Front-Page News:
The Effect of News Positioning on Financial Markets

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Author: Anastassia Fedyk
Reporter: Yanrui Zhou

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Outline

Prior Research and Motivation

Does THE WAY information delivered by the media influence the price discovery process?

- In Efficient Markets: Information is efficiently reflected in prices.
- In Reality: The media plays a role in financial information's dissemination[1];
- A challenge emerged:
  - Since news outlets are likely to give prominence to important events, it's hard to identify the causal impact of news delivery by media cleanly.
- *Fedyk (2024) uses the context of the Bloomberg terminal in order to figure out whether and to what extent the news positioning impacts the speed of price discovery.*

[1] e.g. Excess volatility, bubbles, and return over- and underreactions.

Background: Front-Page News

Take Bloomberg news articles for example:

- At the top of Bloomberg terminal news screen, there are three highlighted slots, which are regarded as front-page slots;
- Two kinds of news: “primary important” (PI) and “secondary important” (SI);
- PI articles are always positioned on the front page.

Background: Front-Page News

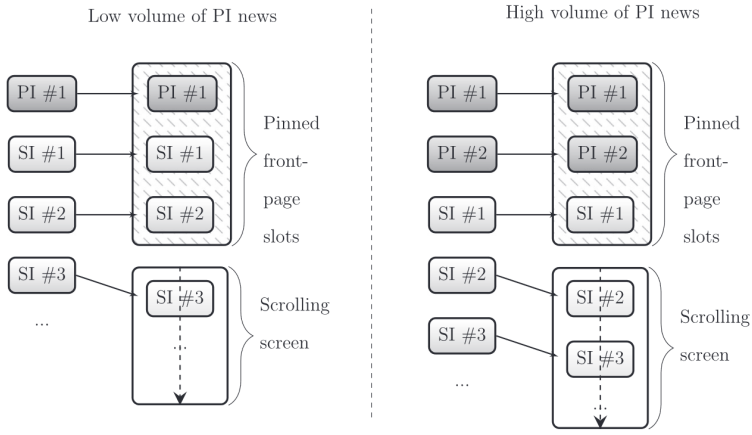


Figure 1. Illustration of how Bloomberg news articles are pinned to prominent front-page positions at the top of the news screen.

Background: Front-Page News

There are two distinctions between front-page and non-front-page SI news:

- First, front-page news articles are more visible than non-front-page news articles from the start;
- Second, front-page news articles remain prominently positioned for some length of time (typically 20 to 40 minutes).

Research Questions

Q: Does the position of news delivered by the media influence the speed of price discovery?

- Q1: What's the immediate market response?
- Q2: What's response during short-term?
- Q3: What's response during long-term?

Hypotheses (Predictions)

- PREDICTION 1 (Immediate Market Response):
  - Front-page news articles are followed by higher trading volume and absolute excess returns immediately after publication.
- PREDICTION 2 (Short-Term Return Continuation):
  - Front-page news articles are accompanied by higher continuation in short-term returns[2].
- PREDICTION 3 (Delayed Return Continuation):
  - Front-page news articles induce lower return continuation at longer horizons.

Immediate: 10 mins, Short-Term: 30 mins, Long-Term: 90-120mins / 15days.

[2] while the articles are still on the front page.

Contributions

1. This article contributes to the studies of how **media** plays a role in financial information's dissemination and irrational market reactions[3];
   - Past studies: research media and media's behavior that influences news' arrival;
   - Expand: research the causal impact of news positioning on the speed of price discovery.
2. This paper contributes to the literature on **investor attention** to salient information[4];
   - Past studies: find that investors[5] overreact to salient information;
   - Expand: show that salient presentation of news by the media serves to speed up the price response but does not lead to overreaction among sophisticated investors.

[3] See Busse and Green (2002), Boulland, Degeorge, and Ginglinger (2017), Peress (2014), Kaniel and Parham (2017)...

[4] See Barber and Loeffler (1993), and Engelberg, Sasseville, and Williams (2012)...

[5] especially retail investors.

Data and sample selection

A. *Exogenous Variation in News Positioning*

- Sample: PI(0.1%) or SI(0.5%) articles tagged with U.S. equity securities during sample period of March 22, 2014 to December 31, 2015.
- News on the Bloomberg terminal can be consumed in two ways:
  - filters customized by individual subscribers;
  - default news screens for specific topics ($\star$).

B. *Market Data*

- Compustat: Industry classification, market capitalization, and shares outstanding;
- QuantQuote: Second-level price and trading data[6].

