

The Role of Media in the Stock Market

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Roles of Financial News

- **Attracts attention**
 - To important current events

- **Conveys information**
 - About the macroeconomy, industries, and firms
 - About politics, laws, and regulations

- **Influences beliefs**
 - Provides compelling interpretations of events

News Selection and Promotion

- Thousands of events occur around the world every day
- Investors notice and recall a small subset of these events
 - Humans have finite attention and imperfect memories
- Media focuses attention and aids memory by exploiting cognitive heuristics
 - Investors attend to salient stimuli that stand out
 - They recall memories that are easily available
 - Journalists try to find or construct **dramatic stories**

Anatomy of a Headline

- Saliency
 - Big and bright
 - Evocative language
 - Strips, churn, squirm

- Availability
 - Story-telling
 - Last-minute standoff
 - Wild ride
 - Drama
 - Unprecedented

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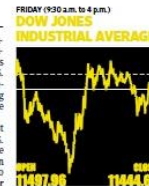
S&P Strips U.S. of Top Credit Rating

Unprecedented Downgrade Comes After Last-Minute Standoff; Treasury Says Decision Is 'Flawed by a \$2 Trillion Error'

BY DAMIAN PALETTA AND MATT PHILLIPS

A cornerstone of the global financial system was shaken Friday when officials at ratings firm Standard & Poor's said U.S. Treasury debt no longer deserved to be considered among the safest investments in the world.

S&P removed for the first time the triple-A rating of America's finances. It downgraded long-term U.S. debt to AA+, a score that ranks below more than a dozen countries, including Luxembourg, and on par with Belgium and New Zealand. S&P also put the new grade on "negative outlook," meaning the U.S. has little chance of regaining the top rating in the near term.



ahead, and after 8 p.m. they made their downgrade official.

S&P said the downgrade reflects our opinion that the fiscal consolidation plan that Congress and the administration recently agreed to falls short of what, in our view, would be necessary to stabilize the government's medium-term debt dynamics." It also blamed the weakened "effectiveness, stability, and predictability" of U.S. policy making and political institutions at a time when challenges are mounting.

"A judgment flawed by a \$2 trillion error speaks for itself," a Treasury representative said.

The downgrade will force traders and investors to reconsider what has been an element

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What's News

World-Wide

- **Syrians poured into the streets of most major towns.** Protesters braved a military crackdown on the first Friday of Ramadan, as security forces fired on marchers. All protesters were wounded in the city of Hama, amid a continuing military siege.
 - **A jury found several New Orleans police officers guilty of covering up their roles in shootings after Katrina.** A3
 - **Texas are bracing for more heat as drought strains power and water supplies.** A3
 - **Japan arrested two Chinese fishing captains, accusing them of entering Japanese waters illegally.** A1
 - **Thailand's Parliament formally elected Yingluck Shinawatra as the country's next prime minister.** A1
 - **Blasts of solar energy that could disrupt electrical systems blew by the Earth.** A1
 - **NASA launched a robotic explorer named Juno on a five-year journey to Jupiter.** A2
 - **Die! Joseph Brady, 89, "astrochimp" trainer.** A2
- Business Finance
- **S&P downgrade of the U.S. government's triple-A credit rating, saying the recent budget deal didn't do enough to address the long-term picture for America's finances.** A1, A4

Markets Go On Wild Ride

By TOM LAURICELLA AND CONOR DOUGHERTY

Financial markets seesawed Friday, driven by fast-moving events in Europe and a jobs report that soothed immediate concerns about the U.S. economy but did little to ease long-term worries.

It was an extraordinary end to a week that saw the Dow Jones Industrial Average collapse nearly 700 points as stocks were flung up and down by skittish traders. On Friday, the Dow gained 60.93 points, or 0.54%, to 11,444.61. But that small change masked wicked swings. Within minutes of the opening bell, the Dow was up 245 points. But by midday the Dow had fallen 71 points from Thursday's close, only to soar back to nearly session highs at midafternoon. Bond and currency trading was also volatile.

Even with Friday's gains, the Dow finished the week down nearly 700 points, its largest point decline since the heart of the financial crisis in October 2008. The selloff left the Dow

down 10.7% from its high in April of this year. It's in negative territory for 2011, down 1.2%.

