

The background of the slide is a collage of various newspaper clippings. Visible headlines include "70 Years of Independence", "WALL STREET JOURNAL", "War Statues", "Apple Pushes", "What's News", "Kenya's G", "Barcelona Remen", and "The Wall Street Journal". There are also images of people, including a group of men in a meeting and a person in a uniform.

Quantitative Trading Project

A Quantitative Approach to Trading the News

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Outline

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Strategy Overview

Outline of our strategy design and dependencies (ie. data, time horizon, investment sizing, leverage, risk controls)

2

Academic Research

Overview of the academic research we reference to develop our strategy

3

Model Implementation

Overview of how the strategy will be implemented and the model refined

4

Future Analysis

Next steps for our future analysis of performance and risk metrics. Also, will optimize model hyperparameters

Strategy Overview

- Investor psychology creates a “disposition effect”: a pattern of holding losing positions and selling winning ones too early
- This creates an underreaction to news effect where prices take longer to drift towards their fundamental value
- We intend to capitalize on this slow drift by quantifying predictable conditions, taking long positions in equities we expect to have positive abnormal drift and short positions in equities we expect to have negative abnormal drift
- We will focus on earnings announcements in large US Equities, using quantiles to choose long/short positions

Academic Research

- Our thesis is based on the Underreaction to News paper by Andrea Frazzini
- Frazzini found that there is significant predictable extended drift higher in equities where most investors are holding profitable positions and good news comes, and predictable drift lower where most investors are underwater and bad news comes out
- Frazzini theorized that this pattern was primarily due to disposition effects in investors

Model Implementation

- We will attempt to predict drift towards fundamental value based off of momentum factors, earnings surprise numbers, and financial ratios
- We are pooling earnings into bins categorized by expected earnings announcement, then normalizing the announcements using a z-score method
- We intend to simulate taking a position on the day of announcement using a set portion of our capital per symbol
- We will assume that we enter at the VWAP for the trading day
- We will hold for N-days, then exiting at VWAP

Future Analysis

- We will gather several fundamental and technical indicators together, choosing indicators based on their ability to predict this drift
- We will measure risk of the portfolio by analyzing Profit and Loss distributions, examining correlations to Fama-French factors and the CBOE volatility index VIX

References

- Frazzini, A. (2006). *The disposition effect and underreaction to news*. *Journal of Finance*, 61(4), 2017–2046.
<https://doi.org/10.1111/j.1540-6261.2006.00896.x>