[6] prices and numbers of shares traded for each second during the market open.

Result: News Positioning and Market Dynamics

A. *Immediate Responses to News*

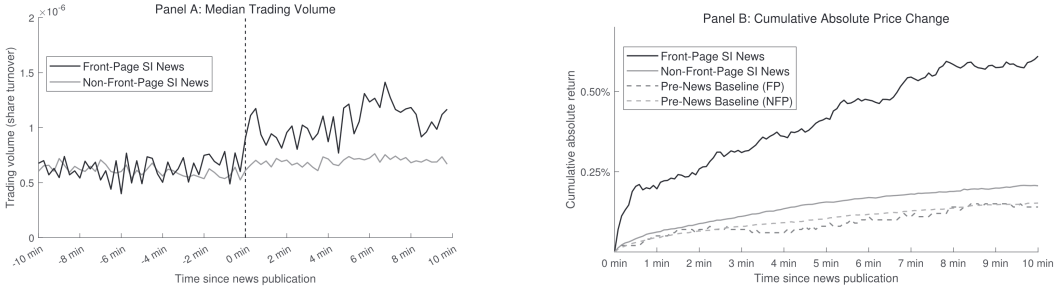


Figure: Absolute excess return and trading volume after news

Result: News Positioning and Market Dynamics

A. *Immediate Responses to News*

The following table quantifies the position effect:

	Averages for Each News Category			Position Effect:	Importance Effect:
	Non-FP SI (1)	FP SI (2)	PI (3)	FP SI vs. Non-FP SI (4)	PI vs. FP SI (5)
Trading volume	0.05%	0.19%	0.29%	0.12%*	0.11%†
	(0.00%)	*(0.03%)*	*(0.04%)*	*(0.05%)*	*(0.07%)*
Abs. excess return	0.21%	0.60%	1.01%	0.37%**	0.35%**
	(0.01%)	*(0.07%)*	*(0.06%)*	*(0.03%)*	*(0.10%)*
# Non-FP SI Obs	4,233			4,233	
# FP SI Obs		858		858	858
# PI Obs			1,306		1,306

FP news indeed leads to higher trading volume and Abs.excess return immediately.

Result: News Positioning and Market Dynamics

B. *Short-Term Return Continuation*

$$Ret_{s,i,[t+10,t+30]} = \alpha + \beta_1 Ret_{s,i,[t,t+10]} + \beta_2 FP_s + \beta_3 Ret_{s,i,[t,t+10]} \times FP_s + Controls + \epsilon_{s,i,[t+10,t+30]}, \quad (1)$$

	Position Effect: FP SI vs. Non-FP SI News				Importance Effect: PI vs. FP SI News			
Coefficient on:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Ret_{s,i,[t,t+10]}$	−0.011	−0.010	−0.014	−0.009	0.193**	0.194**	0.195**	0.202**
	(0.034)	*(0.034)*	*(0.034)*	*(0.036)*	*(0.036)*	*(0.037)*	*(0.038)*	*(0.040)*
$Ret_{s,i,[t,t+10]} \times FP_s$	0.208**	0.208**	0.212**	0.223**				
	(0.037)	*(0.038)*	*(0.038)*	*(0.044)*				
$Ret_{s,i,[t,t+10]} \times PI_s$					0.055	0.055	0.054	0.067
					(0.040)	*(0.040)*	*(0.041)*	*(0.044)*

FP news articles are accompanied by higher continuation in short-term returns;

Result: News Positioning and Market Dynamics

C. *News Positioning and Longer-Term Price Dynamics*

$$\text{Ret}_{s,i,[t+30,t+t_2]} = \alpha + \beta_1 \text{Ret}_{s,i,[t,t+30]} + \beta_2 FP_s + \beta_3 \text{Ret}_{s,i,[t,t+30]} \times FP_s + \text{ Controls } + \epsilon_{s,i,[t+30,t+t_2]}$$