While markets closed higher Friday, there was a fresh job four hours later: Credit ratings firm Standard & Poor's downgraded the U.S. government's triple-A debt rating for the first time ever.

The move left investors facing a weekend of uncertainty about how markets will react Monday.

On Friday morning, it seemed that stocks had dodged a bullet. U.S. employers added a better-than-expected 117,000 jobs and the unemployment rate ticked down to 9.2% from 9.2%. In the minutes after the employment report, investors sold safe-haven assets like U.S. Treasury.

But economists quickly poked holes in the report's positive veneer. The unemployment rate fell not because of stopped-up hiring, but because more discouraged workers gave up their hunt for jobs and dropped out of the work force. At the same time, the pace of job creation, which included 154,000 new private sector jobs, is barely enough to absorb the growth in population.

"One nice number isn't enough to change sentiment at the moment," said Ted Weisberg, president of Seaport Securities. "Folks are scared."

Another reason investors didn't take much heart from the jobs report was that the data was collected in the middle of the month, before the debate intensified over lifting the debt

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As the Financial World Churns, Traders Squirm



Investor Overreaction

- Attention promotes overreaction
 - “Nothing is as important as you think it is while you’re thinking about it.” - Daniel Kahneman, Nobel laureate
- Stories about the stock market direct investor attention
- Do investors overreact to such stories?
 - Need to measure a news story’s content to test this idea

Staying “Abreast of the Market”

- Many journalists (and traders) offer explanations of why the market moved—with the benefit of hindsight

