-0.0061
T-Stat.		0.04	7.27	-2.98	-5.04	-4.17
Negative	15335	-0.0591	-0.0322	-0.0175	-0.0269	-0.0094
T-Stat.		-22.70	-21.54	-11.52	-12.62	-6.28
Hedge	23417	0.0592	0.0429	0.0131	0.0163	0.0033
T-Stat.		15.57	19.64	5.88	5.24	1.49
FR-Away from the Mean						
Positive	8101	0.0038	0.0130	-0.0037	-0.0092	-0.0055
T-Stat.		1.41	8.38	-2.36	-4.15	-3.52
Negative	12088	-0.0765	-0.0434	-0.0194	-0.0332	-0.0138
T-Stat.		-25.41	-25.08	-11.03	-13.44	-7.96
Hedge	20189	0.0803	0.0564	0.0157	0.0240	0.0083
T-Stat.		16.58	20.26	5.54	6.05	2.99
Gr-Towards the mean						
Positive	7501	0.0047	0.0128	-0.0043	-0.0081	-0.0038
T-Stat.		1.68	8.01	-2.65	-3.56	-2.39
Negative	11477	-0.0797	-0.0391	-0.0215	-0.0406	-0.0191
T-Stat.		-26.91	-22.98	-12.44	-16.75	-11.24
Hedge	18978	0.0844	0.0519	0.0172	0.0325	0.0153
T-Stat.		23.10	24.75	8.07	10.86	7.29
Gr-Away from the Mean						
Positive	6333	0.0066	0.0143	-0.0022	-0.0077	-0.0055
T-Stat.		2.60	9.74	-1.48	-3.66	-3.71
Negative	10435	-0.0908	-0.0486	-0.0220	-0.0422	-0.0202
T-Stat.		-30.98	-28.89	-12.85	-17.58	-12.00
Hedge	16768	0.0974	0.0629	0.0198	0.0345	0.0147
T-Stat.		24.71	27.79	8.59	10.69	6.51

Table 5. Cumulative Abnormal Returns – Segmented by Analyst Following

Country			CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
UK	Positive	6007	0.0282	0.0210	0.0059	0.0072	0.0013
High	T-Stat.		9.21	11.97	3.31	2.86	0.72
	Negative	10907	-0.0496	-0.0339	-0.0100	-0.0157	-0.0058
	T-Stat.		-17.26	-20.54	-5.94	-6.68	-3.49
	Hedge	16914	0.0778	0.0549	0.0159	0.0229	0.0070
	T-Stat.		17.43	21.43	6.09	6.27	2.74
UK	Positive	18299	0.0218	0.0232	0.0028	-0.0014	-0.0042
Low	T-Stat.		10.05	18.62	2.18	-0.79	-3.34
	Negative	43834	-0.1229	-0.0694	-0.0293	-0.0535	-0.0242
	T-Stat.		-31.99	-31.46	-13.06	-17.01	-10.98
	Hedge	62133	0.1447	0.0926	0.0320	0.0521	0.0201
	T-Stat.		30.76	34.29	11.67	13.53	7.43
France	Positive	7520	0.0106	0.0137	-0.0005	-0.0030	-0.0025
High	T-Stat.		4.74	10.61	-0.38	-1.65	-1.96
	Negative	12807	-0.0421	-0.0269	-0.0100	-0.0152	-0.0052
	T-Stat.		-16.77	-18.69	-6.83	-7.38	-3.59
	Hedge	20327	0.0527	0.0406	0.0095	0.0121	0.0026
	T-Stat.		13.96	18.72	4.31	3.92	1.21
France	Positive	8663	-0.0056	0.0102	-0.0072	-0.0158	-0.0086
Low	T-Stat.		-1.88	6.01	-4.16	-6.51	-5.05
	Negative	14616	-0.0884	-0.0460	-0.0256	-0.0424	-0.0168
	T-Stat.		-25.35	-22.99	-12.59	-14.85	-8.37
	Hedge	23279	0.0828	0.0563	0.0184	0.0265	0.0081
	T-Stat.		17.07	20.20	6.50	6.68	2.92
Germany	Positive	9686	0.0112	0.0136	-0.0013	-0.0024	-0.0011
High	T-Stat.		4.77	10.12	-0.96	-1.27	-0.84
	Negative	13962	-0.0695	-0.0394	-0.0157	-0.0301	-0.0144
	T-Stat.		-24.84	-24.53	-9.63	-13.14	-8.94
	Hedge	23648	0.0807	0.0530	0.0144	0.0277	0.0132
	T-Stat.		24.47	28.01	7.50	10.25	6.99
Germany	Positive	4148	-0.0075	0.0131	-0.0080	-0.0206	-0.0126
Low	T-Stat.		-1.90	5.80	-3.47	-6.39	-5.58
	Negative	7950	-0.1120	-0.0510	-0.0323	-0.0610	-0.0287
	T-Stat.		-33.42	-26.50	-16.50	-22.24	-14.94
	Hedge	12098	0.1045	0.0641	0.0243	0.0404	0.0161
	T-Stat.		20.65	22.06	8.22	9.74	5.54

