Comments on "Twitter Sentiment and Banks' Financial Ratios: Is There Any Causal Link"

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What the paper does?

- Uses information from tweets in Italian to gauges investor sentiment.

- Words in tweets are classified between positive and negative to construct a twitter sentiment score (TSI):

$$TSI = \frac{\#PW - \#NW}{\#PW + \#NW}$$

- Three Italian banks and one German bank are analyzed: Banca MPS, Unicredit, Intesa, Deutsche Bank.

- Analyze the causal relationship between TSI and financial indicators from equity and bond markets.

What it finds?

- There is some evidence that sentiment and the financial indicators are correlated.

- Causality runs both ways.

Where does it fit?

- Textual analysis and finance: Antweiler and Frank (2004); Tetlock (2007); Engelberg (2008); Li (2008); Tetlock, Saar Tsechansky, and Macskassy (2008); Loughran and McDonald (2011); Garcia (2013).

- Investor sentiment and asset prices: DeLong, Shleifer, Summers, and Waldmann (1990); Da, Engelber, and Gao (2015).
  - Noise traders can induce price movements and excess volatility: Baker and Wurgler (2007).

General comments

- Do all tweets have the same impact? What is their value added to gauge investor sentiment compared to traditional news (e.g. Bloomberg, WSJ, etc.)

