



Social Media Sentiments: Financial Industry Case

What behavioral responses to the peaks of media visibility are observed in the financial sector?

Sentiments in Social Media and Financial Markets

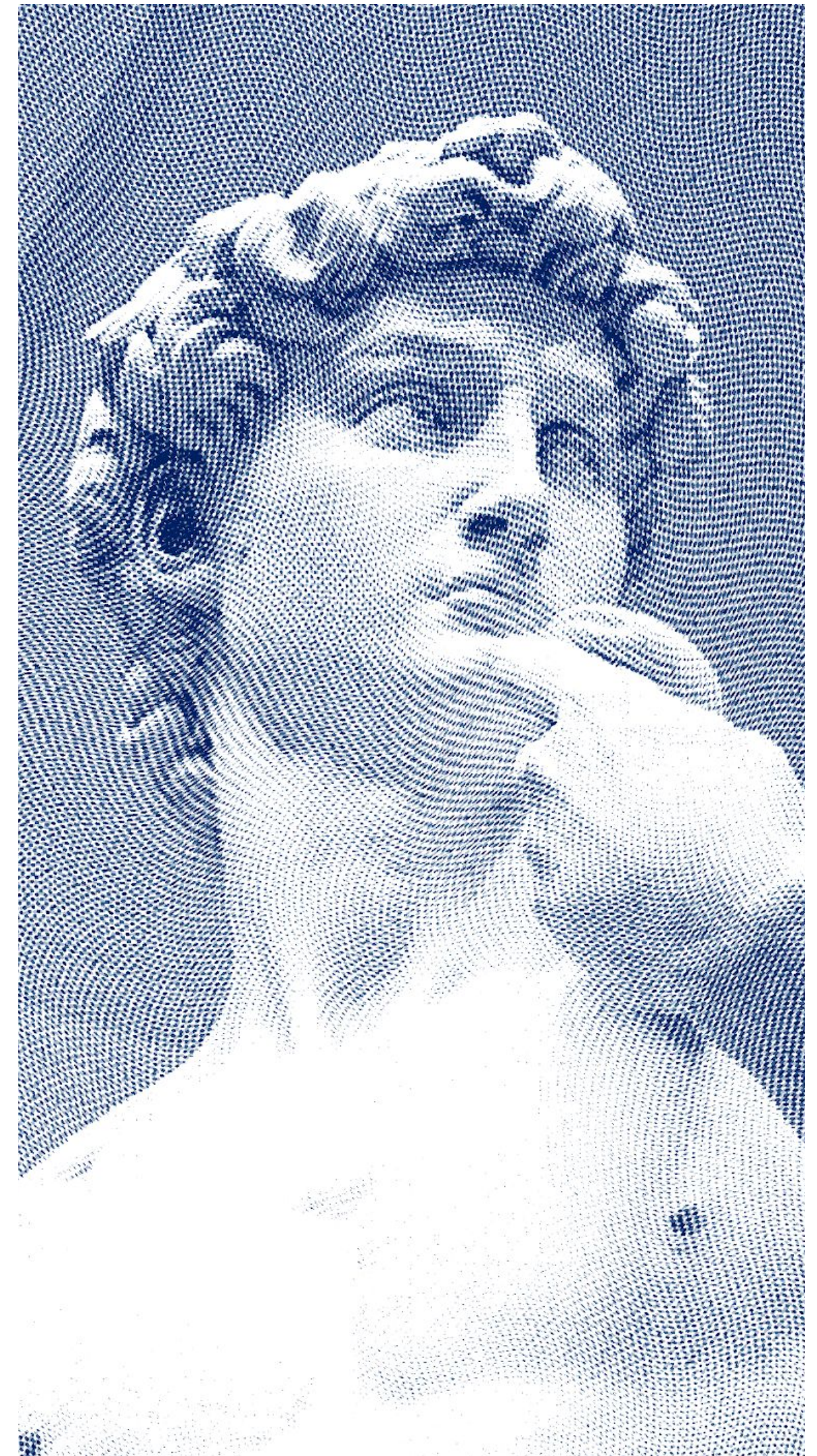
The relationship between media sentiment and financial market behavior is an actively researched area. A body of recent work confirms that news sentiment is a statistically significant, though weak, predictor of market volatility.

Specifically, studies employing GARCH models on 2024 data demonstrated a statistically significant negative relationship between negative news sentiment and market stability. Aggregated news sentiment has also shown predictive power for short-term fluctuations in market returns, particularly during periods of economic or political uncertainty.

Defining Our Approach

- Observed effects of peaks of mentions on stock prices may stem from underlying events
- Focus on the structure of the expressive content within the peak instead of aggregate news flow

Sentiments shape
expectations - market
behavior is anticipatory
rather than reactive



Primary hypotheses

H1**Sector Sensitivity**

Brokerage platforms exhibit significantly stronger search responses to mention peaks than banks and neobanks, owing to shorter investment decision horizons and heightened risk sensitivity

H2**Funnel Effect**

For high-risk financial products, mention peaks first trigger a surge in informational search (curiosity), which then converts into transactional activity with a one-to-two-month lag

H3**Sentiment Conflict**

Maximum behavioral activation (search then purchase) occurs not under clearly positive or negative sentiment, but under a strongly mixed expression balance

H4**Negative Peaks Classification**

There are 2 types of distinctly different negative peaks: a formal one that is difficult to reverse and moderately formal one rooted in user dissatisfaction or low-credibility signals

H5**Capital Movement**

In the financial industry, mention peaks are weakly associated with immediate stock volatility, except in cases of Moderate imbalance (both positive and negative), which may result from companies' attempts to mask prior-month negativity





Data Sample

31 peaks of mentions across 12 companies are sufficient to identify pronounced behavioral patterns and formulate well-grounded hypotheses. However, it is important to pinpoint that such results do not imply claims of statistical significance for all observed relationships.

