# Georgialnstitute of Technology



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# Computational Investing, Part I

121: Digging Into the Data (\$5 studies, Survivor Bias)

Find out how modern electronic markets work, why stock prices change in the ways they do, and how computation can help our understanding of them. Learn to build algorithms and visualizations to inform investing practice.

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#### **Module Objectives**

- Understand how to read an event study
- Review "correct" answers for \$5 events
- Understand problems with survivor biased data
- Understand Actual versus Adjusted historical price data
- Understand some methods of data sanity checking and scrubbing

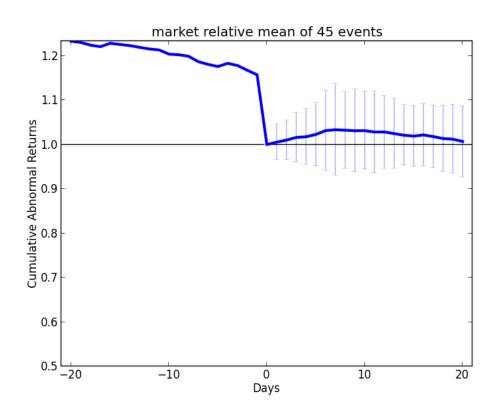


#### **Example Event**

- Based on Bollinger Bands (haven't covered yet)
- Price drops below -1.5 standard deviations of recent daily values
- SPY (S&P 500) is above 0.25

(thanks to Sourabh Bajaj)

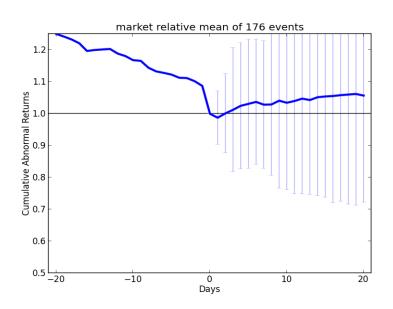
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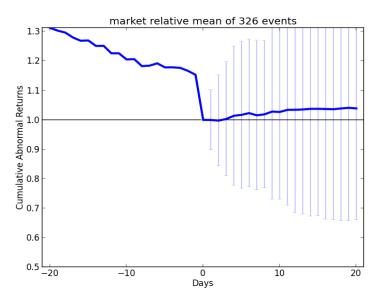
- How do we "read" this?
- How might we "trade" this?



## \$5 Events: Correct Answers. Why Diff?



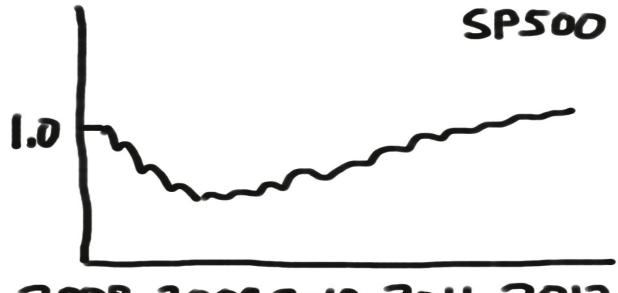
2012 Symbols (thanks to Sourabh Bajaj)



2008 Symbols



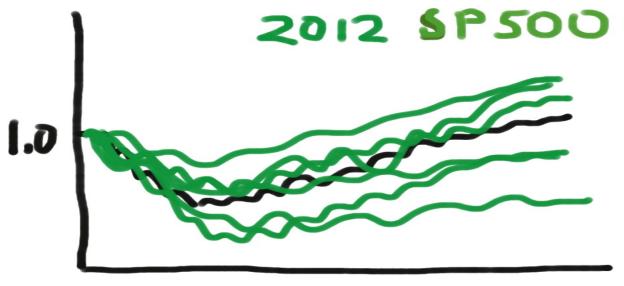
#### **Survivor Bias**



2008 2009 2010 2011 2012



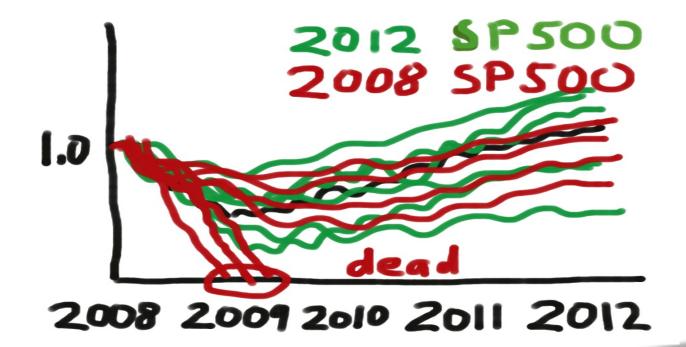
#### **Survivor Bias**



2008 2009 2010 2011 2012



#### **Survivor Bias**





#### What Can We Do?



### **Next: Actual versus adjusted prices**