1 Part 1: data preparation

(1)

	s	netwin1	netwin2
mean	-0.034295	0.000546	0.008731
std	6.910801	0.085145	0.340307
min	-1790.209	-0.890778	-1.071007
10th percentile	-0.005455	-0.083904	-0.316339
25th percentile	-0.000437	-0.033229	-0.152914
median	0.000331	0.000182	-0.012081
75th percentile	0.001659	0.034908	0.128584
90th percentile	0.004961	0.084568	0.313767
max	7.432727	1.588795	22.972540

Table 1: Summary Statistics for Earnings Surprises (s), Market-Adjusted Returns for Windows [0,1] (`netwin1`) and [3,75] (`netwin2`)

(2) All 3 data series have significant outliers. The earnings surprise data is the most affected while `netwin1` seems to be the least affected. This can be infered from the Kurtosis number and by comparing the standard deviation and sample variance to the mean. The presence of outliers can increase the likelihood of both Type I errors (false positives) and Type II errors (false negatives) by affecting test statistics. The largest 339th number and the smallest 339th are the winsorization values at 0.05% and 99.5%. This is the same as the winsorization values for `sw`, `netwin1w`, `netwin2w`.

	s	netwin1	netwin2
Mean	(0.03)	0.00	0.01
Standard Error	0.03	0.00	0.00
Median	0.00	0.00	(0.01)
Mode	-	(0.01)	(0.10)
Standard Deviation	6.91	0.09	0.34
Sample Variance	47.76	0.01	0.12
Kurtosis	66,564.25	11.71	405.61
Skewness	(257.06)	0.30	9.04
Range	1,797.64	2.48	24.04
Minimum	(1,790.21)	(0.89)	(1.07)
Maximum	7.43	1.59	22.97
Sum	(2,320.06)	36.96	590.65
Count	67,649	67,649	67,649
Largest (339)	0.05818	0.31124	5.70
Smallest (339)	(0.16225)	(0.31321)	(0.96)
Confidence Level (95.0%)	0.05208	0.00064	0.00

Table 2: Summary Statistics

2 Part 2: short-run response

(3)

Figure 1: Mean Market-Adjusted Return as a Response to Earnings Surprise

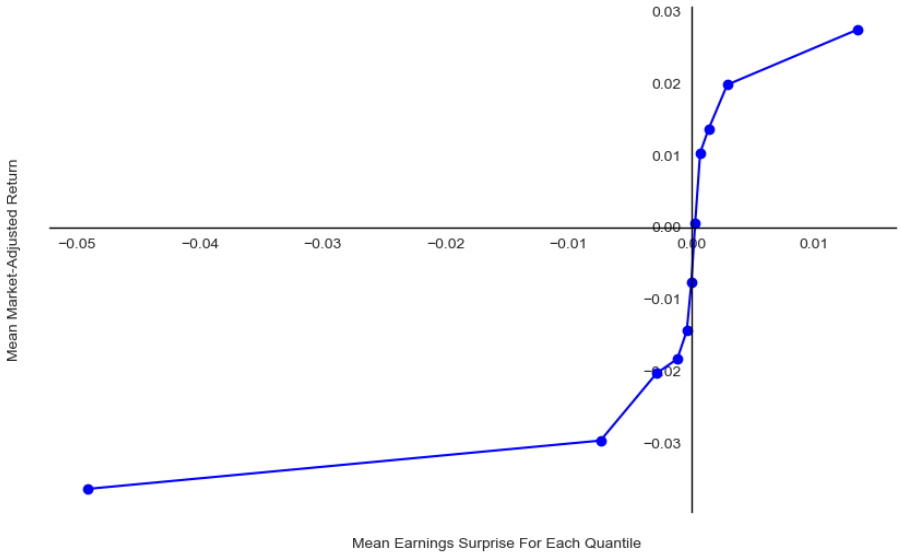
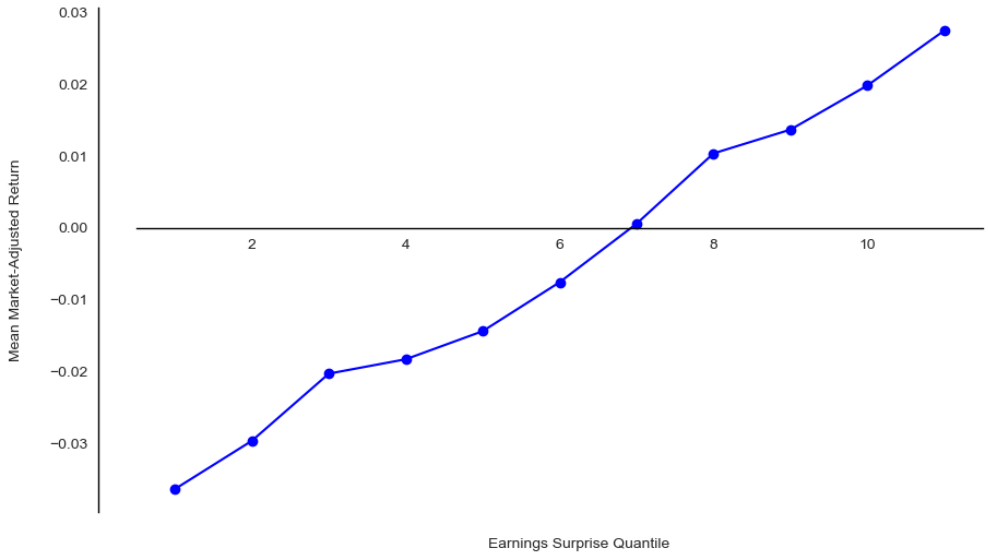