Findings should be treated as exploratory conclusions subject to verification on a larger sample.

Data sample distribution:

Category	Sectors	# of firms
Finance	Traditional banks	4
Finance	Brokers	4
Finance	Neobanks and other non-traditional financial services	4

Traditional banks

Wells Fargo · Citi Bank
HSBC · Barclays

Brokers

Robinhood · IBKR
Webull · Coinbase

Neobanks and other

Axos Financial · SoFi
Nubank · PayPal

31

Peaks of mentions observed

24

Months of data covered
from Jan 1, 2024 to Dec 31, 2025

3

Sectors of financial industry

t-2 to t+6

Window of observation
(2 months before the peak to 6 months after)

Research Design

Normalization of social media mentions into peaks

Peaks of mentions were pre-determined as values above 1 standard deviation from the mean of the brand's average monthly mentions volume. Since around 68% of the data usually lies within the baseline values of +1 standard deviation, the values outside this baseline were considered abnormal peaks.

Segmentation of search queries

We divided search queries into transactional and informational ones, where the first type was equivalent to users' transaction-driven behavior (e.g., "buy", "download", "invest", "open account", "apply for card"), while the informational segment consisted of all the other queries reflecting curiosity about services or news-seeking behavior.

Equity data configuration

Stock price changes were measured as a percentage change between monthly closing prices for all the t's except t0 where the percentage change between the peak month's opening price and the closing price was calculated. Post-earnings-report period was analyzed separately to isolate media-driven effects.

Further original segmentation:

Intensity of Expression (Vol. 1)

Balance of Expression (Vol. 3)

IoE: 6 levels (from Non-Expressive to Extreme) - volume of expressive mentions relative to the company's total mentions volume in the peak

BoE: 5 levels – the absolute value of the difference between the share of positive and negative mentions within the expressive share, excluding neutral content

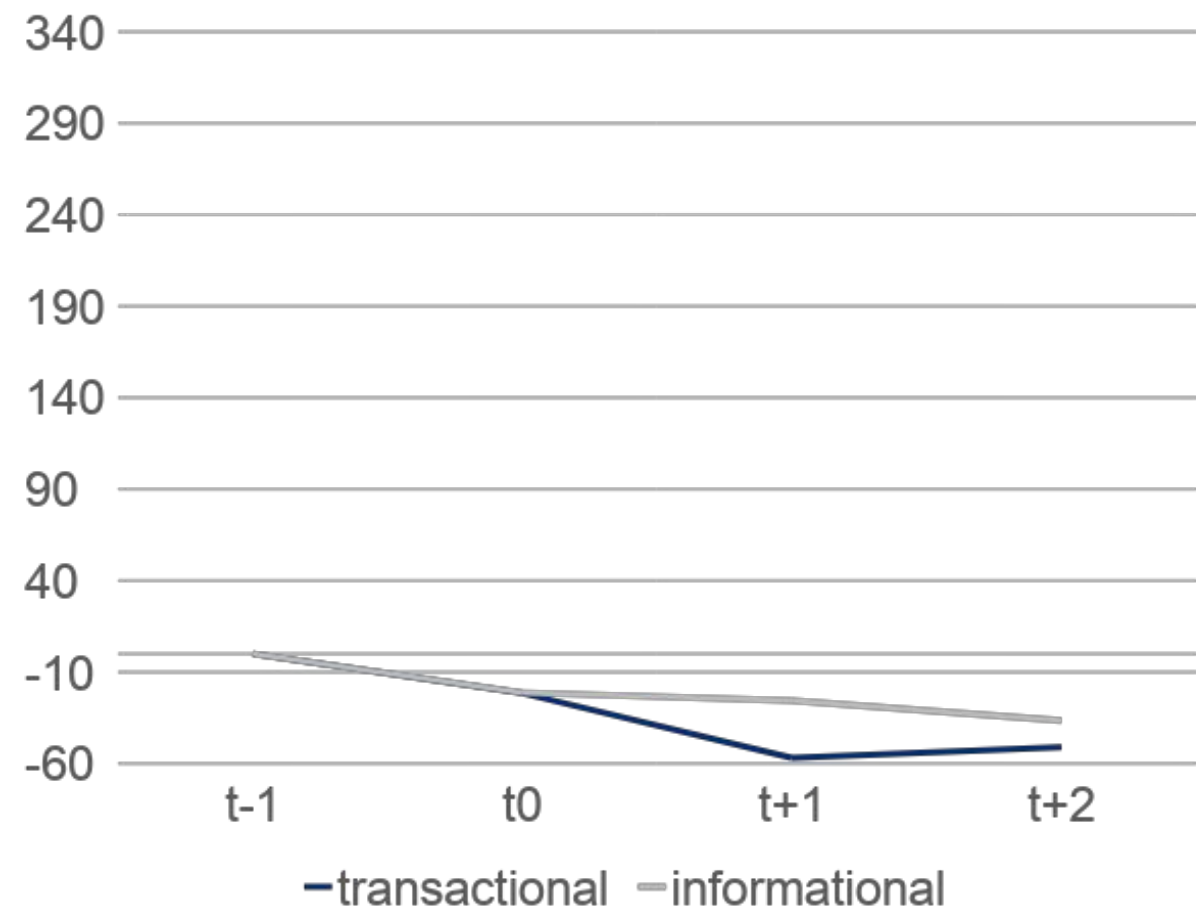
Key Finding 1: Sector Sensitivity

Brokerage firms were observed to be the most sensitive to peaks of mentions category out of the entirety of the financial industry representatives.