Twitter and asset prices

News determined to be fake
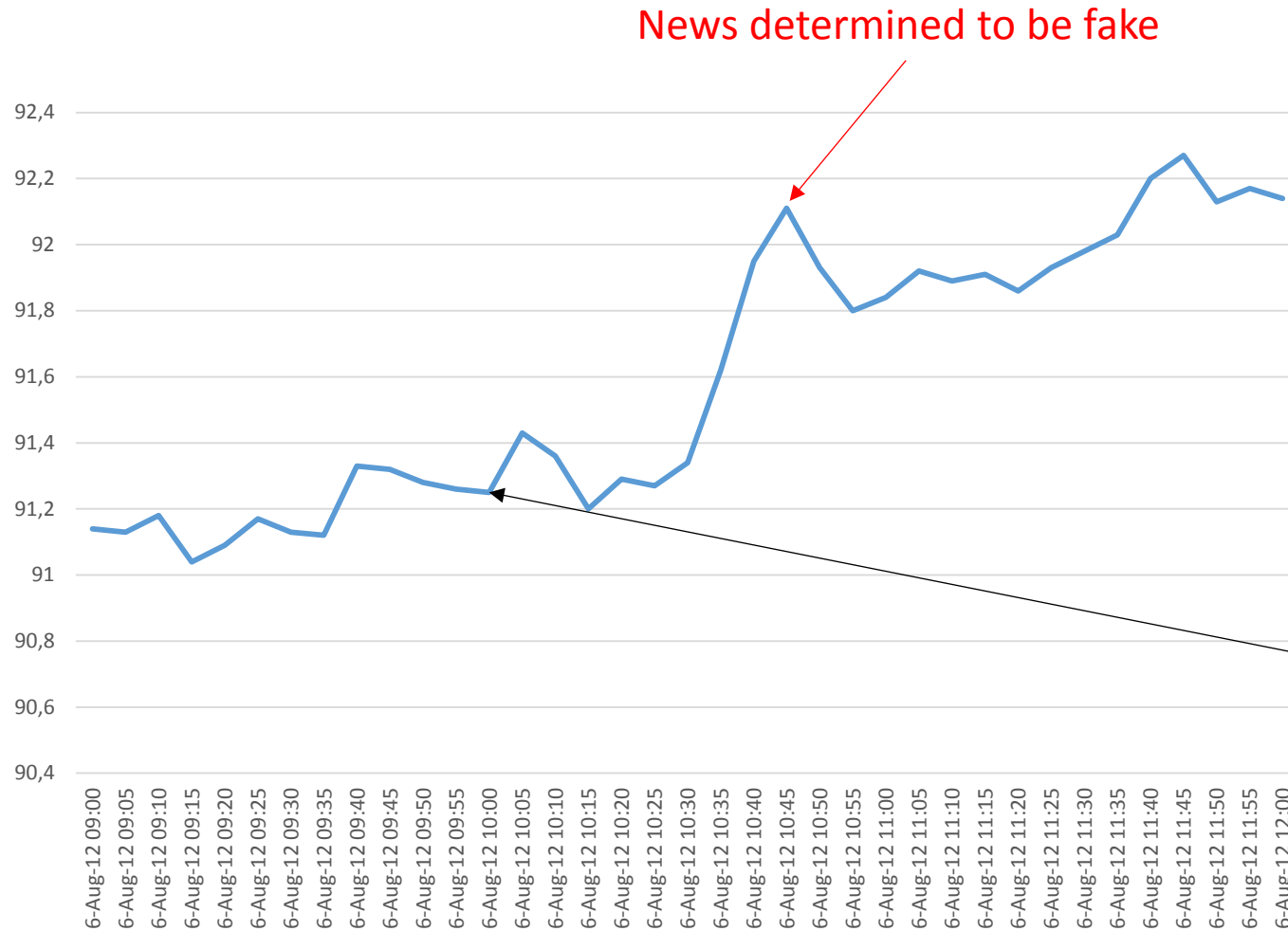
MARKETS

Twitter Rumor Sparked Oil-Price Spike

By Nicole Friedman
Aug. 6, 2012 6:43 p.m. ET

Crude-oil futures bounced up over $1 at one point Monday after a false Twitter rumor exposed the oil market's knee-jerk fear of Mideast turmoil.

A Twitter account claiming to represent Vladimir Kolokoltsev, the Russian interior minister, tweeted at 9:59 a.m. New York time that Syrian President Bashar al-Assad had been killed or injured, followed by two tweets claiming to confirm the death.

RUSSIAN GOVERNMENT CONFIRMS: BASHAR AL ASSAD, PRESIDENT OF SYRIA, HAS BEEN KILLED TODAY IN LATAKYJA WITH HIS WIFE AND TWO PEOPLE.

@MiniInterRussia 1 day ago

This account is an hoax created by italian journalist Tomasso De Benedetti

@MiniInterRussia 1 day ago

6

General comments

- Do all tweets have the same impact? What is their value added to gauge investor sentiment compared to traditional news (e.g. Bloomberg, WSJ, etc.)
  - Are there different classes of noise ("animal spirits" vs. "fake news")? How are the arbitrageurs using this noise?

- What is the advantage of using tweets in Italian? Are the investors that publish or read these tweets different?

- How should sentiment affect CDS premiums or spreads on subordinated bonds? These markets have probably more sophisticated investors than equity markets. "Animal spirits" may be less important.

Specific comments

- Retweets could be used to weight the sentiment conveyed by different tweets within a day. This is valuable information that potentially captures the importance of a tweet.

- Similarly, tweets from "important" users of the platform could also be weighed differently. For example, based on the depth and broadness of their network.

- Per example above, intraday movements may be relevant to assess the impact of "sentiment" on asset prices. An intraday sentiment index could be constructed. Analyze its impact on high frequency asset price movements.

- What is the treatment of tweets that are published after markets are closed? Are they excluded or are they added to the next trading session?

Minor comments (1)

- It is not clear how the LSA, clustering, vectorization, and LDA analysis fit into the selection process of tweets.

- How are words from the tweets standardize (stemming\lemmatization) to map into the dictionary, which contains stems (roots of the words)?

- Do the new words added to the dictionary change the behavior of the sentiment index? If not, why include them?

Minor comments (2)

- The sample of tweets described in the paper encompasses 28 months between August 2015 and January 2018. However, most of the figures only show information for 2016.

- The change in the number of characters allowed in the platform in November 2017 may have changed the sentiment conveyed by tweets. This could be exploited to assess whether tweets are more or less informative after the change.

Final thoughts

- Very nice paper with a lot of potential.

- Looking forward to reading the next draft.