THE RELATIONSHIP BETWEEN THE MAGNITUDE OF SINGLE-DAY STOCK PRICE DECLINES AND SUBSEQUENT ABNORMAL RETURNS

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The Beginning

Background

Contrarian Investing

Investor Overreaction Hypothesis

“Buying the Dip”

What IS Abnormal Return?

Actual Return − Predicted Return = Abnormal Return

Methodology

1. Define Date Range
2. Gather Sample
3. Calculate Predicted Returns
4. Calculate CAR
5. Perform Regression Analysis

Methodology: Data Sample (Cont.)

	Total Events	Events Excluding Beginning Share prices <$10	Adjustment for Unavailable Betas
July 2017	72	38	36
August 2017	116	69	57
September 2017	35	21	19
October 2017	54	33	28
November 2017	133	72	61
December 2017	44	17	15
January 2018	57	30	25
February 2018	117	73	63
March 2018	81	38	35
April 2018	60	37	31
May 2018	119	68	58
June 2018	72	25	16
Totals:	960	521	444

Methodology: Calculating Predicted Returns

Capital Asset Pricing Model:

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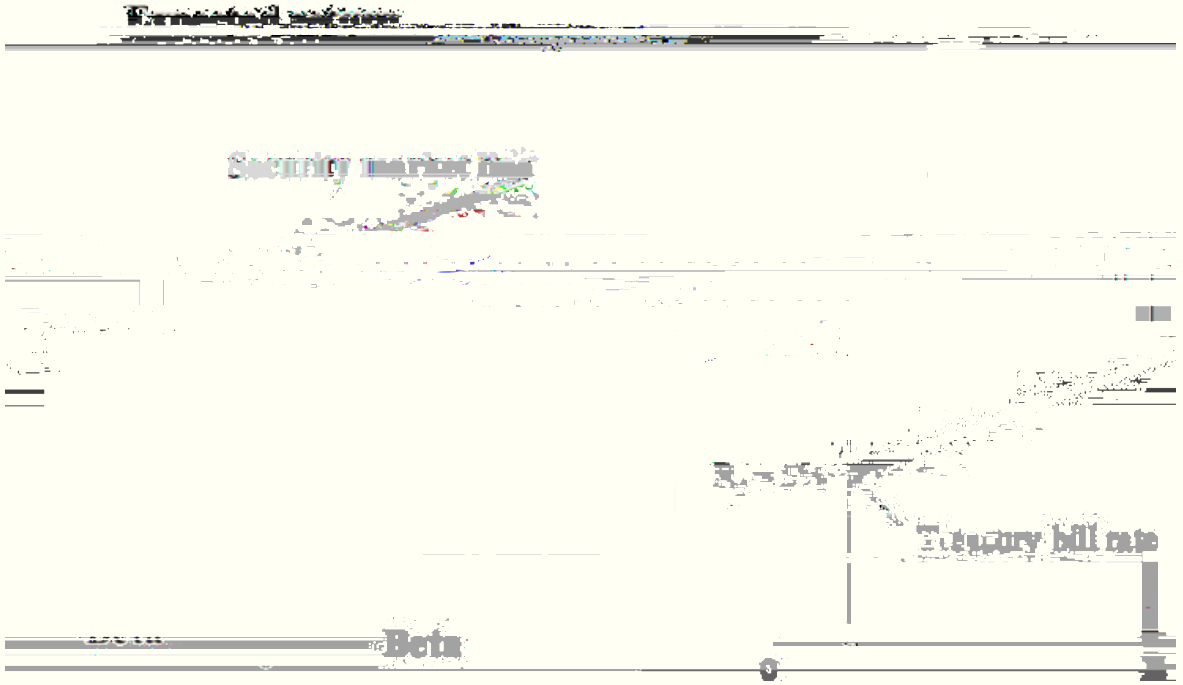
= Expected Return on stock *"j"* over time *"t"*

= Risk-free rate of return over time *"t"*

= Beta of stock *"j"*

= Return of the market over time *"t"*



Methodology: Calculating Cumulative Abnormal Returns

1. Calculated the Abnormal Return for each trading day up to six months subsequent to each event in sample
2. Summed up daily abnormal returns for each time period observed:
    - 10 Trading Days
    - 1 Month
    - 3 Months
    - 6 Months

Methodology: Regression Model

Regression Model:

Ran model four times—once for

( )

= Cumulative Abnormal Return

= Magnitude of initial single-day stock price decline

= Error term

Results

.056	month)***	0.1	0
		(0.1	
0.73	onth)****	0.14	(
		(0.193432)	
0.31	onth****	0.08	(
		(0.259122)	
	N = 444		

Results (Cont.)

Time Period	CAR	t-Value
10-day	-0.157	-0.93
	(0.167867)	
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
0.[illegible]	-0.2883	[illegible]
(0.47[illegible]735)		
		N = 167

Discussion

Statistical significance not achieved

- We cannot recommend that investors design their strategies utilizing the magnitude of single-day stock price declines as a dominant factor

Economically speaking, the results provide insight into potential further research and possible investor considerations.

- Coefficients were only negative (in-line with expectations) for the 10-day and 1-month time periods for the initial set of regressions
- Coefficients for 6-month timeframe switched from positive to negative with second set of regressions

Further Research

Further research is warranted to examine further both short-term and long-term relationships between the magnitude of initial decline and subsequent abnormal return

- 10-trading day time frame exhibited the highest T-Values
- Coefficient for the 6-month time frame switched to negative when only events with initial price declines of greater than 15 percent were included
  - Higher Threshold for “large price declines”
  - Larger sample size

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