Fed policy



Housing market



Oil supply



Exchange rates



Innovation



War



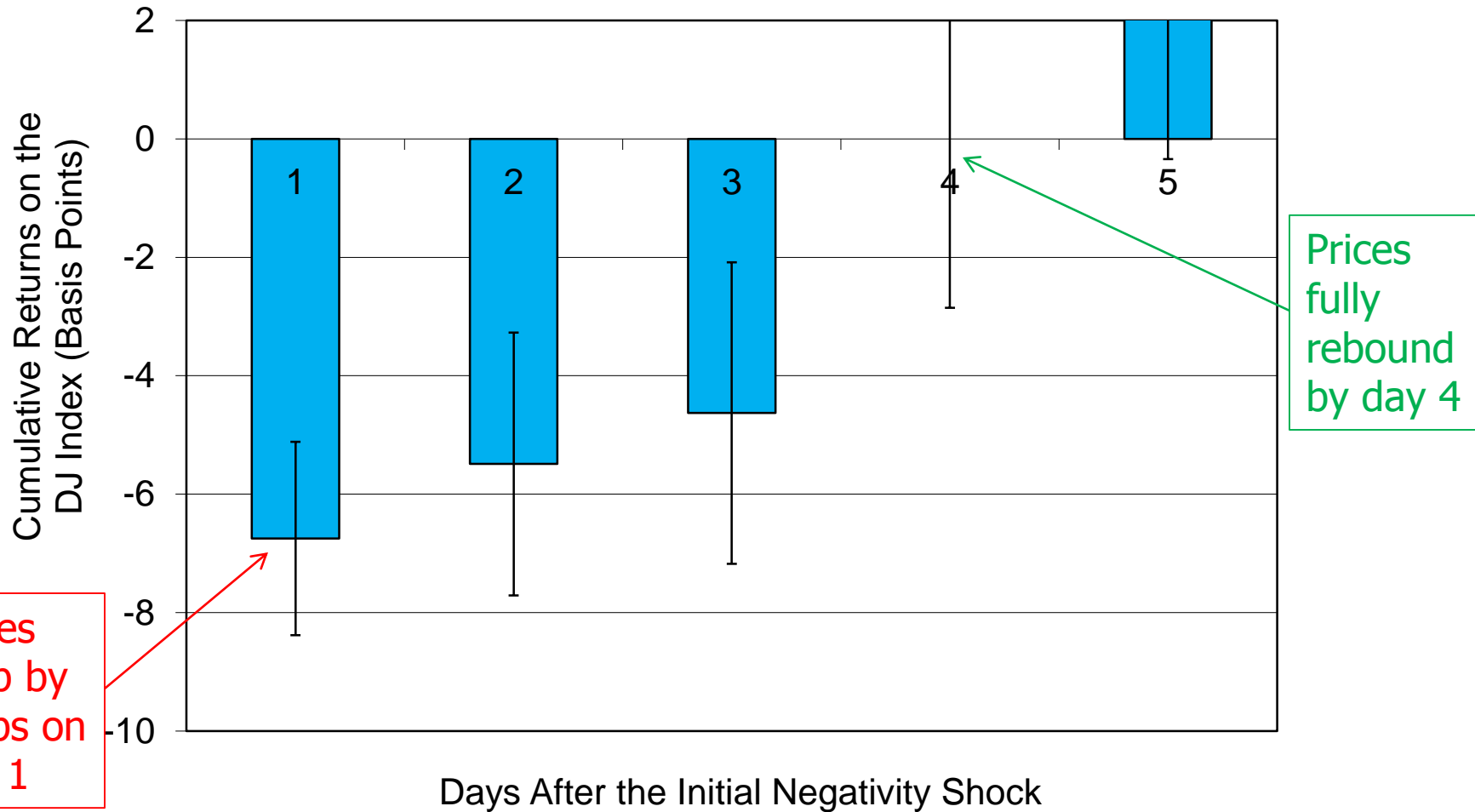
A Simple Content Measure

- Tetlock (2007, *JF*) measures the frequency of positive and negative words in a daily column
 - *Wall Street Journal*, “Abreast of the Market” column
 - Negative words in the Harvard psychosocial dictionary include:
 - “fear,” “worry,” “disappoint,” “collapse,” “flaw,” and “ruin”
 - Compute the relative frequency of both word categories
 - E.g., **negativity** = negative words / total words
- Stock price drops are *correlated* with negative words
- Does the market respond appropriately to these words?

Example: Quantifying Content

- WSJ “Abreast of the Market” column on Feb 17, 2009
 - Headline: *Market’s ‘Hope Balloon’ Loses Air; Tepid Upturns Haven’t Stopped the Slide*
 - Financial markets are supposedly driven by two competing forces: fear and greed. Fear just made another grab for the steering wheel.
 - Disappointment with the government’s planned credit-market bailout and concerns that the \$787 billion stimulus plan won’t jolt the economy fast enough snuffed out the budding stock-market rally. Now investors are worried that stocks could fall back to their November lows -- and possibly even farther.
- Method: Compute negativity in each day’s column
 - E.g., 9 negative / 82 words = 11.0% -- much higher than usual

Negativity Predicts DJ Index



Prices drop by 7 bps on day 1

Prices fully rebound by day 4

Reactions Are Linked with Beliefs

- Journalists' powerful techniques influence beliefs
 - Use evocative imagery
 - Use emotional language
 - Focus on people
- Study of *WSJ* "Abreast of the Market" (1970-2007)
 - Different journalists write the column each day
 - Journalists differ in their writing styles (e.g., optimism)
 - Stock prices increase after days with an optimistic author
 - See Dougal, Engelberg, Garcia, and Parsons (2012, *RFS*)



Which News Is Informative?

- It's difficult to distinguish news from noise
 - The broad stock market (S&P 500) is in the news every day
 - But individual firms only sometimes make the news
 - Depends partly on whether important and relevant news occurs
- “It’s amazing that the amount of news that happens in the world every day just exactly fits the newspaper.”
 - Jerry Seinfeld