Figure 2: Response To Earnings Surprise From 0 To 1

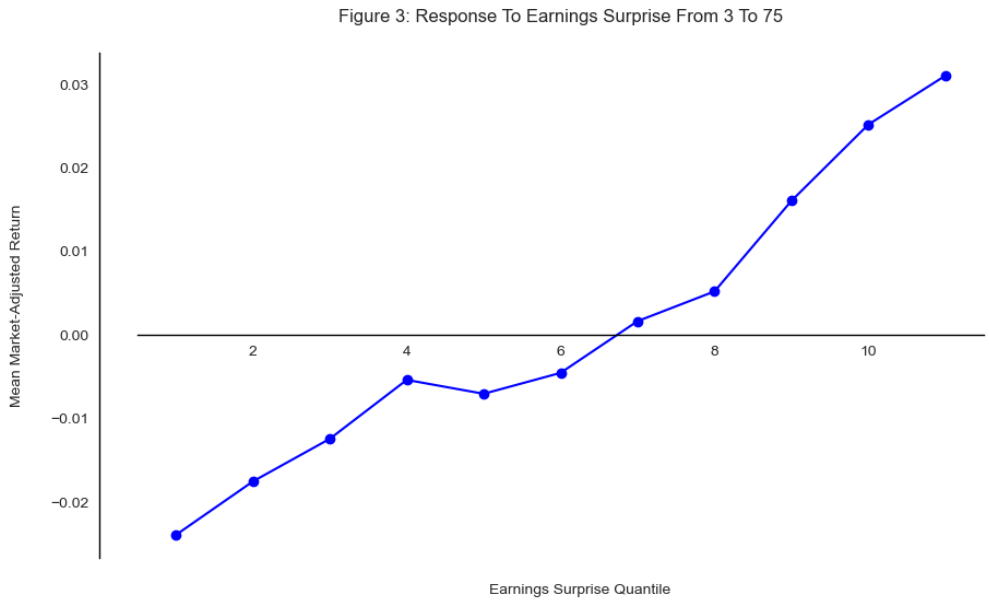


(4)

(5)

3 Part 3: Post-earnings announcement drift

(6)



(7) The efficient market hypothesis (EMH) says that stock prices should immediately reflect all known information. This means that all responses to unexpected earnings should happen right now, and there shouldn't be a pattern in returns afterward. After the earnings report, we wouldn't expect any systematic post-announcement shift in the [3,75] window, no matter how big the earnings surprise was. However, the plot shows that earnings surprise quantiles (`sw_quantiles`) and post-announcement drift (`netwin2w`) are related. Higher surprises in earnings are related to higher average returns in the [3,75] window. It seems that the market doesn't fully get information from earnings reports immediately, so prices change slowly. This result goes against the efficient market theory, showing that markets may take a while to fully get information about earnings.

(8)

4 Part 4: Inattention and distractions

(9)

5 Part 5: Open-ended

(10)

(11)