Table 6a. Cumulative Abnormal Returns –
Segmented by Forecast Horizon (United Kingdom)

Horizon		Cases	CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
-3 to 0	Positive	3201	0.0204	0.0027	0.0081	0.0177	0.0096
	T-Stat.		4.92	1.13	3.36	5.22	4.03
	Negative	8035	-0.0633	-0.0580	-0.0066	-0.0053	0.0013
	T-Stat.		-22.25	-35.50	-3.95	-2.28	0.77
	Hedge	11236	0.0837	0.0607	0.0147	0.0230	0.0083
	T-Stat.		17.06	21.54	5.13	5.73	2.96
1 to 3	Positive	4263	0.0009	0.0181	-0.0074	-0.0172	-0.0097
	T-Stat.		0.23	8.04	-3.25	-5.35	-4.33
	Negative	10133	-0.1377	-0.0712	-0.0347	-0.0665	-0.0318
	T-Stat.		-20.56	-18.51	-8.88	-12.13	-8.27
	Hedge	14396	0.1386	0.0893	0.0273	0.0494	0.0221
	T-Stat.		23.26	26.09	7.84	10.11	6.45
4 to 6	Positive	2923	0.0089	0.0123	0.0003	-0.0033	-0.0036
	T-Stat.		2.24	5.35	0.14	-1.02	-1.59
	Negative	7496	-0.1557	-0.0773	-0.0458	-0.0785	-0.0326
	T-Stat.		-33.35	-28.81	-16.82	-20.53	-12.18
	Hedge	10419	0.1647	0.0895	0.0462	0.0752	0.0290
	T-Stat.		27.53	26.06	13.22	15.35	8.44
7 to 12	Positive	8027	0.0459	0.0371	0.0114	0.0088	-0.0026
	T-Stat.		14.24	20.02	6.06	3.35	-1.39
	Negative	15307	-0.0674	-0.0407	-0.0109	-0.0267	-0.0158
	T-Stat.		-32.23	-33.89	-8.90	-15.60	-13.19
	Hedge	23334	0.1133	0.0778	0.0223	0.0356	0.0133
	T-Stat.		31.10	37.17	10.47	11.91	6.35
13 to 20	Positive	5892	0.0181	0.0225	0.0000	-0.0044	-0.0044
	T-Stat.		6.27	13.56	0.03	-1.85	-2.67
	Negative	13770	-0.1327	-0.0743	-0.0347	-0.0583	-0.0236
	T-Stat.		-23.54	-22.97	-10.56	-12.64	-7.29
	Hedge	19662	0.1508	0.0968	0.0348	0.0540	0.0192
	T-Stat.		24.59	27.50	9.72	10.75	5.45

Table 6b. Cumulative Abnormal Returns – Segmented by Forecast Horizon (France)