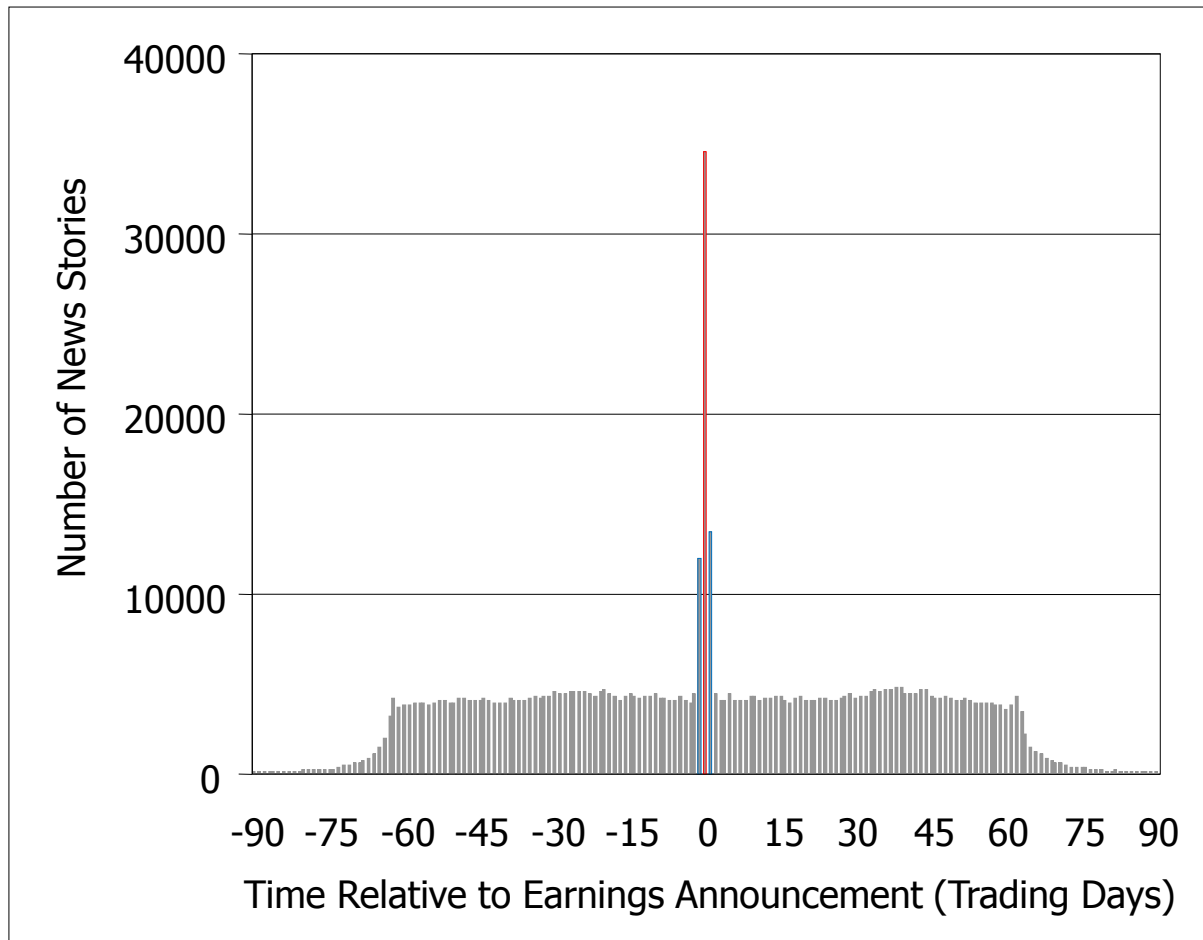
Information in Firm News

- Much financial news is genuinely informative
 - Often relates to the future earnings of firms' businesses

