

Beyond Sentiment: Measuring Intensity in the Business Expectation Survey (BES) Responses

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Philippine Statistical Association, Inc. (PSAI) Annual Conference

20-21 October 2026

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The Business Expectations Survey (BES)



BANGKO SENTRAL NG PILIPINAS

Department of Economic Statistics

A. Mabini St., Malate, Manila

BUSINESS EXPECTATIONS SURVEY

August 2026

(For Industry Sector)



Instruction: Kindly mark the circle to select your answer for each item in this questionnaire unless otherwise specified.

Thank You!

Which sub-sector does your company belong to? (If your answer is not under Industry Sector, kindly request a different questionnaire.)

Industry Sector

☐ Mining and Quarrying

☐ Manufacturing

☐ Electricity, Gas and Water

☐ Agriculture, Fishery and Forestry

Construction Sector

☐ Construction

Wholesale & Retail Trade

Sector

☐ Wholesale and Retail Trade

Services Sector

☐ Community, Social and Personal Services

☐ Financial Intermediation

☐ Hotels and Restaurant

☐ Business Services

☐ Real Estate Services

☐ Transport, Storage and Communications

I. Overall Economic Outlook

	Current Month (Aug 2026) vs Previous Month (Jul 2026)			3 Months from Now (Nov 2026) vs Aug 2026			12 Months from Now (Aug 2027) vs Aug 2026		
	Improving	No Change	Deteriorating	Improving	No Change	Deteriorating	Improving	No Change	Deteriorating
I. Economic Outlook	☐	☐	☐	☐	☐	☐	☐	☐	☐
Please cite possible reason(s) for your economic outlook:									

Overall Business Confidence Indices (CI) (% of Positive Firms - % of Negative Firms)



Same Sentiment. Different intensity

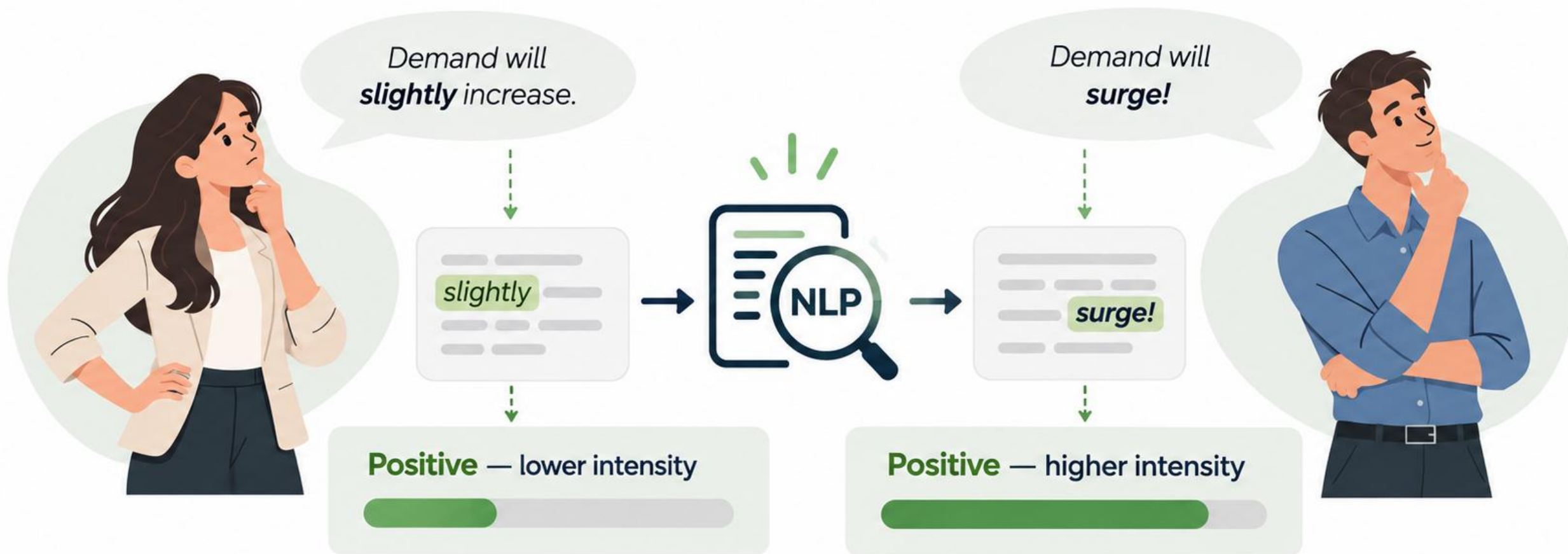
Demand will *slightly* increase.



