Do Value Stocks Outperform Growth Stocks around the Release of Firms' Financial Results? Some Preliminary Evidence from the Irish Stock Exchange

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INTRODUCTION

The extant literature, predominantly US based, suggests that value strategies produce superior returns.[1] However, the interpretation of the nature of these superior returns remains an unresolved issue. One argument is essentially that the markets are efficient and that the superior returns to value stocks are driven by fundamental risk factors. However, Lakonishok, Shleifer and Vishny (1994) and La Porta, Lakonishok, Shleifer and Vishny (1997) suggest there is little evidence financial ratios such as low market-to-book are riskier based on conventional measures of risk. They argue instead value stocks are underpriced relative to their risk characteristics and are potentially subject to behavioural and institutional biases resulting in investors making systematic errors in pricing stocks. They argue investors overestimate the future growth potential of growth stocks and underestimate the corresponding growth potential of value stocks and tend to extrapolate past performance too much out into the future. Gradually investors begin to realise that past performance is not sustainable and prices begin to mean revert. In other words value stocks provide superior future returns because the market only slowly realises that earnings growth rates for value stocks are higher than initially expected and conversely for growth stocks.

The evidence as to whether past growth in earnings is a good predictor of future earnings growth for example is mixed. Little (1962) finds that earnings changes follow a random walk with earnings growth rates being predictable for only one to two years out into the future. Fuller, Huberts and Levinson (1992), in contrast, find that earnings changes do not follow a random walk as investors can forecast relative growth rates reasonably well. However, they argue that it

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is questionable as to whether the size of the price/earnings differential between value and growth stocks is too big to justify the expectation that past growth differences will persist long enough to capture the differences in prices paid for value and growth stocks.

In this paper we examine the role of expectational errors in explaining the superior returns to value stocks in the context of stocks listed on the Irish Stock Exchange. To do this we examine the market's reaction to the release of firms' interim and preliminary results to assess whether investors make systematic errors in pricing. Specifically we test whether the market's response in the period surrounding the release of firms' financial results in the two years after portfolio formation is positive for value stocks relative to the market reaction to growth stocks. This method is similar to the approach adopted by La Porta, Lakonishok, Shleifer and Vishny (1997).[2]

We find that value stocks do indeed outperform growth stocks in the two-year period following portfolio formation. However, in contrast to extant US-research, we are unable to reject the possibility that the return differentials are driven by fundamental risk factors rather than by investors' tendencies to extrapolate earnings growth rates too far into the future.

The remainder of this paper proceeds as follows: In the next section we describe our methodology and in the following section we present our results. We then explore whether our results are perhaps driven by differentials in expected returns as compensation for systematic risk. In the final section we summarise and conclude.

Methodology

Our sample consists of all stocks quoted on the Irish Stock Exchange over the period 1996 to 2002. In order to mitigate potential problems arising from market liquidity we restrict our sample to the top 40 stocks by market capitalisation in each year. [3]

To examine return differences surrounding the release date of firms' interim and preliminary results between value and growth stocks we form portfolios based on two classification systems, the market-to-book ratio (MB) and a classification based on the price-to-earnings ratio (PE). Portfolios are formed in June of each year t using accounting data from year t-1 and market value of equity from December of year t-1.

Using MB we divide stocks into quartiles. The value portfolio consists of all stocks in the lowest quartile of market-to-book and the growth stock portfolio consists of the stocks in the highest quartile of market-to-book. A similar approach is adopted for portfolio strategies based on PE. The value stock portfolio consists of all stocks in the lowest quartile of price-to-earnings and the growth stock portfolio consists of all the stocks in the highest quartile of price-to-earnings.

The focus of our approach is on the market's response to firms' interim and preliminary results. These are measured over the three-day window around the announcement dates reported in the *Irish Stock Market Annual*.[4]

Market Reaction around Financial Results Release Dates for Value and Growth Portfolios

Table 7.1 reports on the market's reaction to the accounting releases of value and growth stock portfolios over the two years after portfolio formation where value and growth portfolios are formed on the basis of MB. The portfolio announcement returns reported in Table 7.1 are equally weighted buy-and-hold returns measured over the three-day window (t-1, t+1) around the publication date of the interim and preliminary results. The reported results are the aggregate of the market's response to the interim and preliminary results for each stock in each of the two post-formation years.