Horizon		Cases	CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
-3 to 0	Positive	2432	0.0041	0.0070	-0.0025	-0.0028	-0.0003
	T-Stat.		0.94	2.77	-0.99	-0.79	-0.12
	Negative	4337	-0.0388	-0.0240	-0.0085	-0.0148	-0.0063
	T-Stat.		-9.41	-10.15	-3.53	-4.37	-2.64
	Hedge	6769	0.0429	0.0310	0.0060	0.0119	0.0060
	T-Stat.		8.80	11.07	2.10	2.98	2.13
1 to 3	Positive	3138	-0.0338	-0.0012	-0.0144	-0.0326	-0.0182
	T-Stat.		-9.97	-0.61	-7.30	-11.75	-9.34
	Negative	5479	-0.0970	-0.0591	-0.0258	-0.0378	-0.0121
	T-Stat.		-19.15	-20.35	-8.72	-9.13	-4.15
	Hedge	8617	0.0632	0.0580	0.0113	0.0052	-0.0061
	T-Stat.		10.61	16.96	3.26	1.07	-1.79
4 to 6	Positive	2159	0.0010	0.0127	0.0011	-0.0117	-0.0127
	T-Stat.		0.22	4.96	0.41	-3.21	-4.99
	Negative	3355	-0.0752	-0.0287	-0.0221	-0.0466	-0.0245
	T-Stat.		-20.29	-13.46	-10.21	-15.34	-11.50
	Hedge	5514	0.0762	0.0413	0.0232	0.0349	0.0117
	T-Stat.		14.10	13.31	7.35	7.89	3.78
7 to 12	Positive	4720	0.0256	0.0198	0.0021	0.0059	0.0038
	T-Stat.		7.11	9.56	0.99	1.99	1.82
	Negative	7699	-0.0397	-0.0206	-0.0111	-0.0190	-0.0079
	T-Stat.		-17.24	-15.63	-8.25	-10.09	-6.00
	Hedge	12419	0.0653	0.0404	0.0132	0.0249	0.0117
	T-Stat.		14.71	15.86	5.09	6.85	4.59
13 to 20	Positive	3734	0.0011	0.0154	-0.0072	-0.0143	-0.0072
	T-Stat.		0.34	8.29	-3.79	-5.40	-3.85
	Negative	6553	-0.0877	-0.0512	-0.0252	-0.0366	-0.0114
	T-Stat.		-23.94	-24.31	-11.77	-12.19	-5.41
	Hedge	10287	0.0888	0.0666	0.0180	0.0222	0.0042
	T-Stat.		15.15	19.77	5.26	4.63	1.25

Table 6c. Cumulative Abnormal Returns – Segmented by Forecast Horizon (Germany)

Horizon		Cases	CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
-3 to 0	Positive	2148	0.0010	0.0045	-0.0029	-0.0035	-0.0007
	T-Stat.		0.19	1.46	-0.91	-0.80	-0.21
	Negative	3701	-0.0674	-0.0461	-0.0122	-0.0213	-0.0091
	T-Stat.		-13.51	-16.10	-4.21	-5.22	-3.16
	Hedge		0.0684	0.0506	0.0094	0.0178	0.0084
	T-Stat.		13.39	17.26	3.14	4.25	2.86
1 to 3	Positive	1986	-0.0292	0.0013	-0.0165	-0.0305	-0.0140
	T-Stat.		-6.11	0.48	-5.91	-7.80	-5.11
	Negative	3455	-0.1241	-0.0537	-0.0413	-0.0705	-0.0292
	T-Stat.		-25.07	-18.88	-14.28	-17.38	-10.27
	Hedge		0.0949	0.0550	0.0248	0.0399	0.0152
	T-Stat.		16.87	17.03	7.54	8.67	4.70
4 to 6	Positive	3106	0.0023	0.0125	-0.0050	-0.0103	-0.0052
	T-Stat.		0.47	4.52	-1.79	-2.60	-1.89
	Negative	3987	-0.0806	-0.0316	-0.0220	-0.0490	-0.0271
	T-Stat.		-21.14	-14.43	-9.87	-15.70	-12.36
	Hedge		0.0829	0.0441	0.0169	0.0388	0.0218
	T-Stat.		17.39	16.12	6.09	9.93	7.97
7 to 12	Positive	3994	0.0314	0.0230	0.0064	0.0085	0.0020
	T-Stat.		9.32	11.87	3.26	3.06	1.06
	Negative	6629	-0.0577	-0.0370	-0.0100	-0.0207	-0.0107
	T-Stat.		-19.63	-21.94	-5.80	-8.59	-6.36
	Hedge		0.0891	0.0600	0.0164	0.0291	0.0128
	T-Stat.		20.11	23.57	6.32	8.03	5.02
13 to 20	Positive	2600	0.0005	0.0167	-0.0061	-0.0162	-0.0101
	T-Stat.		0.16	8.93	-3.19	-6.07	-5.42
	Negative	4140	-0.1163	-0.0556	-0.0326	-0.0607	-0.0281
	T-Stat.		-29.76	-24.77	-14.30	-18.98	-12.52
	Hedge		0.1168	0.0723	0.0266	0.0445	0.0180
	T-Stat.		22.94	24.73	8.94	10.68	6.15