Demand will *surge!*



Same Sentiment. Different intensity



Natural Language Processing (NLP) helps us go beyond *positive* or *negative* to measure how strongly firms express their outlook.

FinVADER

- Contains 7,500 words, with a *valence score* assigned to each.^{1, 2}
- A text's sentiment score is calculated by:

$$\frac{x}{\sqrt{x^2 + \alpha}}$$

← x = sum of valence scores
← α = constant (i.e., 15)

- The FinVADER index (FI) is the average of all sentiment scores over a given time period.

¹ FinVADER is an adaptation of the VADER algorithm. It incorporates finance- and economics-specific lexical valence scores.

² The valence score is a number ranging from -4 to 4 that represents the direction and strength of sentiment expressed in text. The valence score per word is the average rating of 10 human raters. The raters were asked to rate the intensity of each word from -4 (extremely negative) to 4 (extremely positive).



“Midterm elections can spur [an] increase [in] consumption goods.”

“elections”: 0.2,
“can”: 0,
“spur”: 0,
“increase”: 1.5,
“consumption”: 0.2

- $x = (0.2 + 0 + 0 + 1.5 + 0.2)$
- $x = 1.9$
- $score = \left(\frac{x}{\sqrt{x^2 + \alpha}} \right)$
- $score = \left(\frac{1.9}{\sqrt{1.9^2 + 15}} \right)$
- $score = 0.4404$



Improvements to FinVADER

Issue #1: Not all words in the BES corpus are in FinVADER.

- e.g., COVID, Coronavirus, lockdown, ECQ, MCQ.

Solution:

- Identified common BES words not present in FinVADER.
- Assigned valence scores from the closest FinVADER word.
 - E.g., “ECQ”, “MCQ”, “lockdown”, “quarantine” → -1.2, based on “lockout.”

Issue #2: FinVADER is not context-aware.

- FinVADER sums valence scores, so context can reverse sentiment (e.g., “lower inflation” scores negative).

Solution:

- Added a rule to flip the score when “lower” precedes “inflation.”



Classification Metrics

Metric	Base FinVADER	Improved FinVADER
Accuracy	0.753	0.810
Precision	0.834	0.862
Recall	0.753	0.810
F1-score	0.791	0.834

Accuracy – Measures the proportion of all predictions that are correctly classified.