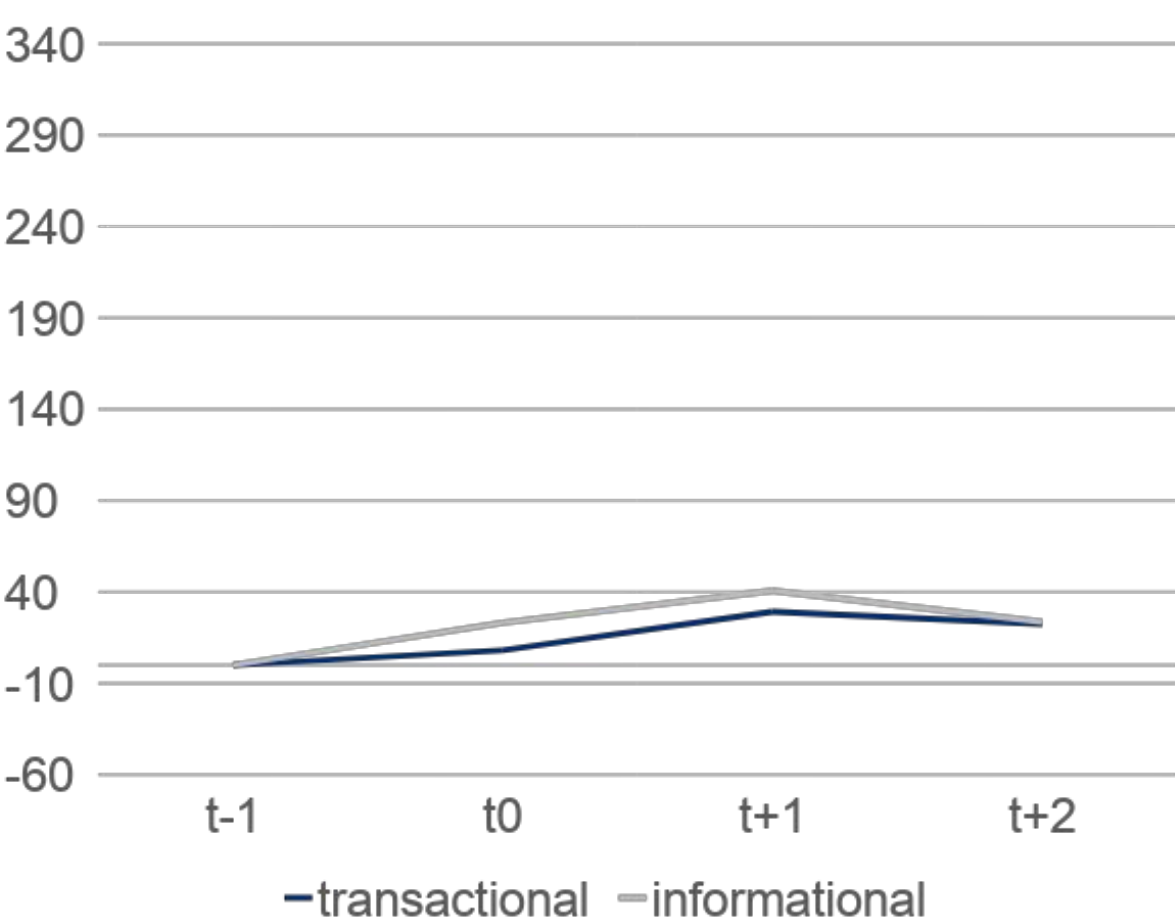
The absolute change in search activity (transactional and informational) among brokerage platforms was **4 to 9 times higher** than among banks and neobanks. Even weak in intensity peaks produced a sustained search increase of approximately +40% above baseline for brokerages.

This finding is consistent with earlier stages of our research, where significant periodic purchases with high prices and substantial financial risk demonstrated the highest conversion of media peaks into search activity. **Brokerage financial services represent a classic example of such a high-risk category.**

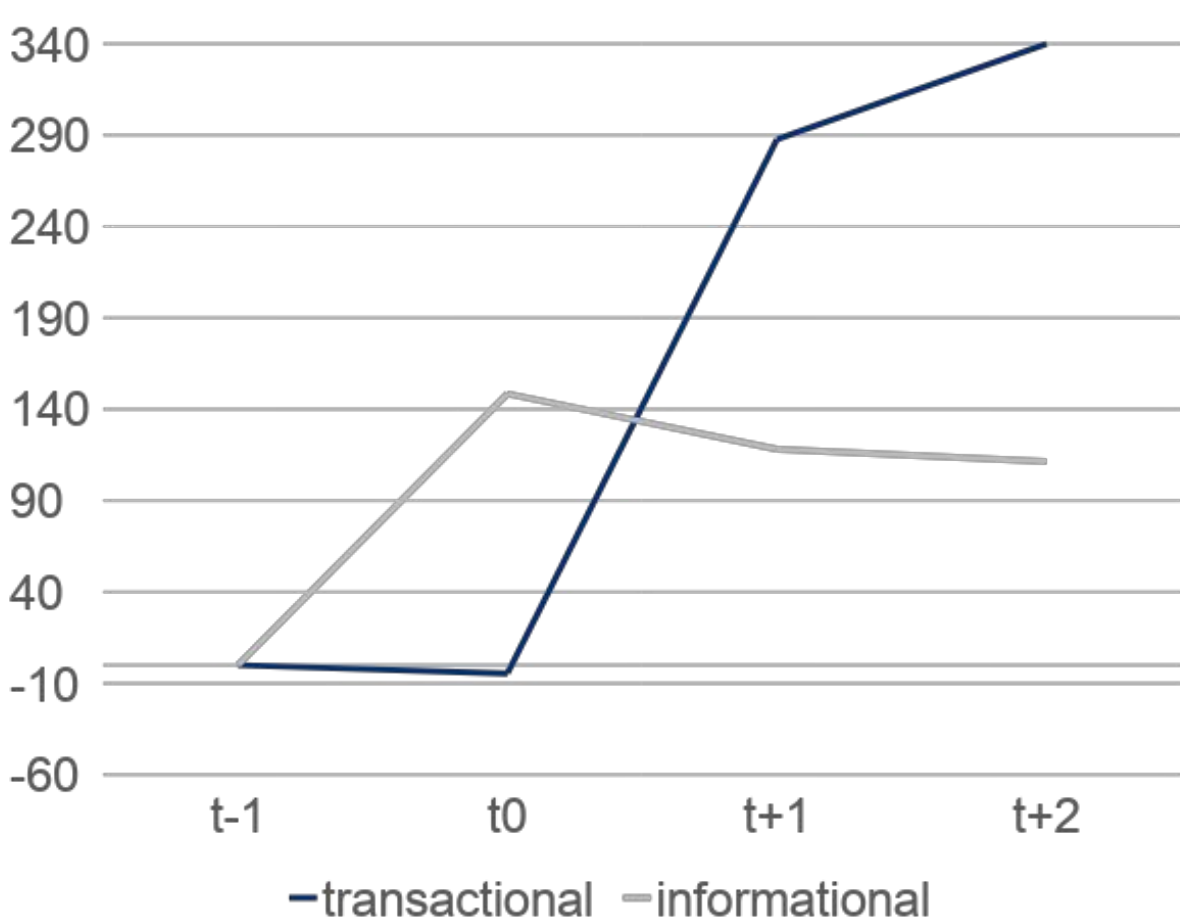
Minimal intensity of expression: transactional and informational monthly search change relative to the month before the peak (%)



