Finding alpha in an earnings upgrade cycle

Alphinity Investment Management

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About Alphinity

Alphinity Investment Management (Alphinity) is a boutique investment manager whose goal is to add value through an investment philosophy and process that is distinctive, rigorous and disciplined.

Alphinity's investment philosophy seeks to identify and invest in attractively valued, quality companies in, or about to enter, an earnings upgrade cycle. We look for stocks that can deliver 'earnings surprises' to drive outperformance. Our approach has solid backing in academic research and statistical analysis, as well as in practice.

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Introduction

A company's earnings ultimately will drive its share price performance. The share price will, at any given point, reflect the market's future earnings expectations. However, the market is typically inefficient at accurately pricing future consequences of new information that will affect company earnings. Clearly identifiable characteristics exist for companies whose earnings ability is likely to be over (or under) estimated by the market, allowing an investor to exploit this inefficiency to create outperformance.

In summary:

- A positive earnings announcement by a company is more likely than not to be followed by a period of sustained positive earnings revisions/surprises driving share price outperformance (and vice versa for negative earnings announcements).
- Earnings revision cycles can be explained by the gradual nature of business cycles as well as human behavioural biases.
- The investment performance from investing in companies in an earnings upgrade cycle (Momentum) is enhanced when combined with Quality and Valuation factors.

Long history of academic research

Ball & Brown (1968) were the first to analyse in detail the reaction of stock prices to the release of company reports. They showed that security prices do react immediately and rapidly to new information as it becomes available. However, unique to Ball & Brown's work was that it was the first to show that stock prices continue to drift in the direction of earnings surprises for several months after the earnings are announced[1]. This is known today as post earnings announcement drift or PEAD. This effect was researched in further detail by Fama[2] (1997) in his work on anomalies that exist in an efficient market.

Bernard and Thomas (1990), Chan et al (1996), Schneider and Gaunt (2011) and Zhou and Zhu (2012) have extended Ball & Brown's (1968) work across different strategies, markets and timeframes, showing a delayed reaction of stock prices to the information in past returns and in past earnings. Findings are summarised below:

- Drifts in future returns over the next six to twelve months are predictable from a stock's prior return and from prior news about earnings.
- Both price and earnings momentum have explanatory power for future returns.
- There is little sign of subsequent reversal.
- Returns for companies that are ranked lowest by past earnings surprise are persistently below average in the following two to three years.
- Investment analyst forecasts are slow to incorporate past earnings news.

Investing in earnings surprises – The Australian experience

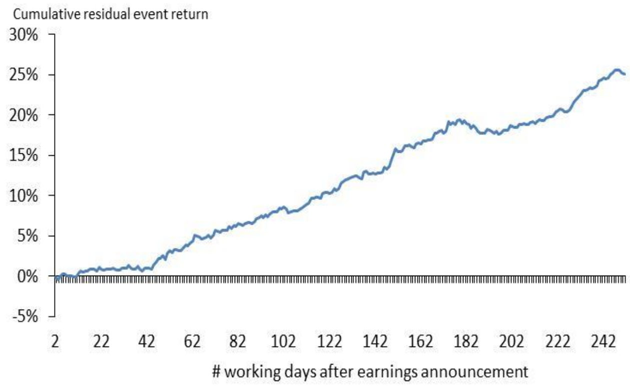
This anomaly of continuous price momentum following a surprise is clearly evident in actual experience in the Australian market. Studies of the effect of positive and negative earnings urprises back up the findings from overseas academic research.

[1] Ball & Brown (1968) An Empirical Evaluation of Accounting Income Numbers JAR Autumn 1968 p160

[2] Fama (1997) Market efficiency, long-term returns, and behavioural finance. Journal of Financial Economics 49, pp283-306.

Research by Van Wyk (2012)[3] measured the performance of an equally weighted portfolio of Australian positive earnings surprise stocks. This portfolio outperformed the market by an average of 25.1% (t-stat 5.75, highly significant) in the following 12 months. The performance of the portfolio is demonstrated in the chart below.

Figure 1: Cumulative equity return 12 months after positive earnings surprise



Source RBS Australia

This study was neutral to industry, size, volatility and beta. Positive earnings surprises were defined as stock specific return greater than two standard deviations in the three days around an earnings announcement.

The impact of negative earnings surprises on stock prices has also been tested. Research by UBS Australia[4] provides valuable evidence of the serial correlation of earnings revisions or how earnings revisions are typically sustained for an extended period of time.

Measured over a period from December 1991 to November 2012 the UBS study showed:

- 74% of downgrade cycles consist of more than one downgrade.
- The average downgrade cycle in Australia over this period is 4.8 downgrades, and the maximum number is 34. Downgrades have lasted between 1 and 53 months, the average being 9.4 months.
- Stocks in a downgrade cycle underperformed the market by 4.5% on average for the duration they are in the downgrade cycle.

Warren Buffett referenced this correlation of negative earnings revisions in his usual homespun way when discussing the operating performance of Tesco (UK) in Berkshire Hathaway's annual report in 2014.