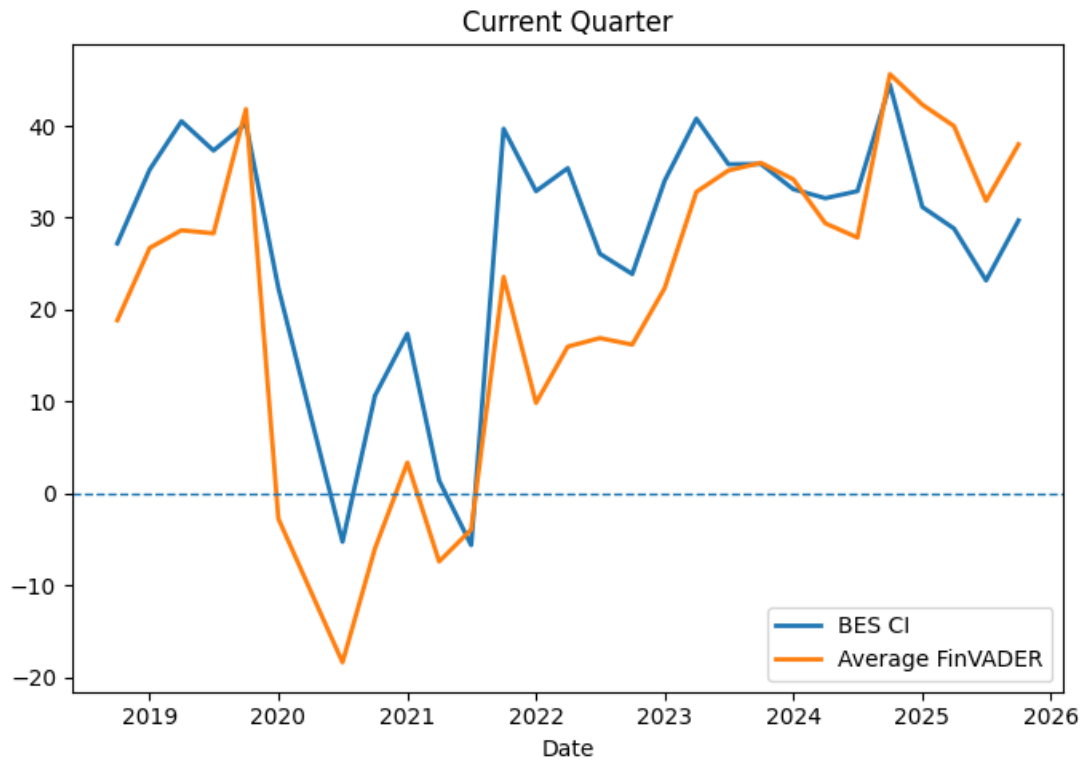
Precision – Measures how often the model is correct when it predicts a particular sentiment class.

Recall – Measures how well the model identifies all actual instances belonging to a particular sentiment class.

F1-score – Combines precision and recall into a single measure, providing a balance between the two.



BES Confidence Index vs. FinVADER Index¹



- FinVADER Index (FI) captures the general trend of the BES Confidence Index (CI).
- Deviations of FI from CI may reflect additional information captured by textual sentiment.

Current Quarter Outlook	Variables	Correlation
BES CI	GDP Growth	0.44
Ave. FI	GDP Growth	0.46
BES CI	Ave. FI	0.83

¹ FinVADER Index is the average of FinVADER scores for all responses that have text.



FinVADER Index helps predict GDP growth.

Variables	Baseline	Official BES	FinVADER	BES + FinVADER
Intercept	1.5952	1.7944	1.7402	1.6196
GDP Growth Lag 1	0.6251*	0.5860**	0.5609**	0.5616**
Δ BES CQ Outlook	.	0.0764	.	-0.1144
Δ BES CQ Outlook Lag 1	.	0.1130	.	-0.0864
Δ Ave. CQ FinVADER	.	.	0.0977	0.1805*
Δ Ave. CQ FinVADER Lag 1	.	.	0.1830**	0.2706**
Adjusted R2	0.367***	0.431**	0.600**	0.605**