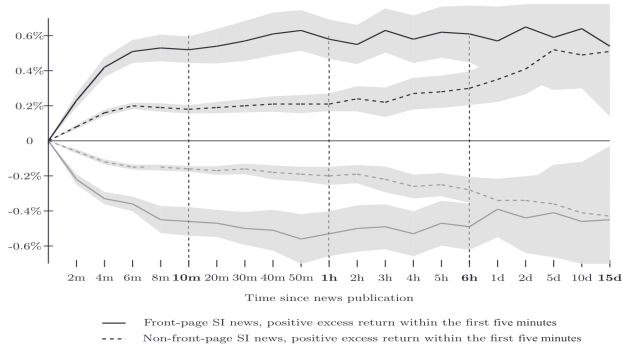
	FP SI vs. Non-FP SI News: Delayed Period $t_2 = 90$ min				FP SI vs. Non-FP SI news: Delayed Period $t_2 = 120$ min			
Coefficient on:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Ret_{s,i,[t,t+30]}$	0.254**	0.248**	0.249**	0.256**	0.266**	0.267**	0.255**	0.261**
	(0.029)	*(0.029)*	*(0.030)*	*(0.031)*	*(0.035)*	*(0.035)*	*(0.036)*	*(0.037)*
$Ret_{s,i,[t,t+30]} \times FP_s$	−0.143**	−0.142**	−0.145**	−0.147*	−0.185**	−0.183**	−0.188**	−0.186**
	(0.032)	*(0.032)*	*(0.032)*	*(0.034)*	*(0.032)*	*(0.032)*	*(0.033)*	*(0.035)*

We can infer that:

- FP news articles induce lower return continuation at longer horizons;
- Non-FP news articles can induce return continuation at longer horizons;

Result: News Positioning and Market Dynamics

C. *News Positioning and Longer-Term Price Dynamics*



- The economic magnitudes show no difference in the long-term reactions to front-page versus non-front-page SI news.

Result: Coverage by Other News Sources

A concern:

- The main results, which Fedyk (2024) attributes to positioning on the Bloomberg terminal, may be driven by contemporaneous coverage elsewhere.

Other news sources:

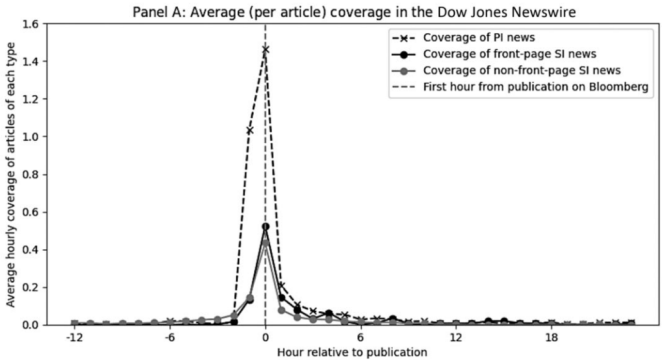
- (i) Dow Jones Newswire,(ii) Factiva, (iii) EventRegistry.

Processes:

- preprocess all headlines to exclude stop words and stem the remaining words;
- use the cosine similarity measure to compare each headline in the Bloomberg news sample against each headline in outside news sources covering the same ticker;
- articles with a cosine similarity above 0.4 are considered a match[7].

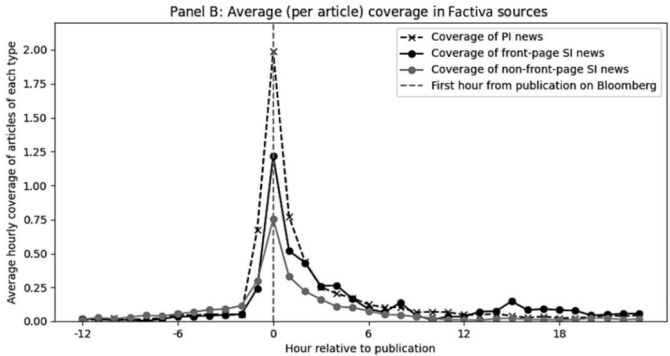
[7]The accuracy rate is 84%.

Result: Coverage by Other News Sources



The Dow Jones Newswire does not cover Bloomberg's front-page SI news any differently than Bloomberg's non-front-page SI news.

Result: Coverage by Other News Sources



News sources that cater to less sophisticated audiences appear to follow (but not lead) Bloomberg in their coverage patterns[8].

[8] I confirm that this difference is independent of the news content.

Result: Validation Tests

- *A. Balance on Observables*
  I confirm that front-page and non-front-page SI news articles are balanced along firm- and article-level characteristics.
- *B. Topic Analysis*
  I use machine learning to classify news articles into topics and confirm that front-page and non-front-page SI news tend to cover the same topics.
- ...

Conclusions

- The position of news delivered by the media influence the speed of price discovery:
  - The news on salient position can be fully incorporated into prices within an hour of publication;
  - Less prominently displayed news is also eventually incorporated into prices, but this process takes an order of magnitude longer than for front-page news.

Other Ideas

- The effect of the number of news that focus on the same event?
- Can investors benefit from this phenomenon?
- ...