S&P Global
Market Intelligence

Alpha Signals: Global Short Squeeze Model

A multifactor model designed to predict short squeeze events – a systematic way of identifying short squeezes before they occur.

Our global Short Squeeze Model systematically scores stocks based on their potential for a short squeeze event. Using our short loan transaction data, the model incorporates capital constraint indicators, which identify names where short sellers are more likely to cover their positions, and events that identify catalysts for short squeezes.

Identifying short squeeze events can be a challenge as they are often rare and hard to predict. Based on a hypothesis that squeezes are more likely to occur when short sellers experience capital constraints (actual or potential losses) coinciding with a catalyst event, the model helps to identify names at risk of a squeeze, improves the accuracy of short interest signals and provides deeper insight into the profit and loss of open short positions.

Leveraging securities finance transaction data from both lenders and borrowers (net of double counting), we capture approximately 3 million daily transactions to calculate capital constraints by determining profit and loss of the current short sale position, the quantity of shares on loan that are losing money and the average break-even price for all open short positions, based on the price at which the position was opened and the duration of the open position. These capital constraint metrics identify the appropriate conditions for a short squeeze.

The model also incorporates news sentiment events when identifying catalysts for short squeezes that could positively affect the price, such as upcoming earnings announcements, merger rumors, abnormal trading activity, analyst revisions and other positive news indicators.

Unique

Utilizes our proprietary underlying short loan transaction data along with our factor data and news events to measure short squeeze risk.

Predictive

The model identifies potential squeezes among the top names. Since its rollout, it has predicted well in excess of those isolated as least likely to squeeze.

Global

Coverage across Developed Europe and Developed Pacific universes (95% of cumulative market cap for each member country), and the US Total Cap universe (98% of cumulative market cap, or 3,000+ stocks).

Granularity

Includes a set of capital constraint indicators constructed from transaction level data to assist in identifying potential short squeezes including out-of-the-money percent, short position profit concentration, earnings announcement events and positive news events, with out-of-sample historical coverage dating back to January 2011.

Key Stats

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Short squeeze model sub-composite factors

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Capital constraint indicators

9
Years in-sample performance data

Customers

Asset managers

Banks

Hedge funds

Actionable insight and risk management

The model may be used as an overlay with other short sentiment strategies to identify positions at risk of a squeeze or for long-only managers to serve as a combination of signals to help better inform their investment analysis and risk processes.

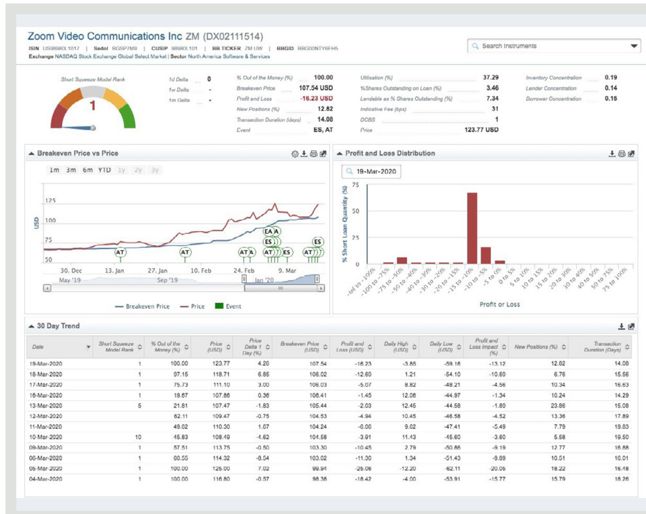
The following set of capital constraint indicators are constructed from transaction-level data to assist with identifying potential short squeezes:

- **Out-of-the-money Percent (OTM%)**
  The sum of shares for short positions that are experiencing losses based on their PnL divided by the total shorted quantity. Names with a high percent of short sellers out-of-the-money are expected to be at risk of a short squeeze.
- **Out-of-the-money Percent - 20-day maximum**
  The maximum OTM% over the prior 20 trading days. The 20-day maximum value removes the effect of short-term price movement and identifies the "worst case" scenario for short sellers**.**
- **Short Position Profit Concentration**
  The distribution of a stock's short loan position profit/loss based on a predefined set of bins.
- **Earnings announcement events**
  Short squeezes happen more frequently around earnings announcement dates. We use this as an indicator to increase the probability of a squeeze five weekdays prior to an earnings announcement and three weekdays following the announcement.
- **Positive news events**
  Using RavenPack news events we identify potential positive news events that can trigger a short squeeze. Event types include merger and acquisition, earnings, trading and other positive events, as described in the methodology section.
- **Abnormal trading volume**
  Cases where abnormal trading volume levels paired with positive price movement are indicative of a positive event known to market participants which can trigger a short squeeze.

A final score

The Short Squeeze Model incorporates capital constraint and event indicators to create a score from one to 100 to quantify the risk of a short squeeze event.

The Securities Finance web portal shows a short squeeze model score and a set of short sentiment metrics for a stock:



Date	Short Squeeze Model Rank	% Out of the Money (%)	Price (USD)	Price Delta 1 Day (%)	Breakeven Price (USD)	Profit and Loss (USD)	Daily High (USD)	Daily Low (USD)	Profit and Loss Impact (%)	New Positions (%)	Transaction Duration (Days)
19-Mar-2020	1	100.00	123.77	4.20	107.54	-16.23	-3.85	-59.16	-13.12	12.82	14.08
18-Mar-2020	1	97.15	118.71	6.85	106.02	-12.60	1.21	-54.10	-10.60	6.76	15.56
17-Mar-2020	1	75.73	111.10	3.00	106.03	-5.07	8.82	-48.21	-4.56	10.34	16.63
16-Mar-2020	1	19.67	107.86	0.36	106.41	-1.45	12.06	-44.97	-1.34	10.24	14.29
13-Mar-2020	5	21.81	107.47	-1.83	105.44	-2.03	12.45	-44.58	-1.80	23.86	15.08
12-Mar-2020		62.11	109.47	-0.75	104.53	-4.94	10.45	-46.58	-4.52	13.36	17.89
11-Mar-2020		49.02	110.30	1.07	104.24	-6.06	9.02	-47.41	-5.49	7.79	19.03
10-Mar-2020	10	45.83	108.49	-4.62	104.58	-3.91	11.43	-45.60	-3.60	5.58	19.50
09-Mar-2020	1	57.51	113.75	-0.50	103.30	-10.45	2.79	-50.86	-9.19	12.77	16.88
06-Mar-2020	1	60.55	114.32	-8.54	103.02	-11.30	1.34	-51.43	-9.89	10.51	16.01
05-Mar-2020	1	100.00	125.00	7.02	99.94	-25.06	-12.20	-62.11	-20.05	18.22	16.48
04-Mar-2020	1	100.00	116.80	-0.57	98.38	-18.42	-4.00	-53.91	-15.77	15.79	18.26

Distribution of short squeeze hit rates for the three coverage universes: