Random Walk's email intelligence captures interactions between brands and consumers to help investors identify demand inflections. Our data driven research provides the most accurate and rigorous view on promotional trends. Random Walk's technology has helped leading investment funds uncover changes in discounting and new customer growth for over a decade.

ABOUT PROMOTIONAL ENSEMBLE

COVERAGE

Companies	Over 300 consumer brands mapped to 225 tickers
Top Industries (# of tickers)	Retail – 73 Internet – 46 Apparel – 19 Software – 13 Leisure Time– 9 Comm Services - 8 Home Furnishings - 6

DATA DETAILS

Source Data	panel of 1M consumer inboxes via direct data partnerships
Data Format	index values per brand for each data category
Ticker Mapping	point-in-time
Delivery Time	Thursdays @ 8am EST
Frequency	weekly
Delivery Method	FTP, email

TRIALS

Historical Data	since January 2017

ABOUT RANDOM WALK

Random Walk is a data driven research firm providing unique insights into how public brands interact with their customers and leads. Random Walk's proprietary email intelligence provides the most accurate and quantifiable view of promotional trends in the industry. Each week millions of emails are classified and categorized.

Since 2011, our insights have uncovered some of the largest inflections in demand ahead of the street and before operating results are announced.

CONTACT

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ECONOMIC INTUITION

When demand for products and services wanes, brands throttle up their email promotional campaigns. Our system accurately captures and quantifies increased activity to customers such as more frequent sales, free shipping, higher incentives, and more. Conversely, when organic demand is high brands reduce their promotional activity.

While investors attempt to "clip coupons" to anecdotally capture trends, this fails to provide a full picture. Email campaigns are highly segmented, targeted by gender, demographic, buying frequency, open rates, acquisition date, and more. Only the Random Walk system captures volume sent to every possible cohort by accessing inbox data for over 1 million consumers. Our technology processes this engagement to provide the most robust, accurate, and quantifiable measure of promotional activity in the industry.

THE DATA

Our technology uses natural language processing and machine learning to categorize and classify millions of emails every week based on promotional and discounting intensity. Our repository dates to 2017 and comprises more than 8 million different types of promotional emails. Our classification engines have created the following promotional data series and deliver them as normalized indexes:

- **Promotional Volume:** Total volume of emails sent that contain any type of promotional language. E.g., "check out our new spring apparel", "10% off".
- **Discount Volume:** Total volume of emails sent that imply a reduction in price or discount. E.g., "10% off", "BOGO".
- **Steep Discount Volume:** Total volume of emails sent that imply a reduction in price of 40% or more. E.g., "get $40 off $100", "BOGO".
- **Effective Discount:** The average percentage discount for all emails sent that imply a reduction in price or discount.

See our data dictionary for a complete list of available fields.

CASE STUDY METHODOLOGY

In this case study, our goal is to understand if the promotional data collected during a company's fiscal quarter predicts how its stock will move during the subsequent earnings announcement. We take the following steps to conduct this analysis:

1. The promotional data is available at a brand level. We assign each brand to its point-in-time ticker and aggregate the data from a brand level to a ticker level. The resulting sample contains 200 publicly traded firms.
2. For each promotional index, we compute 1, 2, and 3 month rolling averages as well as quarter-over-quarter and year-over-year relative changes for each time series. We additionally introduce a covariate in the study using a time series of normalized web traffic for each brand in our analysis.
3. We construct a list of 6 questions that capture the economic intuition behind why companies use promotional campaigns. E.g., when a company sends a discount, are they discounting more or less than usual? Each question is assigned to the signal constructed in step 2 that best answers it.
4. We construct an aggregate signal, the "Random Walk Earnings Signal" by taking a simple average of the index values we identified in the previous step. By construction high/low signal values provide a buy/short opportunity.

RESULTS

Below we provide summary metrics for trading earnings events using the top quarter of all positive and negative signals created using the Random Walk Earnings Signal. Results are between 2017-2021 for trades initiated the day before earnings and exited at the close on the earnings date.