Table 7. Cumulative Abnormal Returns – Segmented by Broker's Forecast Activity

		cases	CAR(-30,60)	CAR(-30,-1)	CAR(0,30)	CAR(0,60)	CAR(31,60)
UK	Positive	14584	0.0283	0.0256	0.0049	0.0027	-0.0022
High	T-Statistic		12.32	19.42	3.66	1.43	-1.68
	Negative	34860	-0.1096	-0.0639	-0.0258	-0.0457	-0.0200
	T-Statistic		-29.67	-30.11	-11.94	-15.12	-9.42
	Hedge	49444	0.1379	0.0895	0.0307	0.0484	0.0178
	T-Statistic		28.88	32.63	11.00	12.38	6.48
UK	Positive	9722	0.0159	0.0182	0.0014	-0.0023	-0.0038
Low	T-Statistic		6.19	12.37	0.94	-1.12	-2.55
	Negative	19881	-0.1060	-0.0596	-0.0249	-0.0464	-0.0215
	T-Statistic		-30.20	-29.58	-12.15	-16.15	-10.68
	Hedge	29603	0.1219	0.0778	0.0263	0.0441	0.0178
	T-Statistic		26.51	29.48	9.80	11.71	6.73
France	Positive	6000	0.0054	0.0137	-0.0034	-0.0083	-0.0049
High	T-Statistic		1.75	7.70	-1.87	-3.26	-2.75
	Negative	10305	-0.0697	-0.0384	-0.0199	-0.0313	-0.0114
	T-Statistic		-21.41	-20.55	-10.46	-11.73	-6.10
	Hedge	16305	0.0752	0.0522	0.0165	0.0230	0.0065
	T-Statistic		15.40	18.61	5.78	5.75	2.32
France	Positive	10183	-0.0002	0.0107	-0.0045	-0.0108	-0.0063
Low	T-Statistic		-0.07	8.11	-3.37	-5.77	-4.80
	Negative	17118	-0.0650	-0.0363	-0.0174	-0.0287	-0.0113
	T-Statistic		-24.60	-23.94	-11.27	-13.25	-7.45
	Hedge	27301	0.0649	0.0470	0.0129	0.0178	0.0050
	T-Statistic		16.12	20.35	5.47	5.41	2.15
Germany	Positive	5517	0.0093	0.0160	-0.0021	-0.0066	-0.0045
High	T-Statistic		2.77	8.24	-1.06	-2.40	-2.34
	Negative	9243	-0.0926	-0.0458	-0.0241	-0.0468	-0.0228
	T-Statistic		-26.75	-23.02	-11.92	-16.53	-11.46
	Hedge	14760	0.1019	0.0617	0.0220	0.0402	0.0182
	T-Statistic		23.19	24.45	8.57	11.18	7.23
Germany	Positive	8317	0.0032	0.0119	-0.0042	-0.0087	-0.0046
Low	T-Statistic		1.45	9.48	-3.26	-4.87	-3.64
	Negative	12669	-0.0794	-0.0421	-0.0200	-0.0373	-0.0172
	T-Statistic		-26.73	-24.67	-11.57	-15.34	-10.12
	Hedge	20986	0.0825	0.0540	0.0159	0.0286	0.0127
	T-Statistic		22.37	25.48	7.37	9.45	5.98