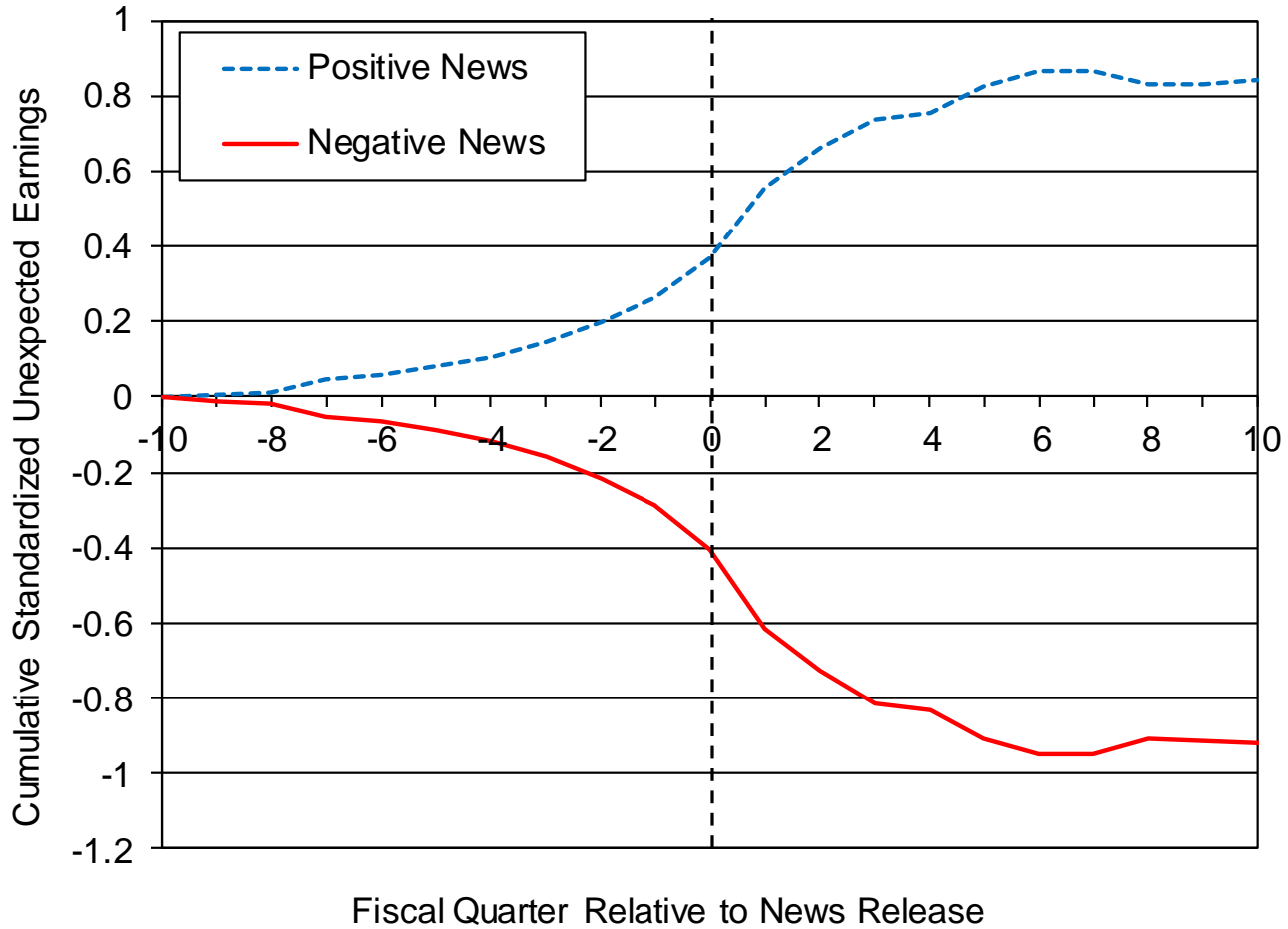
- Tetlock et al. (2008, *JF*) analyze firm news
 - *DJ* newswire and *WSJ* stories about S&P 500 firms
 - Most news about firms doesn't make the front page
 - Compute negativity scores for these firm-specific stories
 - Examine outcomes before and after negative stories
 - Firms' earnings
 - Firms' stock prices