Dependent Variable: GDP Growth

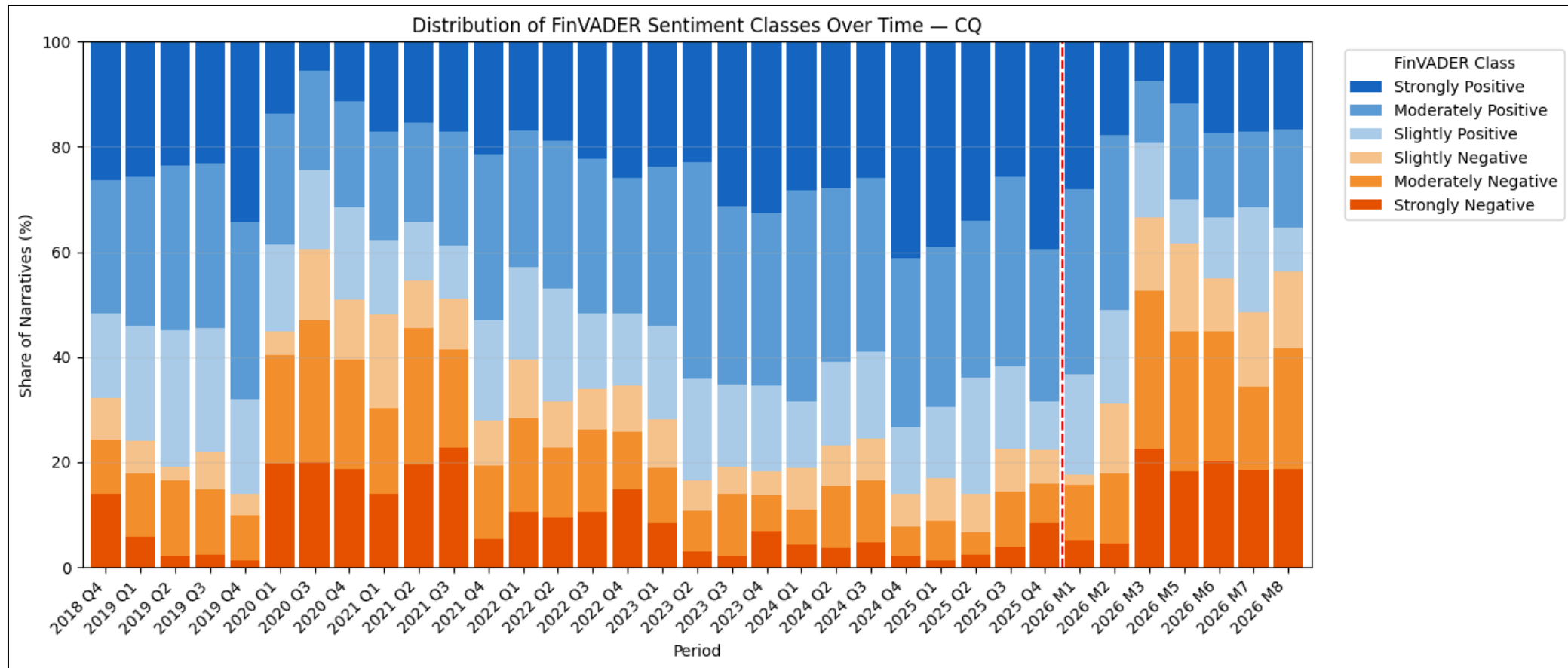
Sample: BES 2018 Q4 – 2025 Q4 (26 observations)

HAC-robust standard errors are used in all models.

*** $p < 0.05$; *** $p < 0.01$*



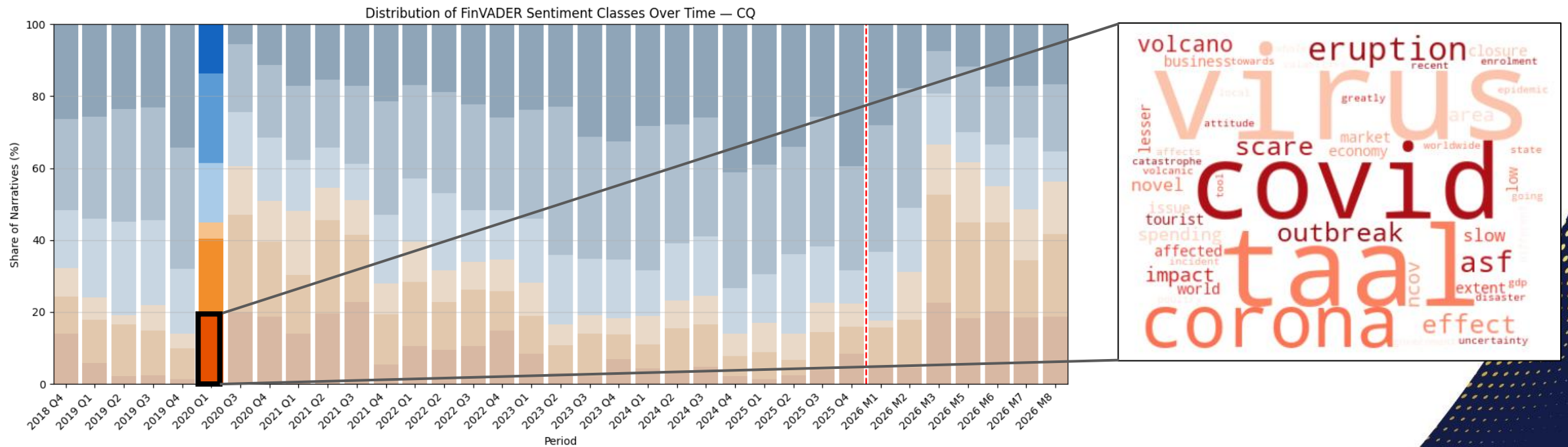
Six (6) categories to reveal sentiment distribution