Table 8. Asymptotic Model of Long Run Hedge Portfolio Adjusted Returns					
	Alpha	Beta	Gamma	Tau	R^2
UK	0.1380	-0.0039	-0.1444	32	99.7
t-statistic	156.79	-1.42	-166.09		
France	0.0677	-0.0552	-0.0666	14	99.7
t-statistic	376.60	-49.26	-107.03		
Germany	0.0955	-0.0085	-0.0995	33	99.4
t-statistic	107.62	-3.14	-117.66		

FIGURE 1 Market Adjusted CARs - Full Sample

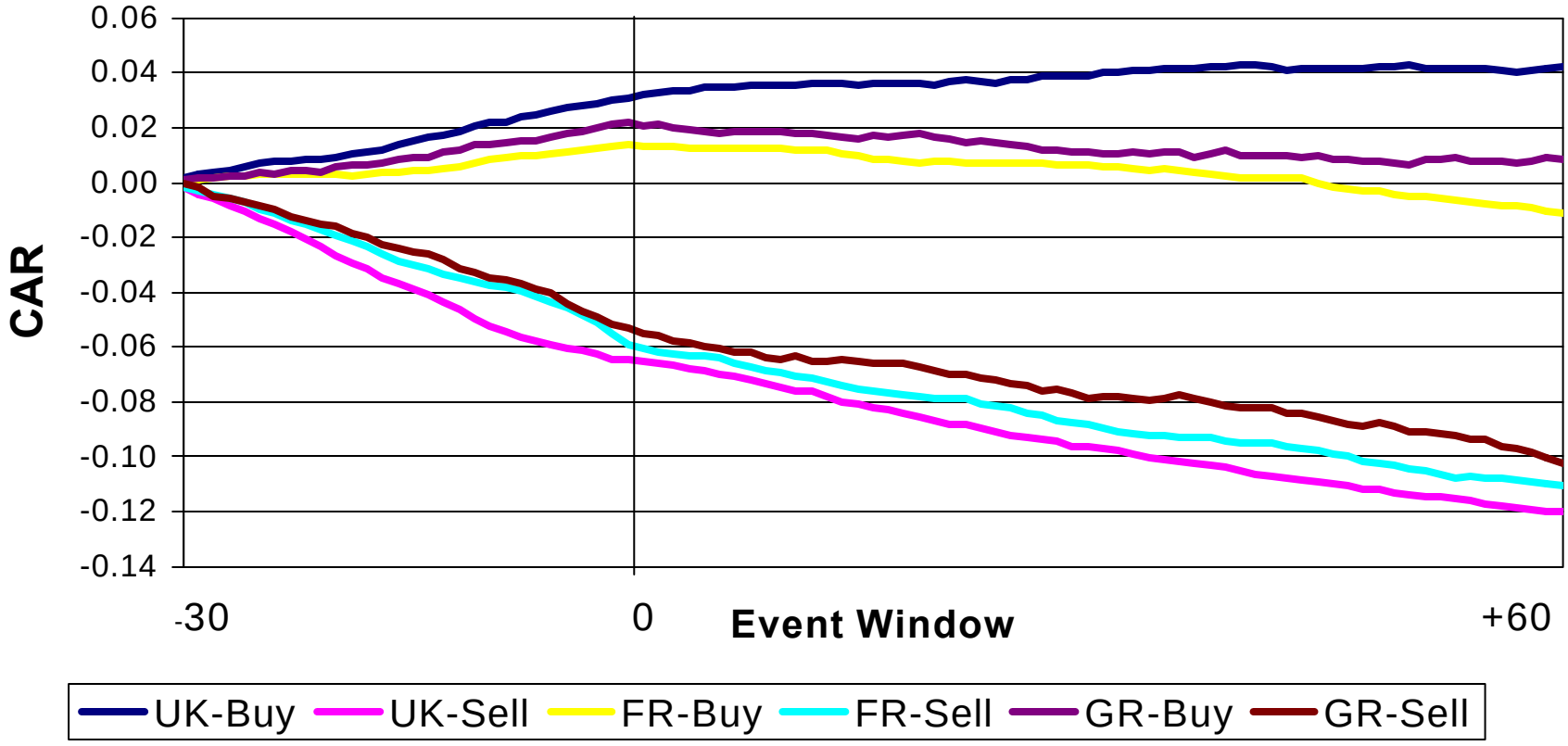