> ***"In the world of business, bad news often surfaces serially: You see a cockroach in your kitchen; as the days go by, you meet his relatives."*** [5]
>
> \- ***Warren Buffett***

Price Momentum

While earnings surprise leads to price momentum, the research from Ball & Brown[6] (1968), also demonstrated that Price Momentum is a great signal itself for future earnings surprise.

Price Momentum is a valuable complementing signal when using an earnings revision based investment approach as a change in price momentum can often precede a change in earnings momentum (revisions).

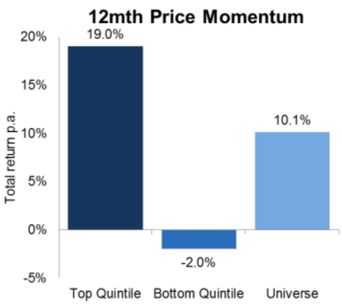
Further research showed a company with historically weak earnings can experience a period of share price momentum as investors price in an improved earnings outlook in advance of these earnings being reported. (Chan et al (1996))[7]. The price momentum effect is primarily attributed to the gradual absorption of information.

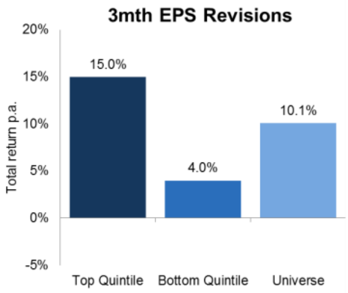
[3] Van Wyk (2012) Capturing the trend after reporting season: RBS Equities (Australia) p2
[4] Balasubramanian (2012) Mythbusting the downgrade cycle, UBS Securities (Australia) cycle p1
[5] Buffet (2014) Berkshire Hathaway Annual Report p18
[6] Ball & Brown(1968) An Empirical Evaluation of Accounting Income Numbers. JAR Autumn 1968 p160
[7] Chan et al (1996) Momentum strategies - The Journal of Finance vol 50. No5.p1681

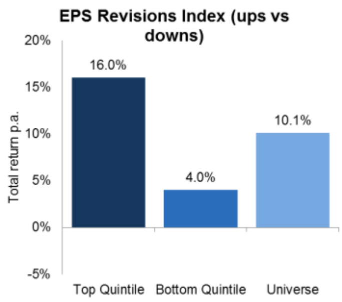
Momentum factors in Australia

Alphinity has undertaken its own extensive analysis of momentum factors in Australia which again shows the efficacy and persistence of alpha over time using this philosophy.

Below we show the results of our back-testing of three momentum factors: three month earnings revisions, 12 month price momentum, and earnings diffusion (ratio of earnings estimates being revised up vs number being revised down).







Dates: Feb 95 - Dec 14. Source: Alphinity, Deutsche Bank

Explanations for earnings surprise persistence

Having established price momentum and earnings momentum go hand in hand, and PEAD occurs, the next question is ***"why does this anomaly exist?"***

Put simply PEAD occurs because earnings revisions or surprises, both negative and positive, are serially correlated. What this means is that after one earnings surprise, it is more likely than not to be followed by another one, which in turn continues to push the share price in that same direction. This is where we get earnings trends from, when you hear that "this company is on a roll", or "bad things come in 3's" – there is a real basis to those statements. New information is coming to light about the ongoing momentum inside the business.

Foster (1977), Lev and Ohlson (1982) Kormendi and Lipe (1987), Freeman and Tse (1989), Bernard and Thomas (1989) advance the theory of a "rational delayed reaction to earnings news". This is caused by investors failing to form an unbiased expectation of future earnings immediately upon revelation of current earnings.[8]

Meeting or beating market forecasts of future earnings is a notion well entrenched in today's corporate culture. Research by Bartov, Givoly and Hayn (1997) examine the "expectation game" whereby investors and companies focus on the degree to which reported earnings meet or beat analyst estimates. They found that earnings surprises are a reliable predictor of the firm's future performance. They found that firms whose earnings releases constitute a favourable surprise show in subsequent years a higher growth in sales and earnings and a higher ROA and ROE than firms with similar earnings performance but unfavourable surprises.[9]

Ultimately this is because the market, while efficiently pricing in what it knows about the current new information e.g. an earnings upgrade, is inefficient in pricing in the implications of that upgrade for future earnings prospects.

Reasons cited for this phenomenon, mostly relate to human behavioural biases that contribute to only gradual incorporation of new information. These biases have been exhaustively analysed and debated including in the well know works by Kahneman and Tversky (1979 and 1981). Many of these terms will be familiar to the reader, but can be summarised as:

[8] Bernard, Thomas (1989) Post-earnings –Announcement Drift: Delayed Price Response or Risk Premium? Journal of Accounting Research Vol27, p1-36

[9] Bartov et al (2002) The rewards to meeting or beating earnings expectations. Journal of Accounting and Economics 33 (p173-204)

- **Anchoring**: Analysts naturally anchor to their old earnings estimates until there is overwhelming evidence the earnings change is due to permanent rather than temporary factors. This leads to subsequent upgrades.
- **Framing:** New information is framed in the context of past events. Tversky and Kahneman (1981) showed the psychological principles that govern the perception of decision making. Market participants need to know the full story to get comfortable with why the earnings have changed.
- **Asymmetrical reward structure**: Corporates and market analysts have an asymmetrical reward structure in which the penalties for being overly positive exceed the rewards for getting it wrong. This leads to conservatism in guidance and forecast for future earnings. For management, there is a benefit in under-promising and over-delivering.

