

BRC Investment Management LLC

Research Spotlight

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CONCEPTS

Earnings Announcements and the Torpedo Phenomenon

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In mid-June, Park Electronics (PKE) was flying high. For five straight quarters, PKE earnings had handily beat street estimates and the company's stock price had seen an increase of over 30%. Then, without warning, on June 28, the party ended. PKE announced that EPS for the quarter ending May 31 was only \$.44 when the mean IBES consensus was \$.473. While a 3 cent shortfall seems small, when a disappointment comes on the heels of five straight large positive surprises, the market's response is rarely favorable. PKE's stock price dropped by over 20% in following days.

In the vernacular of the street, PKE fell victim to a "torpedo" event. EPS Torpedoes are unexpectedly negative earnings announcements that occur to companies that had, up until that point, experienced a streak of positive earnings reports. As in the case of PKE, the market's reaction to torpedoes is often swift

EPS Torpedoes are unexpectedly negative earnings announcements that occur to companies that had, up until that point, experienced a streak of positive earnings reports

and dramatic.

A central tenant of our investment process is the contention that by utilizing our quantitative and fundamental valuation techniques we are able to predict, in advance, which companies are likely to announce future positive earnings surprises. Consequently, we are very interested in the characteristics and frequency of earnings torpedoes. In order to understand these events more fully, we designed a research project which was designed to address three main questions:

- 1) What is the probability of a company announcing severely negative earnings given a recent positive trend in earnings announcements?
- 2) What is the average impact on stock prices from torpedo announcements should one occur?
- 3) How are BRC Alpha rankings related to the probability of experiencing torpedo events? In other words, do stocks we find attractive experience more or less torpedo events than stocks in general?

If our models are effective at predicting EPS surprises, but in the process of doing so we subject our portfolios to a greater instance of torpedo announcements, then the benefit of our strategy could be muted.

Methodology

Utilizing our proprietary research database, we examined over 50,000 earnings announcements for all Russell 3000 companies over the period from January 1998 through November 2006. Announcements were categorized based on the magnitude of surprise, earnings, history preceding the announcement, and the BRC Alpha rankings on the Friday immediately prior to the week of announcement.

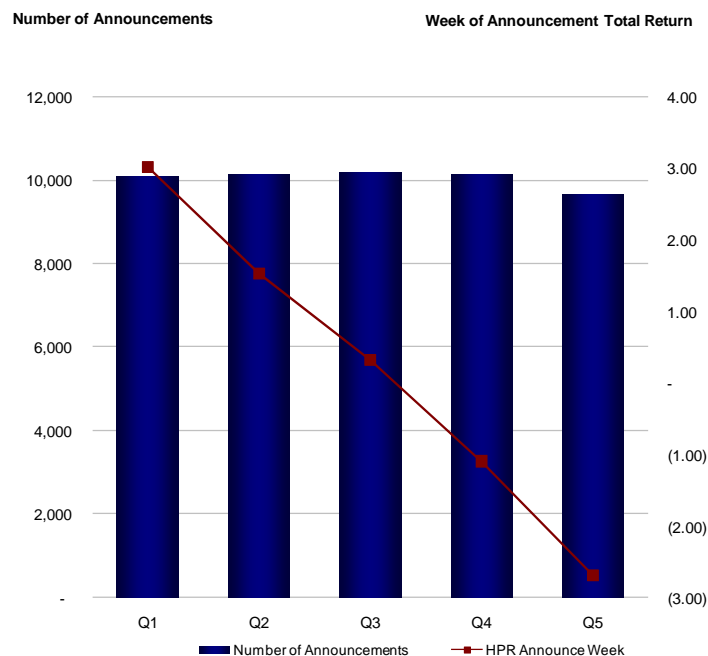
The total return for each stock was calculated over the entire week in which earnings were announced. The average return of all stocks in the same economic sector and capitalization group was subtracted from the analyzed stock's return in order to adjust for market, sector and capitalization influences. To identify torpedo announcements, companies with at least four consecutive above average EPS surprises (or below average for Short Torpedoes) were isolated for further analysis. Torpedo announcements were defined to be reports in the current period that ranked in quintile 5 of our BRC Standardized Earnings Surprise model (quintile

1 for short torpedoes).

Findings

Before examining the impact of torpedoes, we calculated the estimated impact of raw positive and negative surprises across our entire 50,000 announcement database. On average, we found that the companies that announced earnings that were in the top 20% of our BRC Standardized Earnings Surprise model

Figure 1 The Impact of EPS Surprises



outperformed their sector and capitalization peers by 3.01% during the week of announcement. Companies announcing earnings in the lowest surprise quintile underperformed their peers by an average of -2.68%.

When we conditioned EPS announcements on each company's earnings surprise history leading up to the current announcement, the impact of torpedoes began to emerge. Figure 2 highlights the week of announcement returns for the best and worst torpedo events.

First, the analysis suggests that significant serial correlation exists in company EPS announcements. 32.8% of the worst announcements are reported by companies with a string of at least 2 negative prior announcements. Only 13.7% of the worst announcements are reported by companies with a string of 2 or more positive surprises.