FIGURE 2 Market Adjusted CARs - Full Sample - Hedge Portfolios

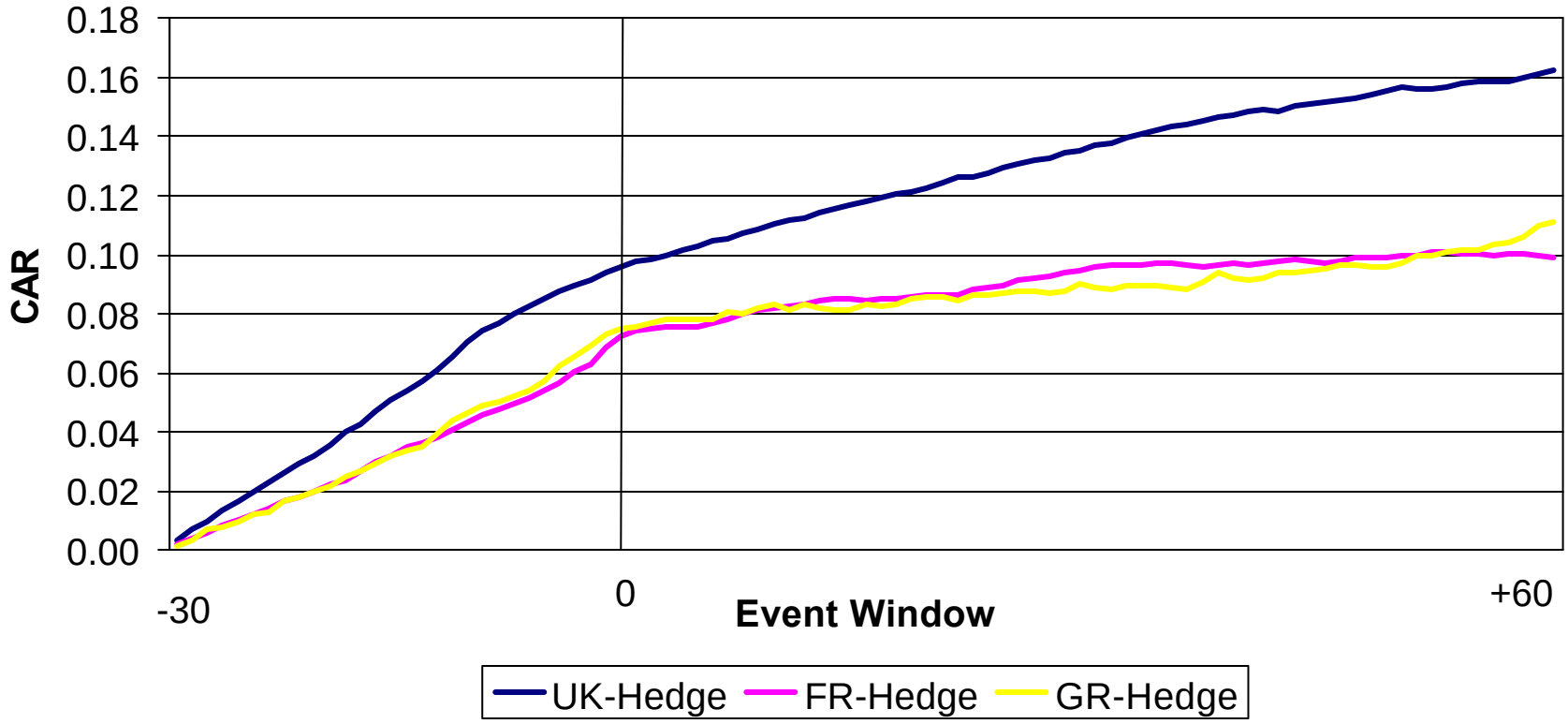

FIGURE 3 Unadjusted CARs - Full Sample

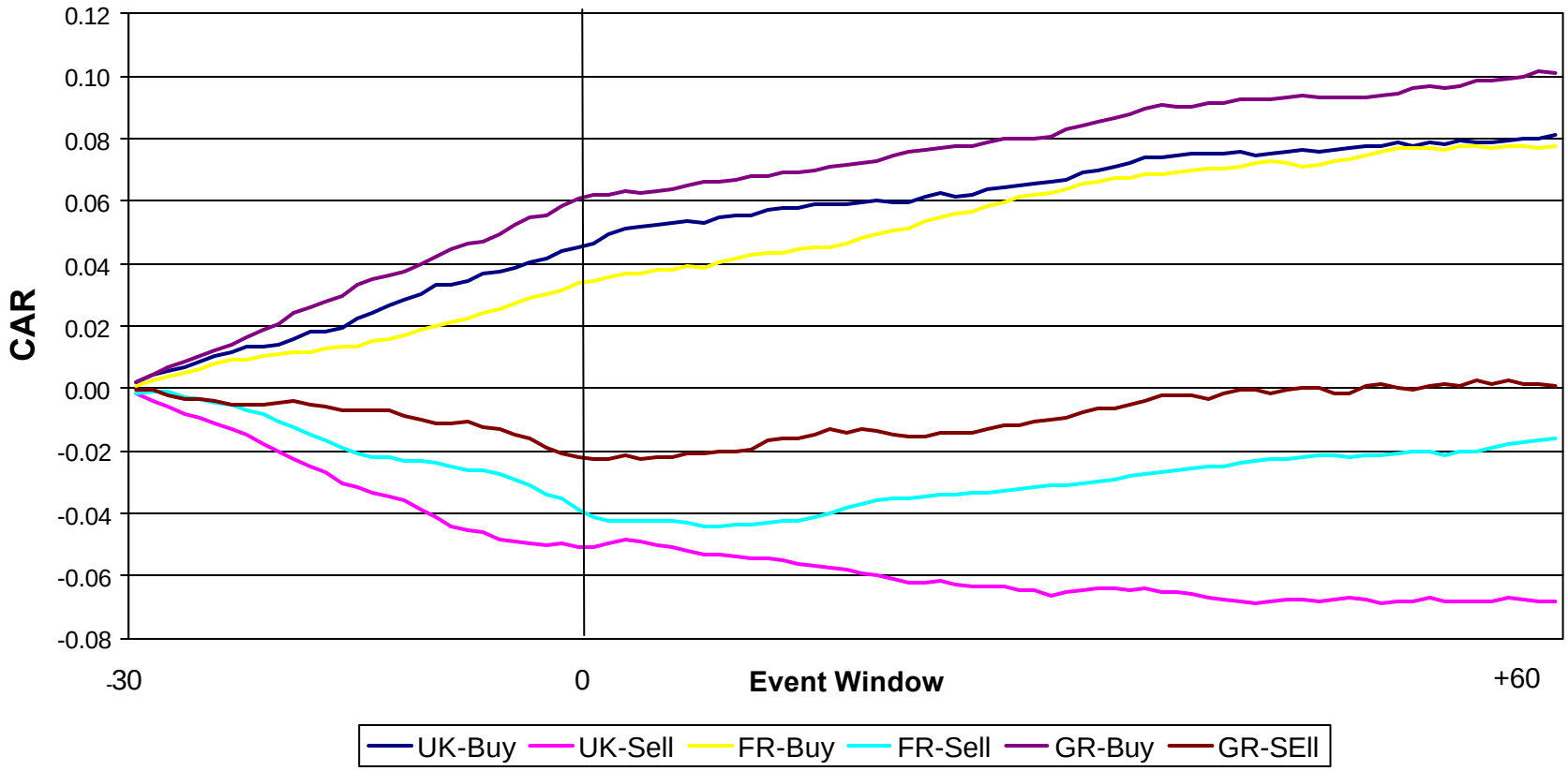

FIGURE 4 Unadjusted CARs - Full Sample Hedge Portfolios