In practice these behaviours and other biases are visible in the following forms:

- Sell side analysts preferring safety in consensus.
- Investors falling in or out of love with a stock due to a specific product, management team or industry the company operates in.
- Portfolio managers convincing themselves they are right but just need more (indeterminate) time to prove it.

There are also more direct fundamental reasons. While the distinct stages of a company life cycle (introduction, growth, maturity, and decline) are well understood by market participants, the length of each phase and the transition period from one phase to another is more difficult to predict. This applies not only to investors but to the management teams themselves who communicate with the market. When things are finally turning for a company, management is reluctant to show optimism early to avoid further disappointment should the improvement turn out to be temporary.

Conversely when everything has been going well for a business for some time it is easy to come up with reasons why a setback is only temporary.

These behavioural biases all play an important role in why stocks in an earnings revision cycle will be serially correlated over extended periods.

Enhancing earnings revision investing

The risk with using an earnings revision based investment approach is failing to see the end of the upgrade cycle. This can be particularly painful as companies with a successful history of earnings growth often rerate over time i.e. investors are willing to pay more for its future earnings than they were at the beginning of the upgrade cycle. An investor's ability to avoid this 'growth trap' can be enhanced by combining earnings revision factors with **quality** and **valuation** factors. A typical earnings upgrade cycle is outlined in Figure 2. It is important to enter a position upon the positive earnings surprise and exit before the negative announcement.

Figure 2: A typical earnings upgrade cycle

Earnings surprise along with quality and value factors can be obtained objectively from readily available data. It is important to not treat these in a "black box" sense and instead apply analytical skill to verify the data, and to analyse the 'why' as much as the 'what'.

Quality

Considerable evidence exists that investing in 'quality' companies provides a superior risk reward trade over time.

A quality company can be described as one which has low financial risk, high profitability and low earnings volatility. Another feature of a quality company is one with low levels of earnings manipulation through the use of balance sheet accruals and income provisioning. The key to a quality company is the strong sustainability of its cash flows over long periods of time across various economic environments. In addition being good stewards of investor capital, and generating a good return for shareholders.

Quality can be observed by an improving return on equity, stable and sustainably increasing profit margins, increasing balance sheet capacity and consistent free cash flow generation. These factors increase the likelihood and sustainability of future positive earnings surprises whilst a deterioration in these factors can indicate potential negative future earnings surprises.

Valuation

Research and experience shows that combining Value and Momentum (measured in the form of earnings revisions and price momentum) will deliver superior outperformance. The conclusion of a study into value and momentum operating together by Asness et al (2009) states:

> ***"Value and momentum signals produce expected abnormal returns in a variety of markets and asset classes, their combination performs even better than either alone, and the benefits of diversification across markets and asset classes are large...."***[10]

One explanation for the enhanced outcomes are the buy and sell signals that the combined factors produce. They help an investor to avoid both value and growth "traps" at the beginning and end of an earnings revision cycle.

Avoiding Value traps

While it may seem intuitive that buying stocks on a low valuation should outperform buying stocks on a high valuation over the long run, selecting stocks purely on a low valuation also contains a measure of risk. Fama and French (1998) found that low price-book ratios (Value) may operate as a measure of risk in a portfolio, as firms priced well below book value are more likely to be in trouble and end up going out of business. It is also established that very high dividend yields are often an indication of issues within a company rather than value. One way to mitigate this risk is to use Momentum signals to help select the value stocks that have an improving outlook, and avoid the 'value traps'.

Avoiding Growth traps

Conversely, a company with rapidly growing sales and earnings can perform very well for a time despite seemingly higher valuations.

However sustaining high annual sales growth is extremely difficult. On average only one company in the S&P500 between 1990 and 2015 was able to sustain a 10%+ sales growth for 10 consecutive years (in any 10 year rolling period).[11] The law of large numbers naturally causes many firms to end their growth streak as does the duration of economic cycles.

Valuation provides a strong signal (along with deteriorating quality) to sell a position before the inevitable negative surprise occurs. **When using an earnings momentum strategy it is vital to have a strict sell discipline.**

In conclusion

- Earnings revisions are serially correlated leading to sustained share price performance.
- The correlation is due to human behavioural biases along with the gradual nature of company business cycles.
- An earnings revision approach is enhanced when combined with quality, valuation and price momentum factors.

[10] Asness et all (2013): Value and Momentum Everywhere. The Journal of Finance. Vol 68, No.3.p932

[11] ibid

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