6 Appendix

Figure 4a: Response To Earnings Surprise From 0 To 1

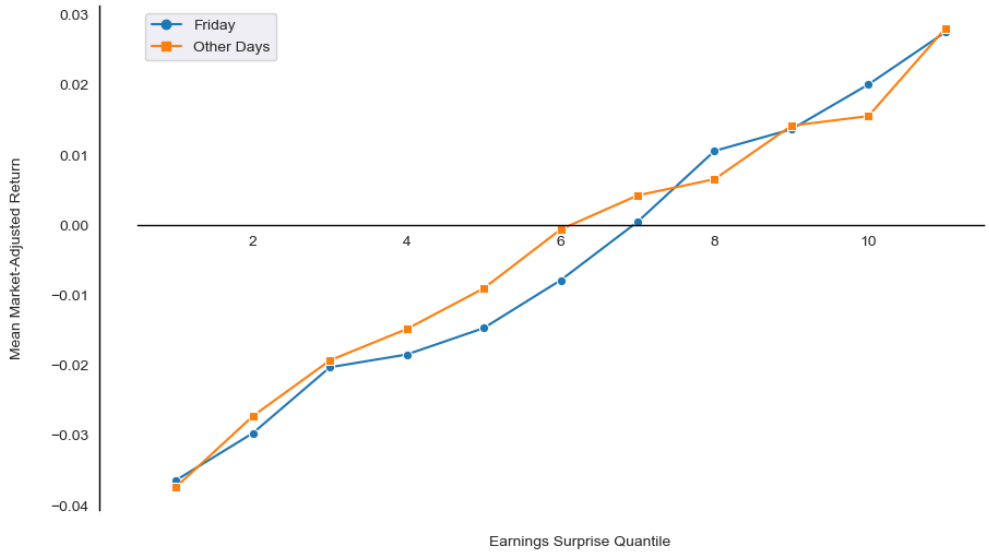


Figure 4b: Response To Earnings Surprise From 3 To 75

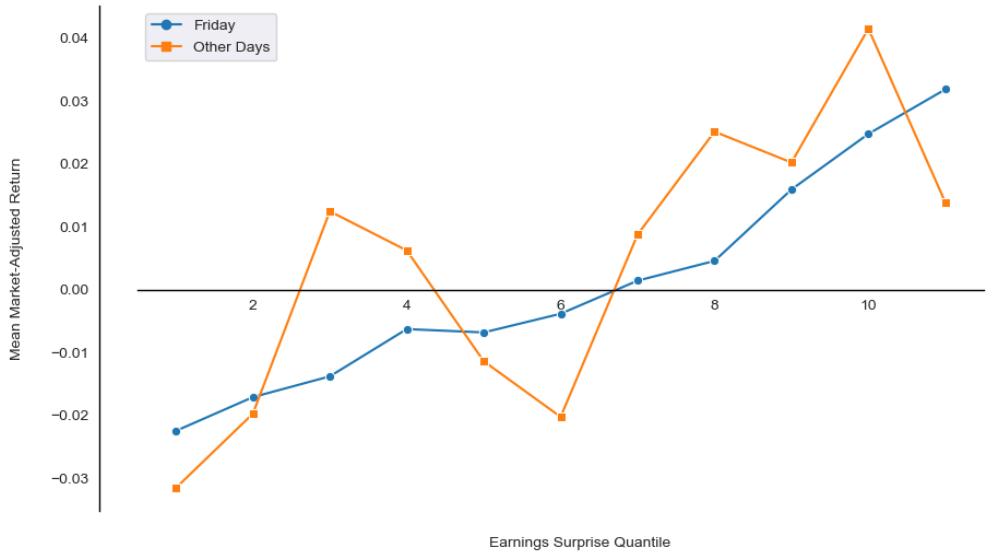


Figure 4c: Mean Market-Adjusted Return as a Response to Earnings Surprise From 0 to 1

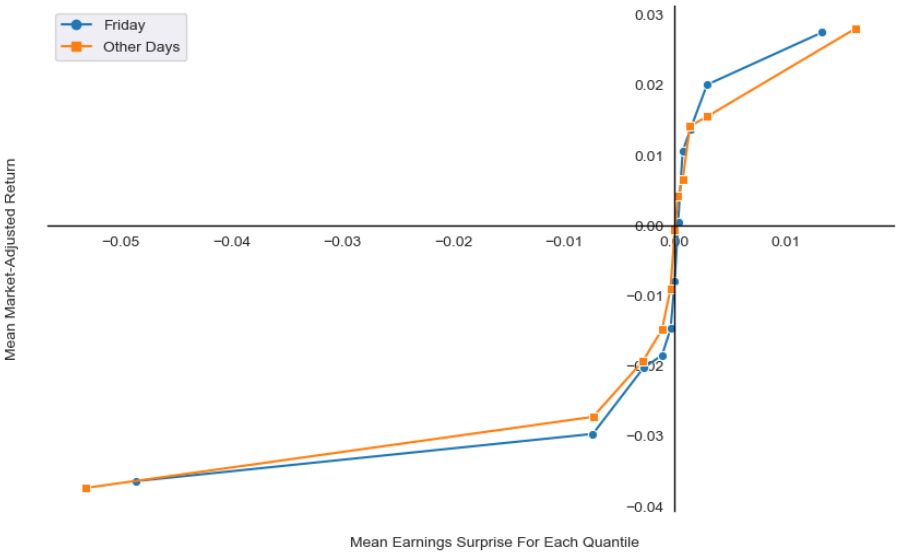


Figure 4d: Mean Market-Adjusted Return as a Response to Earnings Surprise From 3 to 75