	Trade Count	Avg. Return	Hit Rate	Avg. W / Avg. L	Profit Factor
All Trades	690	1.17%	53.6%	1.12	1.30
Long Trades	346	1.29%	52.6%	1.21	1.34
Short Trades	344	1.06%	54.7%	1.05	1.26

PORTFOLIO PERFORMANCE

In a portfolio setting based on trading capital of $50M between 2017-2021 and trading the top quarter of all positive and negative Random Walking Earnings Signals, performance is as follows for entering a trade on the day before the earnings event and exiting on the earnings event date. In practice, the signal would be available shortly after the end of the fiscal quarter and an investor would have a few weeks between the end of the quarter and the earnings announcement date to build this position.

Cumulative portfolio growth from 2017-2021
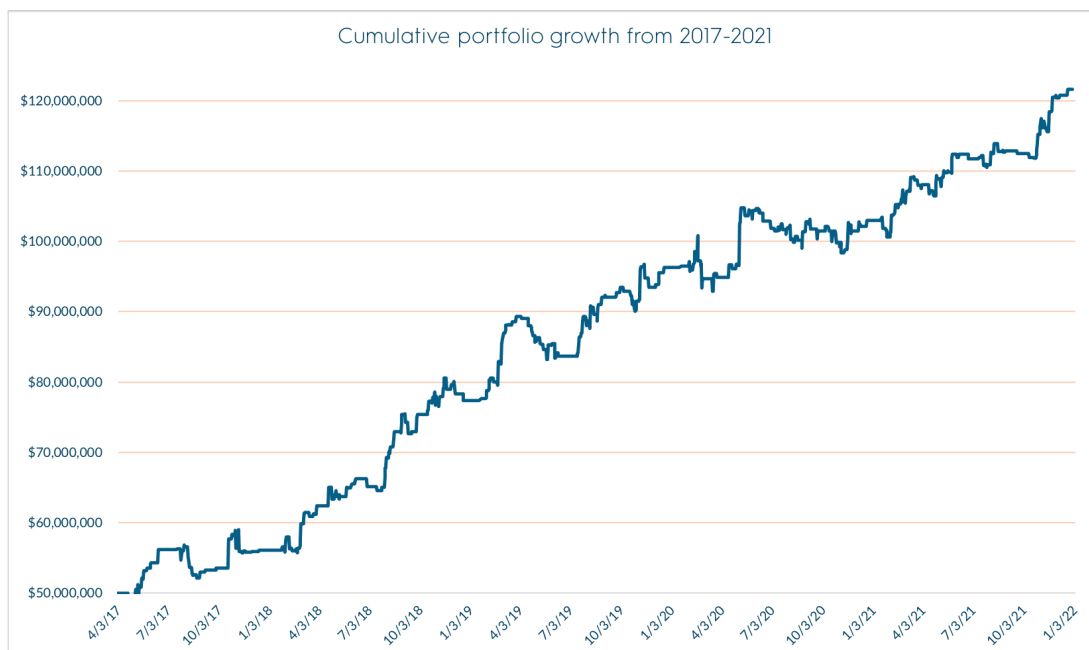
Annual Return	30.2%
Sharpe Ratio	1.56
Max Drawdown	-8.3%
Correlation to SPY	0.03

The portfolio construction used in this analysis limits trade size based on the liquidity of the stock with a maximum position size of $10M per trade. It should be noted that earnings activity is cyclical. On the average day, an investor only needs $3.4M. Thus, the metrics we present are conservative. All returns above are beta-adjusted.

DISCUSSION

In this study we've illustrated a use case in which a company's promotional activity data can be used to successfully predict how that company's stock will move at its next earnings announcement. With strong standalone performance, this study demonstrates that the promotional data can be a valuable input into the decision making process of both discretionary and systematic investors who wish to adjust positions, confirm positions, or discover new trading opportunities heading into earnings events.

Discretionary investors may also wish to use this data to identify inflection points (both positive and negative) in consumer stocks for opportunistic strategies or use this data to identify downside risk for existing positions. Systematic investors may wish to derive ranks with monthly or weekly frequency based on these inputs to drive a long/short decile portfolio.

ABOUT THIS RESEARCH

This case study was prepared by Leapday (www.leapday.io), a firm specializing in quantitative research for financial markets. Leapday creates event-based signals for asset managers, traders, and hedge funds, and provides consulting services for alternative data providers.