Weak intensity of expression: transactional and informational monthly search change relative to the month before the peak (%)



Moderate intensity of expression: transactional and informational monthly search change relative to the month before the peak (%)



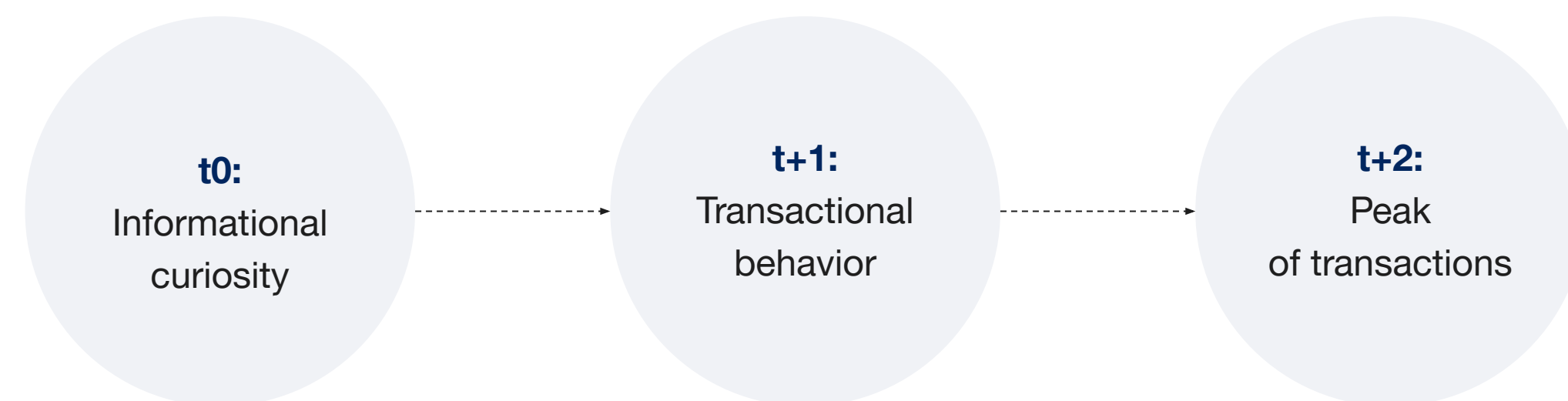
Key Finding 2: Funnel Effect

The Curiosity-to-Action funnel operates only at Moderate Expression Intensity. No such systematic funnel was observed at low, minimal, high or extreme expression intensity levels. High and extreme intensities typically produce unpredictable or absent responses

Moderate expressiveness (sufficient to capture attention but not so high as to trigger distrust) creates an optimal balance between emotional engagement and rational evaluation. Unlike extreme expressions, moderate level is not perceived as a signal of deviation connotated with manipulation or panic.

A similar effect was observed in our earlier research on non-financial product categories, suggesting its universality.