Table 7.1: Returns in the 3-Day Period Surrounding the Release of Firms' Accounting Results on Value and Growth Portfolios Classified by Market-to-Book, 1997–2002

At the end of each June between 1997 and 2002 the top 40 stocks by market capitalisation are ranked in ascending order based on the ratio of market-to-book. The portfolio of growth stocks consists of quartile of stocks with the highest market-to-book value and the portfolio of value stocks consists of the quartile of stocks with the lowest market-to-book. The returns presented in the table are averages over all formation periods. These are measured on a semi-annual basis over the 3-day period (t-1, t+1) surrounding the release of the preliminary (P) and interim (I) results and then summed up over the preliminary and interim results in each of the two post-formation years (P1,I1 and P2,I2).

MB	Growth	Value	Mean difference	t-Stat for Mean difference
P1,I1	0.00165	0.01999	0.01834	4.48*
P2,I2	-0.00506	0.01807	0.02313	5.22*

* = statistically significant at a= 0.05

We find event returns are significantly higher for the value portfolio than for the growth portfolio. In year one, the cumulative event return for the value portfolio is 0.2 per cent for the growth portfolio and 2.0 per cent for the value portfolio. The return differential of 1.8 per cent between the value and growth portfolios is statistically significant at a=0.05. Similar results occur in year two. The cumulative event return for the value portfolio is -0.5 per cent for the growth portfolio and 1.8 per cent for the value portfolio. Again the return differential of 2.3 per cent is statistically significant at a=0.05. This evidence is consistent with the updating of the earnings prospects for value stocks relative to growth stocks taking place slowly.

Table 7.2 presents comparative results based on PE as the method of classifying stocks into value and growth portfolios.

Table 7.2: Returns in the 3-Day Period Surrounding the Release of Firms' Accounting Results on Value and Growth Portfolios Classified by Price-to-Earnings, 1997–2002

At the end of each June between 1997 and 2002 the top 40 stocks by market capitalisation are ranked in ascending order based on the ratio of price-to-earnings. The portfolio of growth stocks consists of the quartile of stocks with the highest price-to-earnings and the portfolio of value stocks consists of the quartile of stocks with the lowest price-to-earnings. The returns presented in the table are averages over all formation periods. These are measured on a semi-annual basis over the 3-day period (t-1, t+1) surrounding the release of the preliminary (P) and interim (I) results and then summed up over the preliminary and interim results in each of the two post-formation years (P1,I1 and P2,I2).

PE	Growth	Value	Mean difference	t-Stat for Mean difference
P1,I1	0.00007	0.01033	0.01026	2.67**
P2,I2	-0.00527	0.00664	0.01191	2.36**

** = statistically significant at a= 0.05

Similar conclusions to those based on Table 7.1 can be drawn. In year one, the cumulative event return in the three-day period surrounding the release of the results is 0.0 per cent for the portfolio of growth stocks and 1.0 per cent for the value portfolio. The return differential of 1.0 per cent between the value and growth portfolios is statistically significant at a=0.05. In year two the cumulative event return for the value portfolio is -0.5 per cent for the growth portfolio and 0.7 per cent for the value portfolio. Again the return differential of 1.2 per cent is statistically significant at a=0.05.

In aggregate the evidence suggests that value stocks significantly outperform growth stocks in the three-day period surrounding the release of firms' interim and final results. The results are broadly similar whether we condition on either MB or PE. Interestingly, the differential returns and their associated t-statistics are of greater magnitude in forming portfolios based on MB, the classification system favoured by Fama and French (1992).

Our evidence on the market's differential response to the accounting releases of value and growth stock portfolios is consistent with the US evidence reported in La Porta, Lakonishok, Shleifer and Vishny (1997).

Are Return Differentials Driven by Differences in Risk Premia?