Fundamental Content Is Important

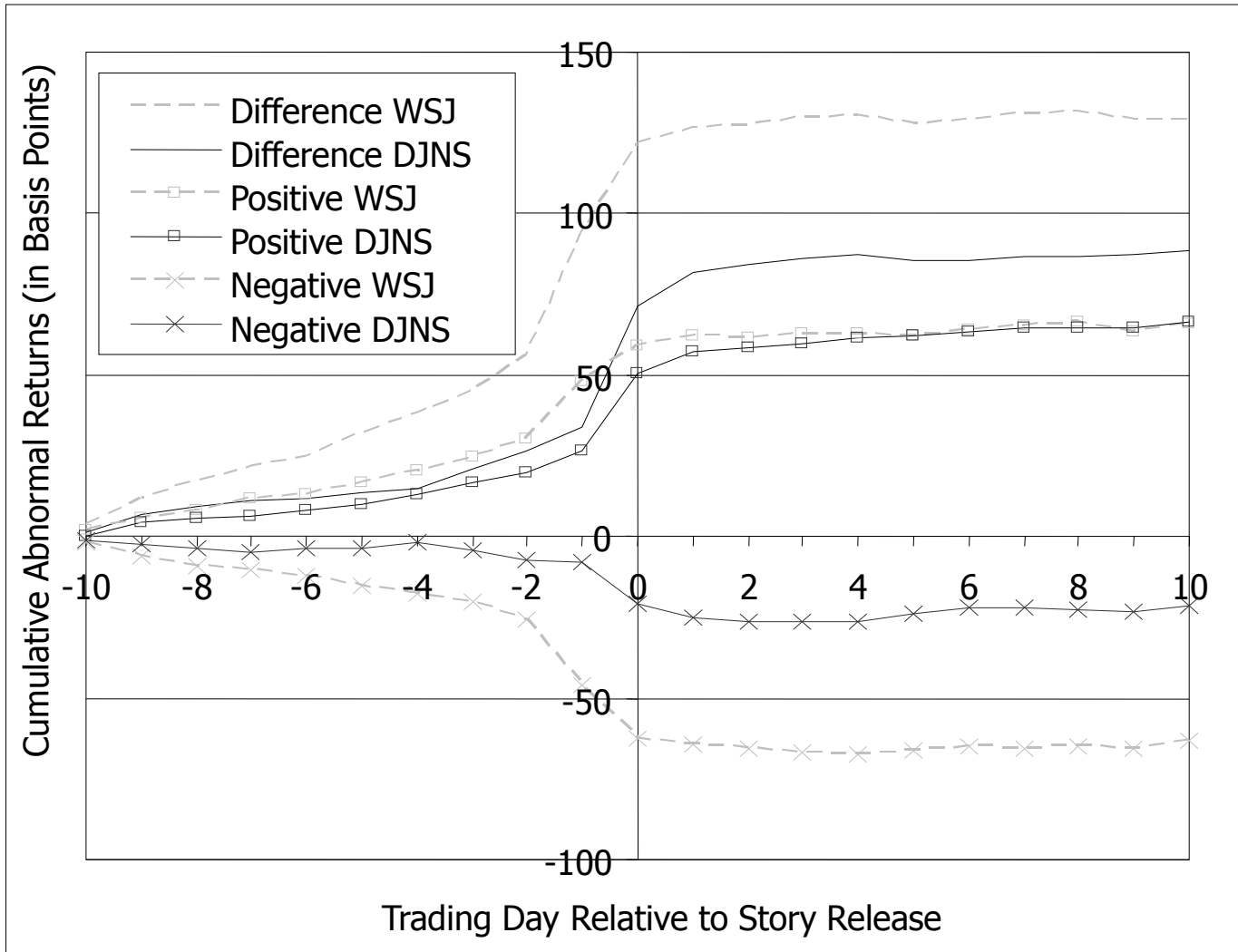
- Coverage patterns suggest earnings news is important