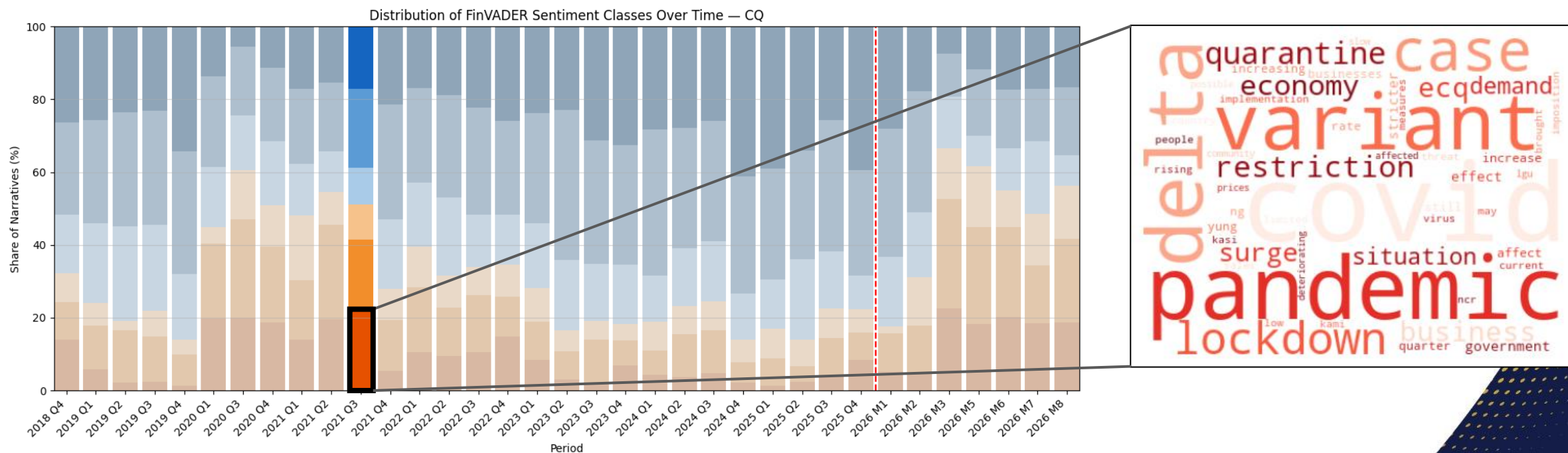
Monthly BES began on January 2026, indicated by the red vertical dashed line.