In the foregoing section we presented evidence that value stocks exhibit positive surprises *vis-à-vis* those experienced by growth stocks in the three-day period surrounding the release of firms' interim and preliminary results for the two-year period following initial portfolio formation. We suggested such evidence is potentially consistent with the behavioural view that investors systematically underestimate the growth prospects of value stocks and overestimate the growth prospects of growth stocks. In other words they extrapolate the positive (negative) growth potential for growth (value) stocks too far into the future. These prospects are re-evaluated slowly as new information comes to the market (for example through firms' statutory accounting releases) and prices begin to mean revert.

However, an ardent follower of the efficient market hypothesis would argue that these returns differentials are not driven by pockets of market inefficiency but rather are attributable to compensation for risk.

We adopt an approach employed in La Porta, Lakonishok, Shleifer and Vishny (1997) to test this possibility. Essentially the market efficiency argument is that differences in returns between value and growth portfolios may be driven by differences in *ex ante* risk premia around a small number of important information events. The argument goes that if a disproportionately high proportion of the annual uncertainty about a stock occurs around the time of the announcement of a firm's results then so also arguably should a disproportionate share of the risk premium as well. This in turn implies that for both value and growth stocks event returns should be higher than non-event returns in these periods.

In contrast if the behavioural view is correct and the information revealed about growth stocks is sufficiently negative, event returns should be significantly lower than non-event returns, despite a higher *ex ante* risk premium. Thus a comparison of event returns and non-event returns for growth stocks can potentially distinguish between the risk premia and behavioural views.[5]

Table 7.3 presents the results for this test using both PE and MB methods of portfolio classification.

Table 7.3: Cross-Sectional Regression Tests of Difference between Event and Non-Event Period Returns for Value and Growth Portfolios

We run cross sectional regression tests of the daily return for each portfolio on the ISEQ index and a dummy variable for whether the day lies in the (-1,+1) interval surrounding the interim and preliminary results. Separate regressions are performed for value and growth portfolios with portfolios formed at the end of each June. In panel A, portfolio formation is based on MB whilst

in panel B portfolios are constructed on the basis of PE. As in Table 7.1 and 7.2 the portfolio of growth stocks consists of the quartile of stocks with the highest MB (PE) and the value stock portfolio consists of the quartile of stocks with the lowest MB (PE).

Panel A: MB Regressions	Intercept	Event day dummy	Market return
High MB portfolio return (growth)	0.00019	0.00969	0.31678
	(0.67)	(4.94)**	(12.98)**
Low MB portfolio return (value)	0.00041	0.00710	0.17013
	(1.46)	(3.65)**	(6.92)**
Panel B: PE Regressions			
High PE portfolio return (growth)	0.00008	0.00847	0.46846
	(0.29)	(4.54)**	(19.12)**
Low PE portfolio return (value)	0.00037	0.00963	0.09074
	(0.94)	(3.40)**	(2.68)**

** = statistically significant at a= 0.05

We run cross-sectional regression models of the daily return for each stock on the ISEQ index and a dummy variable for whether the day is in the (-1, +1) window around the announcement of a firm's interim and preliminary results. Regressions are run separately for value and growth stock portfolios.

Taking the results based on the MB reported in Panel A we find for regressions based on high MB (growth stocks) the intercept is 1.9 basis points (bp) per day and a coefficient of 0.32 on the market return. Importantly, the coefficient on the event dummy is a positive 10bp per day. Event days are significantly above non-event days which is consistent with the *ex ante* risk premium argument. Results based on the P/E classification (Panel B) are similar. We find for regressions based on high PE (growth stocks) the intercept is 0.8 bp per day and a coefficient of 0.47 on the market return. The coefficient on the event dummy is 8 bp per day. Thus, for both the MB and PE methods of classifying growth portfolios, event-day returns are significantly above non-event day returns which is consistent with the *ex ante* risk premium argument and not with the behavioural perspective.

For (low MB) value stocks the intercept is 4.1 bp per day and a coefficient of 0.17 on the market return. The coefficient on the event dummy is 7 bp per day. For (low PE) value stocks the intercept is 3.71 bp per day and there is a coefficient of 0.09 on the market return. The coefficient on the event dummy is 10 bp per day.