Figure 2 The Impact of Long and Short Torpedo Events

	Worst EPS Announcements				Best EPS Announcements		
	Total Count	Count	Pct Total	Return	Count	Pct Total	Return
More than 3 Positive Qtrs	4,262	368	3.8	(4.59)	1,501	14.9	2.75
3 Positive	2,745	320	3.3	(3.89)	778	7.7	2.74
2 Positive	4,979	639	6.6	(3.28)	1,375	13.6	2.90
No Trend	27,364	5,169	53.5	(2.63)	5,240	52.0	3.00
2 Negative	4,810	1,326	13.7	(2.44)	595	5.9	3.83
3 Negative	2,529	730	7.6	(2.31)	277	2.7	3.49
More than 3 Negative Qtrs	3,486	1,110	11.5	(2.14)	320	3.2	3.50
Total	50,175	9,662	100.0	(2.68)	10,086	100.0	3.01

In contrast, for companies reporting the best surprises, 36.2% have a string of at least 2 positive surprises while only 11.8% have a string of at least 2 negative surprises.

Second, we can see from the analysis that the impact of a current negative surprise is greater for companies that have had a string of positive surprises. For this analysis, we have defined a “Long Torpedo” as a Q5 earnings surprise occurring on a stock where there has been at least 4 consecutive positive surprises leading into the announcement. We have defined a “Short Torpedo” as a Q1 earnings surprise for any company where there has been at least 4 consecutive EPS disappointments preceding the current announcement.

As shown in Figure 2, the Long Torpedo events underperform by 4.6% during the week of announcement compared to an underperformance of 2.7% for all negative surprises. Short Torpedo stocks outperform by 3.5% compared to an average of outperformance of 3.0% for all positive surprises. Based on this analysis, it appears that negative announcements for high earnings momentum companies are punished more severely than positive

announcements for negative earnings momentum companies are rewarded.

To answer our third research question, we looked at the conditional probabilities of torpedo events occurring given various BRC Alpha levels. From examining Figure 3, we can evaluate the overall predictive ability of our Alpha model. Looking at the total row, we see that the probability of a quintile 1 Alpha stock experiencing a future top 20% earnings surprise is over three times greater than the probability of a bottom 20% earnings surprise. Similarly, the probability of a future negative surprise for our quintile 5 Alpha stocks is over 5 times greater than the probability of a top 20% earnings surprise.

Using Figure 3, we can also estimate the probability of a torpedo event occurring for the overall universe as well as for our most highly and most negatively ranked stocks. For example, looking at all universe companies that have announced a string of at least 4 positive surprises, we see the probability of the next announcement being a Q1 surprise is 35% while the

Figure 3 Probability of Future EPS Surprises and Torpedo Events

Surprise Trend	Universe			Adjusted Alpha Q1			Adjusted Alpha Q5		
	Count	Prob of Q1 Surprise	Prob of Q5 Surprise	Count	Prob of Q1 Surprise	Prob of Q5 Surprise	Count	Prob of Q1 Surprise	Prob of Q5 Surprise
More than 3 Positive Qtrs	4,262	35%	9%	909	47%	4%	257	17%	27%
3 Positive	2,745	28%	12%	534	38%	6%	257	14%	33%
2 Positive	4,979	28%	13%	998	38%	9%	490	15%	34%
No Trend	27,364	19%	19%	3,804	31%	11%	4,229	9%	38%
2 Negative	4,810	12%	28%	417	20%	15%	1,103	6%	45%
3 Negative	2,529	11%	29%	199	22%	17%	670	6%	44%
More than 3 Negative Qtrs	3,486	9%	32%	251	14%	22%	994	6%	45%
Total	50,175	20%	19%	7,112	33%	10%	8,000	9%	40%



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probability of a Q5 negative surprise is only 9% (Long Torpedo). When we screen these high earnings trend stocks to include only those companies that are ranked in the top 20% of our Alpha model, we see the probability of a positive surprise increases to 47% and the probability of Long Torpedo drops to only 4%. Apparently, the application of our BRC Alpha model reduces the probability of experiencing Long Torpedoes by over 50%.

Looking at the short side of the equation, we see that the probability of a Short Torpedo is approximately 9% for all companies that have announced at least four negative earnings surprises. When we look at only the stocks ranked lowest on our BRC Alpha models, the probability of a Short Torpedo drops to only 6%, a 33% reduction.

Summary

Based on our research, positive and negative earnings surprises exhibit significant positive serial correlation, however, long and short torpedo announcements occur with some regularity. When Long Torpedo events occur, the average negative price reaction is more than twice as the average of all EPS disappointments. The market's reaction to Short Torpedoes appears somewhat muted in

comparison, however, there remains clear evidence of a torpedo effect.

Given a streak of at least 4 prior earnings surprises, we estimate the probability of a future Long Torpedo to be around 9% for the full universe and around 4% for stocks ranked in the top 20% of our Alpha model. For shorts, we estimate that the probability of a future Short Torpedo to also be around 9% for all universe stocks and only about 6% for stocks that are ranked in the bottom 20% of the universe based on our BRC Alpha model.

Although our Alpha model significantly increases the probability of future positive surprises, the probability of a future torpedoes does not similarly increase. To the contrary, application of the BRC Alpha model appears to significantly reduce the chance the future earnings torpedoes will detrimentally affect portfolio returns.

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