News Content Predicts Firm Earnings

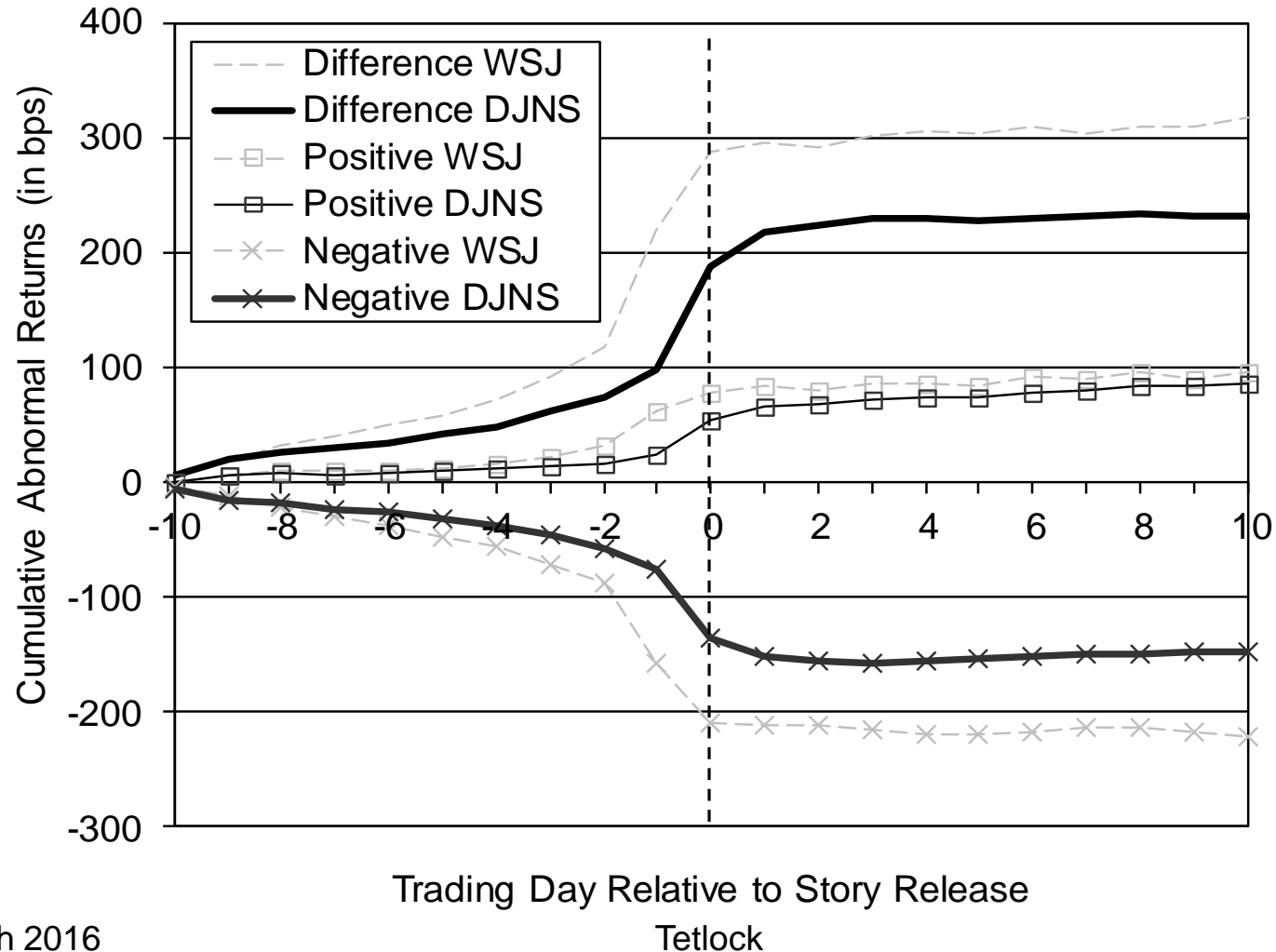


Brief Underreaction to Information



Underreaction to Earnings News

- Focus on stories that mention “earnings”



Interpreting Firm News

- Investors can't attend to all relevant news
- They underreact to relevant news that's not featured
- Underreaction increases with news relevance
 - Stories about earnings are especially predictive of firm value
- Do investors overreact irrelevant news?

New News vs. Stale News

- News often arrives in sequences of related stories
 - Inattention to initial news could cause investors to react to subsequent (partially) stale news as if it were brand new

- Theory: Market prices should react more to new news
 - Practice: “People everywhere confuse what they read in the newspapers with news” – A.J. Liebling

- Tetlock (2011, *RFS*) study of stale news about firms
 - Data: DJ news archive from 1996 to 2008
 - Staleness = similarity of a story to previous stories about the firm
 - E.g., 90 words overlap / 150 words = 60% staleness

Extreme Case of Stale News

- Consider market activity in United Airlines' stock
 - United Airlines filed for bankruptcy in 2002
 - Two published studies of the market reactions to this event
- 2002 United bankruptcy story was new
 - ~100% stock price decline; no rebound
- The firm exited bankruptcy in 2006
 - On Sept. 7, 2008, United's stock market cap is \$1.6B



United Stock on Sept 8, 2008

- *Google News* posts a 6-year-old *Chicago Tribune* story about United's 2002 bankruptcy
 - United's stock falls 76% within minutes
 - The stock rebounds but remains down 11% on the day



Reactions to Stale News

- Stock prices react less to stale stories
 - Presumably, stale stories are less informative
- Still, prices overreact to stale stories
 - Price reactions to stale stories tend to reverse

Key Lessons from Research

- Bidirectional links between media and markets

- Market prices reflect both news and noise
 - Overreact to non-information
 - Sensationalist news that grabs investor attention
 - False or stale news when investors aren't paying attention

 - Underreact to genuine information
 - Substantive news—e.g., news about earnings
 - News that's not featured—e.g., firm news in the back pages

Closing Remark

- Amount of news and ability to process it have increased
 - Links between media and markets are constantly evolving

