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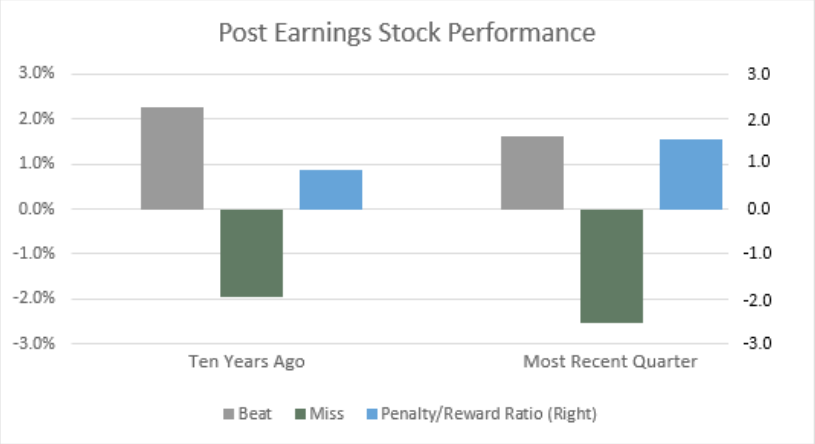
## The Diverging Effect of Beats and Misses on Stock Prices

"Earnings Season": that magical time of year when stars rise, hopes are dashed and the polarity of an investment manager's psyche is tested. It is the time of year roughly defined as the period between the 4th and 7th weeks after the end of the quarter. The sting of the season is traced to the outsized movements of common stocks after earnings are announced, which typically relate to results, or issued outlooks, versus expectations. This "sting" bears out empirically as well. Consider the following: During the period outside of earnings season (weeks 1 through 3 and 8 through 13) the CBOE Volatility Index has declined 1.03% on average, per quarter, since 12/31/07, whereas the Index has increased 8.20%[i] during weeks 4 through 7. As a result, one can begin to quantitatively justify the madness that accompanies earnings season. Moreover, our experience and intuition has led us to theorize that the reward for a good earnings release has been tempered while the penalty for a poor release has been magnified over time. In an attempt to further quantify and test our intuition on the magnitude of the impact of earnings releases on share prices, we parse the data that underpins the reaction to these announcements.

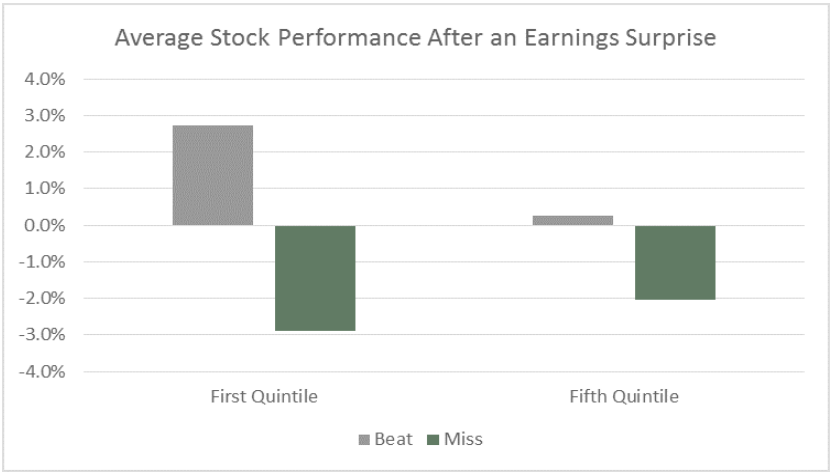
Using FactSet as our primary source for the calculation of earnings surprises, we have pulled the most recently reported quarterly earnings per share for each company in the Russell 3000 Index along with their releases from ten years ago, if available. For each period we designate a "Beat" to those companies whose actual earnings came in ahead of sell-side analysts' consensus estimates for the period. Conversely, we designate a "Miss" to those companies whose reported earnings fell short of consensus. Additionally, we again used FactSet to determine the return on each company's share price during the first trading day after its earnings release. That is, for companies reporting pre-market we look at that day's trading result; for an after-hours release we analyze returns for the following trading day. In an attempt to quantify our theory regarding the reward for a Beat and the penalty for a Miss, we aggregated the data by separating the universe into Beats and Misses, looked at the average returns for each group, and assessed how the magnitude of those returns compare to each other in both time periods. We have coined the term that divides the average return for a Miss by the average return for a Beat the Penalty/Reward Ratio (in absolute value terms). Intuitively, a Penalty/Reward Ratio less than one implies that Beats are rewarded, on average, with a greater return than the loss suffered after a Miss. Alternatively, a ratio above one implies that Misses are more harshly punished with declines greater than the return generated by a Beat. An increasing ratio shows a trend towards a greater punishment for Misses relative to the gains after a Beat. The following is a summary of the data.