Applicable to only
Moderate Intensity of Expression



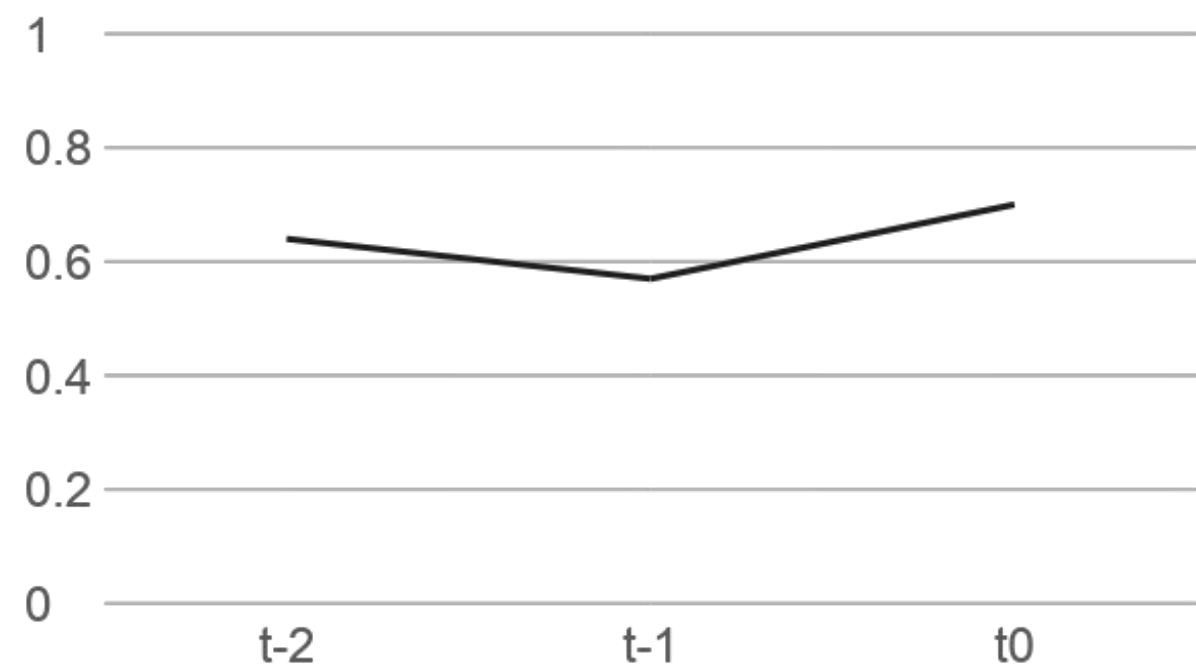
Key Finding 3: Sentiment Conflict

The analysis of dynamics reveals a characteristic “*layered cake*” pattern: positive sentiment, apparently initiated by the company itself, is layered onto negativity from the preceding period. When either sentiment dominates (even positive), the search response is significantly weaker.

In the observed cases of IBKR, Webull and PayPal, the share of negativity among expressive mentions declined in the month preceding the peak. However, at the time of the peak, the share of negativity rebounded effectively making negativity more conspicuous against the positive backdrop. **The attempt to 'mask' negativity does not reduce but amplifies audience attention.**

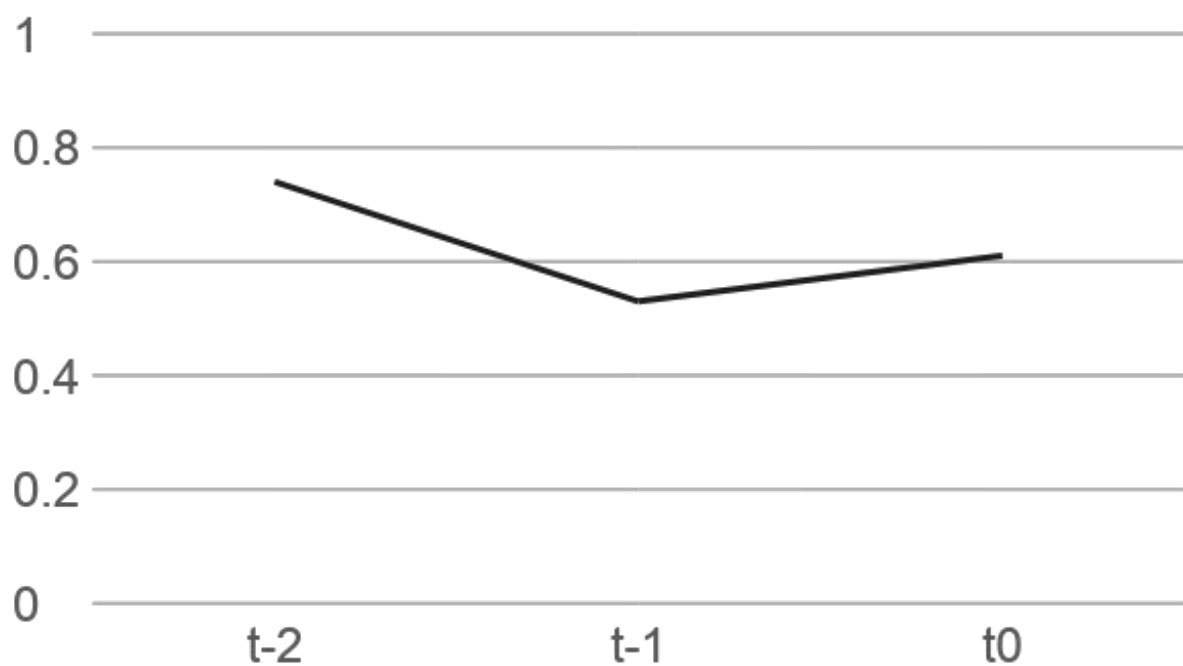
The highest search activation (Z-score up to 1.47) was recorded in the Strongly Mixed balance of expression segment where positive and negative mentions are nearly equal, rather than when one side clearly prevails. This suggests that for financial services, ambiguity is perceived not as noise, but **as a signal prompting independent investigation.**

IBKR:
Share of negative mentions among expressive mentions from t-2 (2 months before) until the peak months:



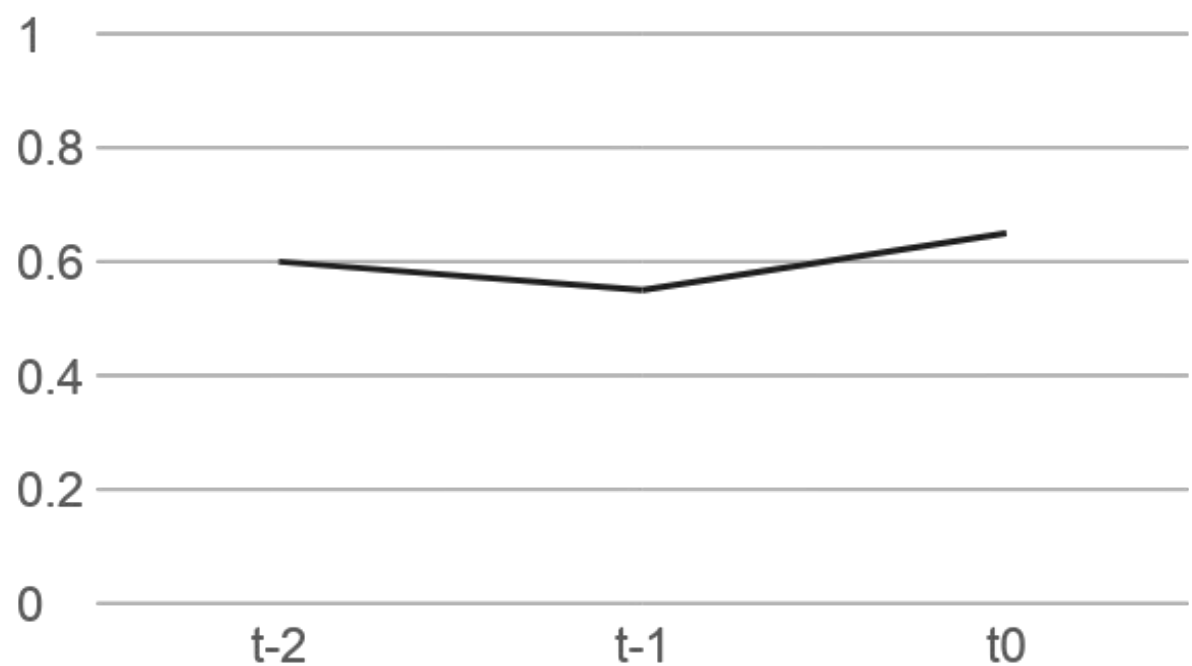
t-1: -7 p.p. neg.
t0: +13 p.p. neg.

WeBull:
Share of negative mentions among expressive mentions from t-2 (2 months before) until the peak months:



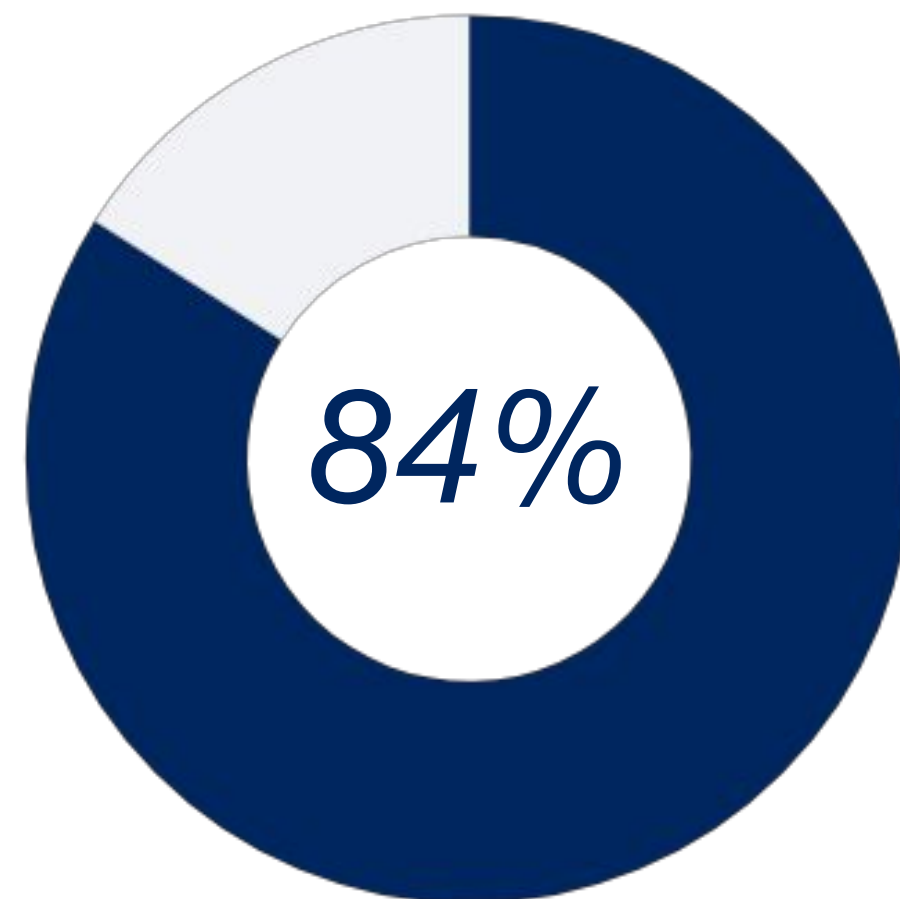
t-1: -20 p.p. neg.
t0: +8 p.p. neg.

PayPal:
Share of negative mentions among expressive mentions from t-2 (2 months before) until the peak months:



t-1: -5 p.p. neg.
t0: +10 p.p. neg.

84% out of 31 peaks exhibited a negative imbalance of mentions



Key Finding 4: Negative Peaks Classification

Formal

Strong and Very Strong Imbalance

Triggered by formal events: lawsuits, data breaches, layoffs, regulatory actions.

Defining characteristic: the share of negativity in total mention volume is minimal at the peak itself, owing to dilution by neutral content. Reversing such dynamics is extremely difficult; further 'dilution' via neutral content is the more effective strategy.