In summary therefore, based on comparisons of event- and non-event-day returns for growth stocks, we are unable to reject the possibility that the differentials in realised returns between growth and value stocks are in fact

driven by differences in *ex ante* risk premia rather than by expectational errors by investors underestimating the growth prospects for value stocks and overestimating the growth prospects for growth stocks. The risk premia hypothesis implies that event day returns should be higher than non-event returns for both value and growth stocks. The data is consistent with this hypothesis. We do not find that event returns for growth stocks are lower than non-event returns for growth stocks which as previously articulated would be consistent with the behavioural hypothesis.

Interestingly, our results in this regard contrast with those of La Porta, Lakonishok, Shleifer and Vishny (1997). They report results that do not support the risk premium argument. Specifically, their data show that event returns are lower than non-event returns for growth stocks despite the higher *ex ante* risk premium posited by the market efficiency theory which they conclude is consistent with the behavioural perspective.

Summary and Conclusion

In this paper we examined whether expectational errors play a significant role in explaining the return differentials to value and growth stocks on the Irish Stock Exchange in the period surrounding the release of firms' interim and preliminary results. Our sample consists of the top 40 companies by market capitalisation each year over the period 1997–2002.

Our initial results suggest that the market's response to the release of firms' financial results is of larger magnitude for portfolios of value stocks than for growth stock portfolios. However, in further analysis, we are unable to reject the possibility that these return differentials are driven by compensation for risk rather than by systematic expectational errors made by investors.

One possible interpretation of our results is that by restricting our sample to the top 40 companies by market capitalisation, the pricing of such firms is more efficient, leaving less room for systematic bias in the earnings surprises for value versus growth stocks. There is evidence in the literature that large firms are less likely to be subject to anomalous behaviour than "smaller" firms (e.g. Hong, Lim and Stein, 2000; Hong and Stein, 1999; Merton, 1987). Interestingly, La Porta, Lakonishok, Shleifer and Vishny (1997) report weaker evidence of value stocks outperforming growth stocks in the period surrounding the release of firms' quarterly results when they refine their sample companies to include only those that have a market capitalisation in excess of the NYSE median.

However, if we were to expand our sample companies to include the remaining 40 or so companies quoted on the Irish Stock Exchange we would run into problems of illiquidity. In addition the market value of those remaining companies constitutes less than 5 per cent of the total value of the entire market. Thus, from an investor perspective, any potential profitability, even if it were to exist, would not be economic to exploit.

Our reported results have implications for investors implementing value versus growth trading strategies for the largest most liquid stocks quoted on the Irish Stock Exchange. Though value stocks systematically outperform growth stocks in the period immediately surrounding the release of firms' financial results, the profitability of such strategies may be potentially illusory as the differences in return may simply be appropriate compensation for risk rather than reflective of investor expectational errors in pricing stocks.

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1 Broadly speaking value stocks are defined as stocks that have a low market price relative to financial variables such as earnings, book value of assets, cashflow, dividends etc. Growth stocks are correspondingly defined as those having a high market value relative to these variables.

2 As firms' results are released on a quarterly basis in the US, La Porta et al. (1997) examine the differential price reaction to value versus growth stocks in the immediate vicinity of these dates.

3 Thin trading is a particular problem on the Irish Stock Exchange (Murray, 1995). Though restricting our sample stocks to the top 40 by market capitalisation is to a certain extent arbitrary a cursory examination of share price activity reveals that for companies marginally below the top 50 there is a considerable number of days when the share price does not change. For example, taking the two-year period 1999–2000, for those companies outside the top 50 the average proportion of days for which there is no price change is 71% of cases (standard deviation = 17.5%; median = 68%). This is prima facie evidence of lack of trading activity. In any case, the total market value of the companies excluded from our sample represents less than 5% of the value of the entire Irish Stock Exchange and therefore as a group they are not economically significant and would be of little interest to investors attempting to exploit profits using value-based trading strategies.

4 We aggregate returns until one day after the announcement date to account for the possibility of delayed stock price reaction. This measure is a very clear measure of market surprise, since it does not require an explicit model for investor expectations. Accumulating the return from the day prior to the announcement date is designed to take account of prior information leakage and information search by market participants in the day prior to the known release date (Kim and Verrecchia, 1991).

5 It would not be possible to disentangle these two views for a portfolio of value stocks because for both the behavioural and risk premia explanations one would expect a higher return on event days than on non-event days.

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