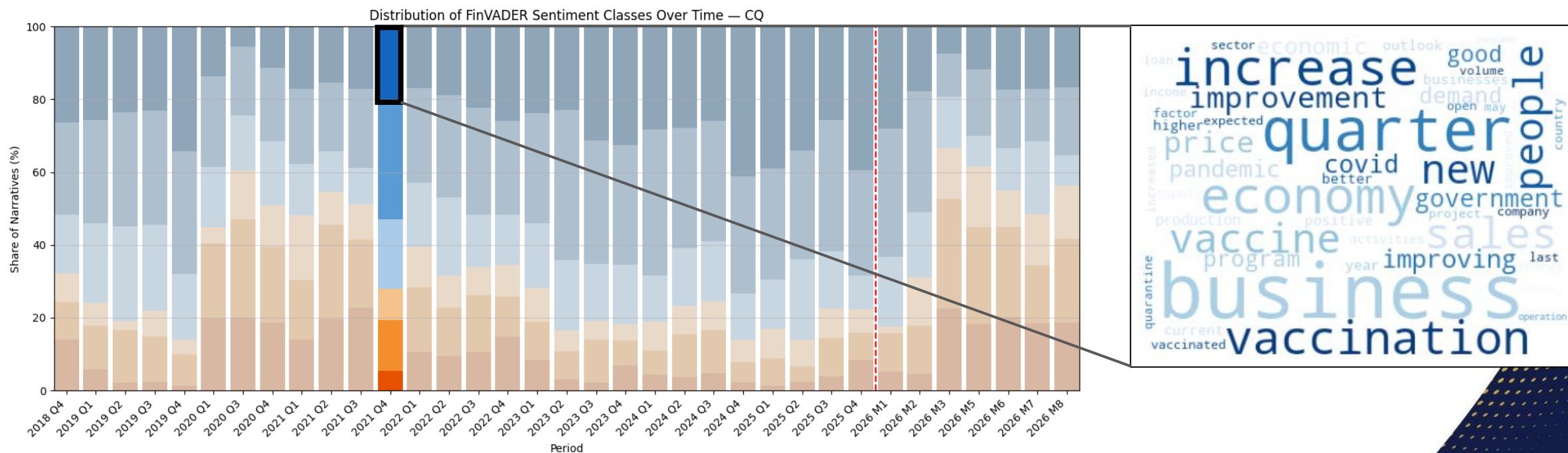
Strongly negative comments spiked in early 2020.



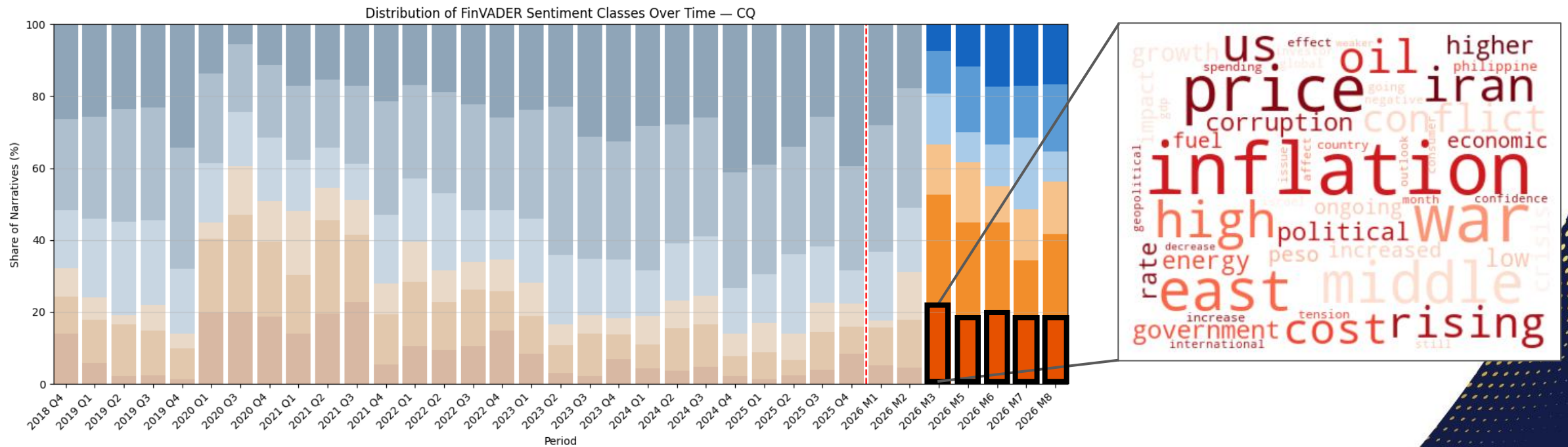
Strongly negative comments peaked in 2021 Q3.



In the next quarter, firms became more optimistic.



Throughout most of 2026, firms remained pessimistic amid various economic challenges.



Conclusion

- **Textual responses provide additional information** that can complement the official Confidence Index (CI) in assessing business sentiment.
- The FinVADER Index (FI) should be treated as an **experimental, complementary measure** rather than a replacement for the CI.
- **Future direction:** improve response rate to open-ended questions, validate sentiment scores, explore more context-aware methods



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