Ten years ago, the average return for a Beat was 2.26% and the average return for a Miss was (-1.96%). Beats were rewarded more than Misses were penalized. The resulting Penalty/Reward Ratio was 0.87. For the most recent quarter the average return for a Beat was 1.63% and the average return for a Miss was (-2.55%). The penalty for a Miss has been magnified and now far exceeds the reward for a Beat, which has diminished over time according to this data. While the magnitude of the percentage changes may seem benign, the Penalty/Reward Ratio has jumped to 1.56, a 79% increase! We can gain similar insight if we look at some percentiles within the data. Ten years ago 10% of the Beats would have generated a return above 10.7% during the following trading session. That has diminished to a return of >9.5% for the top ten percent of companies beating estimates in the most recent period. Conversely, 10% of Misses fell more than 11.5% in the prior period while falling over 11.9% in the most recent period. Again we see that the reward for Beats has shrunk while the penalty for a Miss has been amplified.



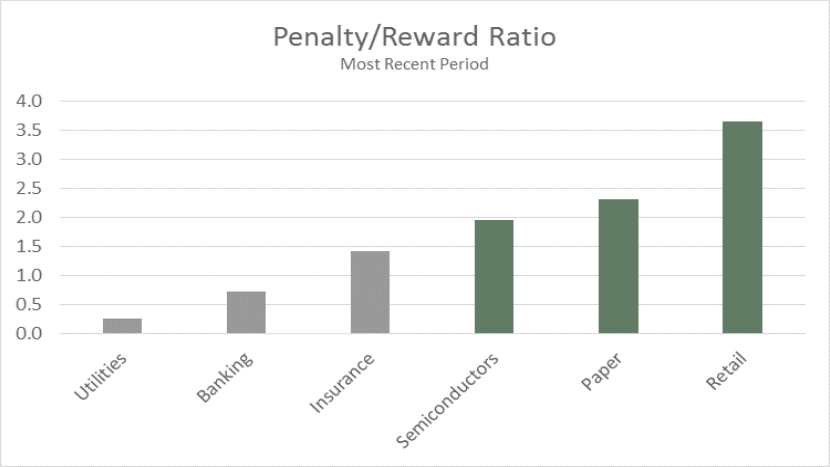

Source: FactSet Research Systems, Inc.

As a manager of both small cap and large cap equity portfolios, we thought it would be interesting to stratify the data by market cap to identify any major differences in the performance of Beats and Misses by company size. As we analyzed the data for the most recent period, not surprisingly we found that the standard deviation of the smaller companies' share price reactions significantly outpaced the standard deviation of the largest companies' returns in this universe. When broken down by market capitalization into quintiles, the first quintile (smallest companies) had a mean and standard deviation of 2.72% and 7.87% for Beats and (-2.91%) and 8.16% for Misses. Contrarily, the fifth quintile (largest companies) had a mean and standard deviation of just 0.26% and 5.22% for Beats and (-2.05%) and 5.67% for Misses. If we assume a normal distribution, that means that while 5% of companies in the fifth quintile had a return below (-13.4%) for Misses or above 10.7% for Beats, the returns in the upper and lower 2.5% of the curve for the first quintile extended below (-19.2%) for Misses and above 18.5% for Beats. Additionally, over 30% of first quintile companies reporting saw a move that was greater than plus or minus 10%. This fits with our experience: small cap names are much more volatile during earnings season than their large cap brethren. One other interesting point: the fifth quintile Penalty/Reward Ratio came in at an astounding 7.90, easily the highest of any slice of data we analyzed, as Beats were rewarded with just 26 basis points of outperformance while Misses fell, on average, 2.05%. This ratio was up significantly from 1.46 ten years ago for that segment of the universe.




Source: FactSet Research Systems, Inc.

When analyzing the data broken down by sector for the most recent period we noticed that the most volatility, as defined by the standard deviation of all Beat and Miss stock reactions, came from cyclical sectors such as Paper, Retail and Semiconductors where standard deviations ranged from 10.2% to 11.9%. This intuitively makes sense. The one outlier appears to be the Telecommunications vertical that came in with a standard deviation of 11.6%. This may be due to factors such as high leverage in the industry or simply a matter of a smaller sample size of companies. On the other end of the spectrum, we see that the Utilities, Banking and Insurance sectors had standard deviations that ranged from 3.01% to 4.50%. It appears that as volatility increases, so does the Penalty/Reward Ratio. Of the 19 Isthmus Partners defined sectors, Utilities, Banking and Insurance all came in below the median ratio of 1.45 while Paper, Retail and Semiconductors all came in well above that level.




Source: FactSet Research Systems, Inc.

Conclusion

The data revealed some information that confirmed our intuition and other interesting data that we had not expected. Specifically, while we expected to see a directional shift in the Penalty/Reward Ratio over time, we were surprised by the 79% increase. Similarly, while our expectation that earnings miss tail-risk differentials amongst small versus large companies was borne out, we were surprised by the disproportionality regarding earnings beats amongst small versus large companies; that is, there appears to be relatively little reward that large companies receive in beating expectations. Finally, while we expected differences in inter-sector volatility, the differences were larger than what we predicted.

What can we do with this information? We glean a couple additional takeaways that confirm Isthmus Partners' approach to equity investing. First, as a manager who values companies based on long-term projected cash flows as opposed to short-term earnings, we can take advantage of the increasingly pronounced earnings release reactions to make sound long-term decisions in entering/exiting positions. Secondly, we recognize that momentum is a strong factor that can showcase itself prominently on the heels of earnings releases. It is for this reason that we often phase-in (phase-out) positions, which at times are centered around earnings releases, so as to minimize timing risk.

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[i] Source: FactSet Research Systems, Inc.