

Assignment 1

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ECON 833: Computational Methods for Economists

Fall 2021

Sentiment analysis has developed quite a lot, which is theoretically rooted from the behavior finance theory. As the sentiment trend shows more explanatory and predicative power on the current and future prices, keeping track of the sentiment changes becomes more popular. There are several important questions needed to have answers in conducting a sentiment analysis.

First and foremost, it is the measures of sentiment. Previous literature has provided two main measurements on investor sentiment: a “bottom up” and a “top down” approach (Baker and Wurgler, 2007). The first one applies more microeconomic factors on individual differences, including the willing to engage in social activities (Hong, Kubik, and Stein, 2004) and the ancestry influence (Pan and Pirinsky, 2015). On the other hand, the “top down” approach focuses on more macroeconomic indicators, such as the Baker and Wurgler social sentiment index (Baker and Wurgler, 2006) which contains six proxies from the trading volume to new issues. This index has been adopted by many researchers as a measure of the investor sentiment (e.g. Kurov, 2010;

Stambaugh, Yu, and Yuan, 2012).

More recently, with the development of press and social media, many studies shed light on the news and the content online. Besides quantifying the effect of one source, some researchers try to compare the influence of both sources. The financial columns of newspaper attract some research interest as newspaper often release information on a daily basis to a large group of readers. Tetlock (2007) works on a column from WSJ to extract the investor sentiment. Later, Garcia (2013) follows a similar path but uses New York Times in a longer time frame. Meanwhile, Liu, Sherman, and Zhang (2014) take a step back on measuring or extracting the investor sentiment from those news, instead they simply count the positive and negative news in a specific pre-IPO setting.

Indexing with the information on the virtual platform also provides many advantages, such as, more information and boarder coverage. However, it comes with a noisy context which can be hard to deal with. Antweiler and Frank (2004) use the posts on Yahoo!finance and Raging bull to explore whether these talks offer any explanation on the market changes. Das and Chen (2007) also work on the Yahoo!finance message board to test the effect of these small talk using a self-designed algorithm. Da, Engelberg, and Gao (2015) construct the FEAR index based on the Google Search Volume Index (SVI).

Since the viral social media platforms enter the center of social life, some studies dive into the popular ones to measure the investor sentiment. Bartov, Faurel, and Mohanram (2018) aim to reveal the effect of individual tweets prior to a firm's earning announcement on the stock price. Gu and Kurov

(2020) use firm-specific Twitter sentiment scores to show the power of social media in the capital market. In addition, Bali, Hirshleifer, Peng, and Tang (2018) analyze the investors' attraction to lottery stocks based on their social interactions measured by the Facebook Social Connectedness Index.

Currently, I am planning to measure the effect of social media and social influencers on the development of SPACs. This new mode of going IPO interests people both from the professional and the academia. Why would a blank check company create benefits for investors? Why are investors willing to invest money in a no-business firm? Gahng et al. (2021) represent the history of the thriving SPAC markets and reveal the internal structure of a SPAC transaction. Meanwhile, this market has attracted many star investors who are also active on the social media, including Bill Ackman and Chamath Palihapitiya. What are their roles in a SPAC IPO? Furthermore, I want to study the Z generation's view on makes their investment decisions. Are they still listening to any financial analysts? Or do they prefer to follow star investors on different social media platforms and start trading? There are many other financial topics and questions which are worthwhile to dig deeper using social media data.

The equation (1) calculates a share return using a buy-and-hold investment strategy. The figure 1 and 2 below show the average SPAC IPOs and closed deals per year with the popularity of SPACs on Twitter and News.

$$BHRC_{i,t} = \prod_{t=1}^{min(T, delist)} (1 + R_{i,t}) - 1 \quad (1)$$

Figure 1: Annual Media Publications on SPACs and Numbers of Deals

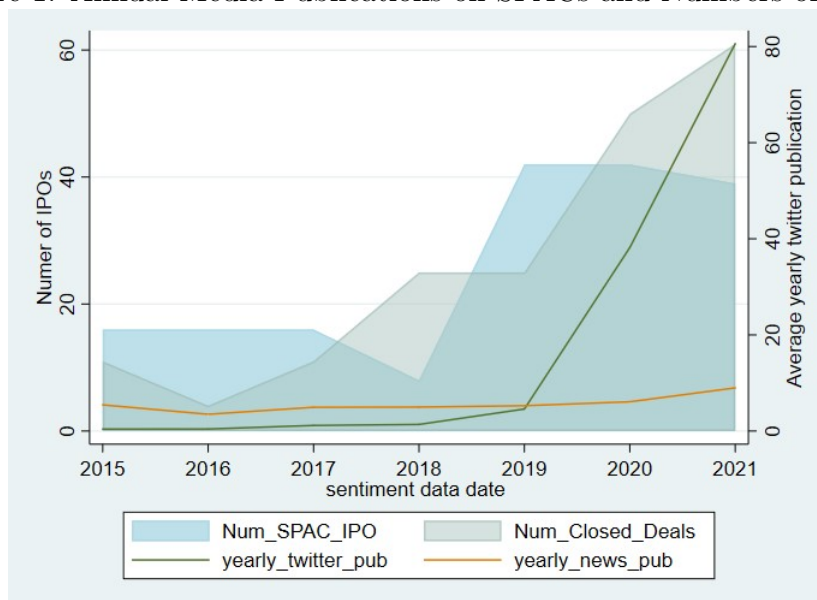
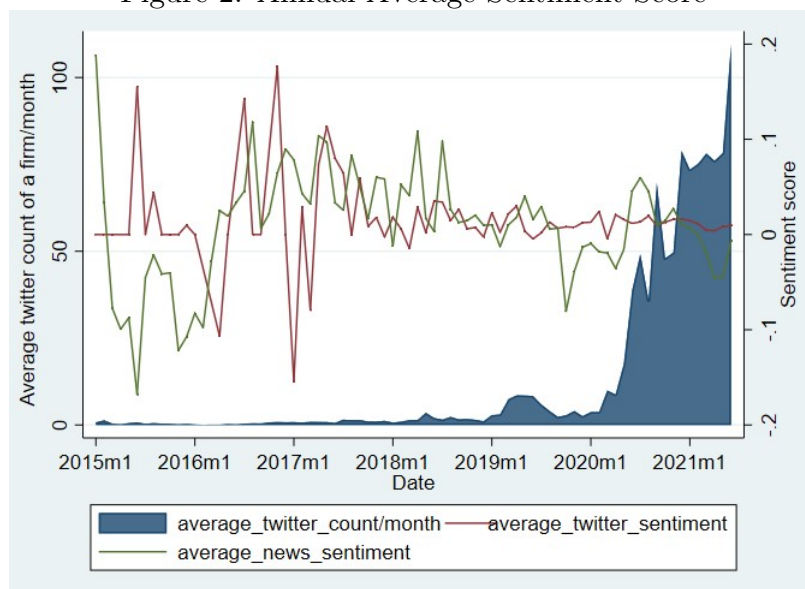


Figure 2: Annual Average Sentiment Score



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