Informal

Moderate Imbalance

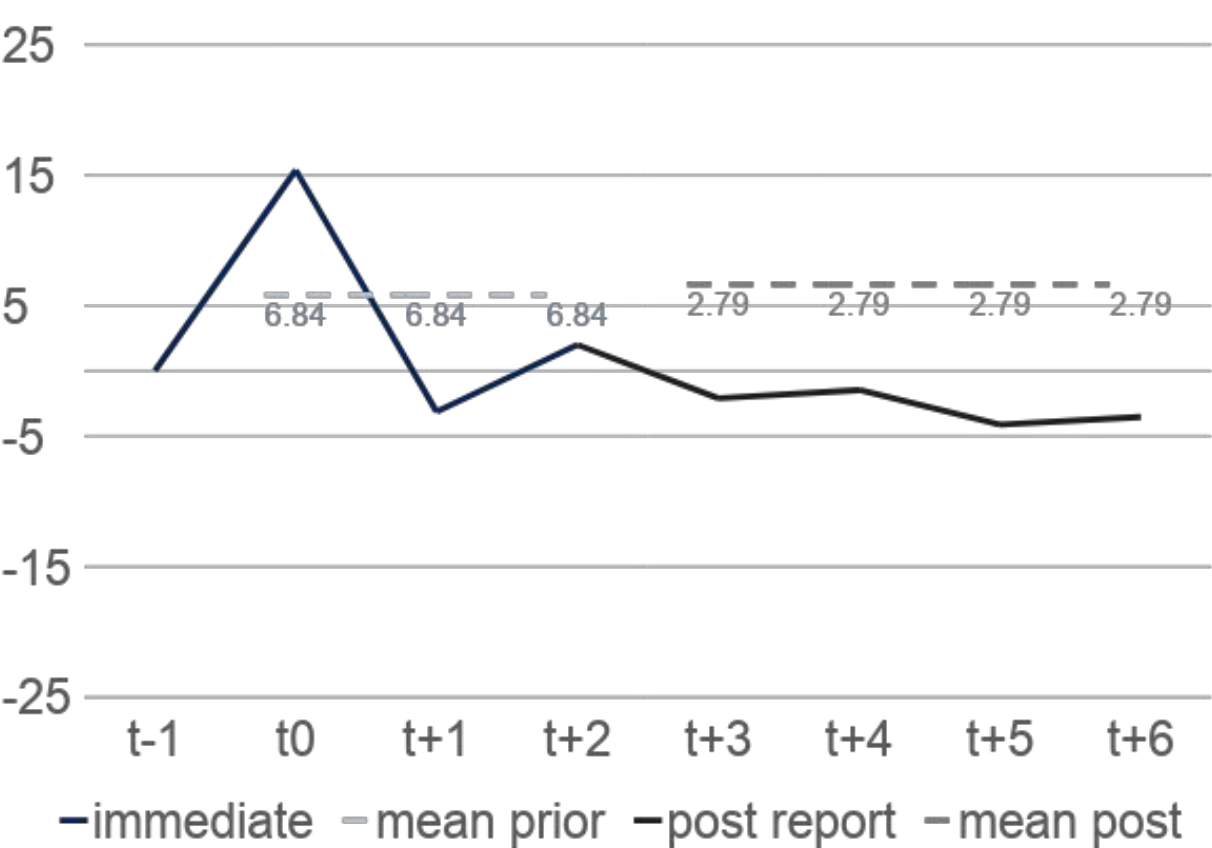
Arise from user dissatisfaction or low-credibility accusations. Trajectory: decline in negativity share in the month prior (driven by rising positive content), followed by a resurgence at the peak.

Attempting to 'outweigh' negativity with positive content proves ineffective as negativity returns and becomes more conspicuous.

***Recommended counter-strategy differs by type:
dilute with neutral content (Formal) vs. directly address grievances (Informal)***

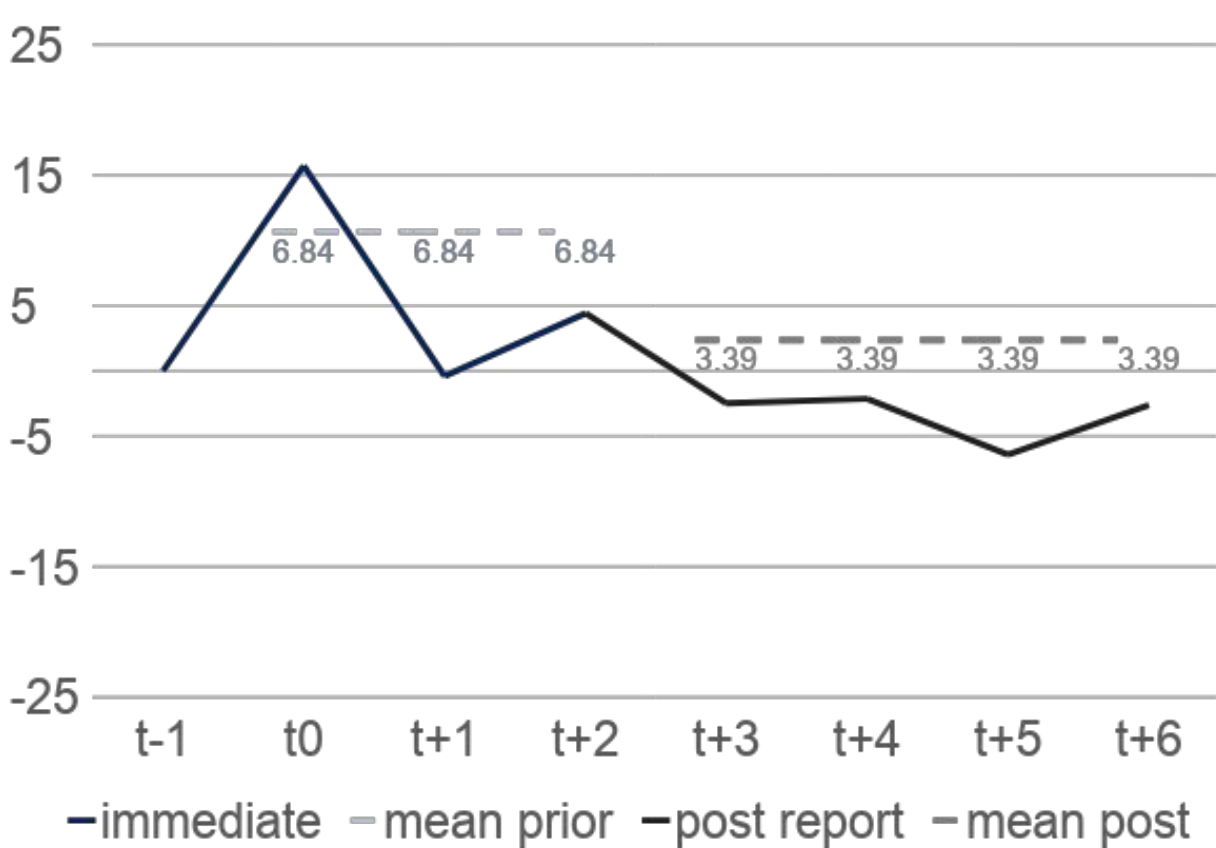
Moderate disbalance: difference of 11% up to 40% between negative and positive expressions (in either direction)

Percentage stock price correction



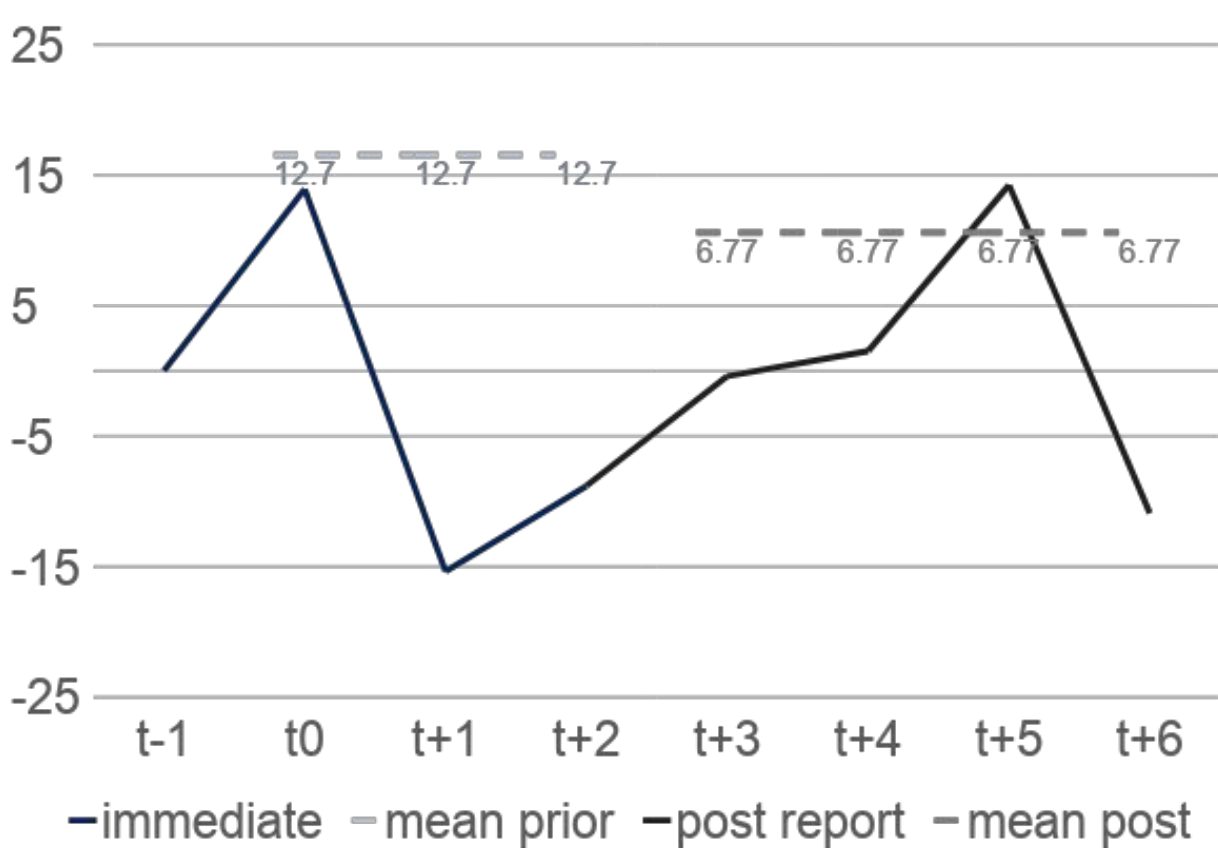
Moderate negativity: difference of 11% up to 40% between negative and positive expressions (e.g., 40% pos / 60% neg)

Percentage stock price correction



Moderate positivity: difference of 11% up to 40% between negative and positive expressions (e.g., 60% pos / 40% neg)

Percentage stock price correction



Key Finding 5: Capital Movement as a Weak Link

Moderate disbalance as the only segment that drives immediate reaction

For most segments, stock price changes following mention peaks are less pronounced than those following official earnings reports. However, Moderate imbalance (both positive and negative) demonstrates a stronger immediate market reaction (t0 to t+2) than the post-earnings period.

The overall finding of a weak link between mention peaks and immediate stock volatility is consistent with the consensus in the academic literature.

Case of Moderate Negative peak: Nubank

An illustrative example is Nubank’s peak of mentions (November 2025): with 60% negativity and 40% positivity, shares rose 7.4% in the peak month, as the situation was perceived as an *improvement* relative to the preceding 80% negativity.

While a causal relationship between reduced negativity share and stock price appreciation cannot be established from a single observation, this example illustrates a mechanism that merits verification on a larger sample.



Critical insights for decision-makers

For investor relations:

Monitor expression balance (not just mention volume) as a leading indicator of investor behavior. The Moderate imbalance of sentiment zone is a signal for heightened vigilance.

For PR departments:

For formal negative events: dilution with neutral content is more beneficial than a positive counterattack. For Moderate in negativity user-driven peaks, on the other hand, it is more efficient to directly address specific grievances.

For risk management:

Moderate imbalance of sentiment is the zone of least predictable market reaction as it is associated with the highest volatility in both search activity and stock price movements.





Studying key factors
of perception and trust