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How economic concerns of households affect the investment decisions of private investors

Google searches and trading: The effect of sentiment on individual investment decisions

Whenever we are interested in a topic, worry about something, or are simply looking for an answer we do not know, we often take out the smartphone or open the browser, type in a keyword and figure out which answer is provided by Google. What we search at Google highly reflects what is in our mind and, thus, Google search volumes can provide valuable insights about peoples' thoughts and sentiment, which in turn may affect trading behavior.

On the market-level, Google searches of negative economic terms (for example recession, unemployment, or bankruptcy) have been used to construct an aggregate measure of economic concerns of households (sentiment) (Da et al. (2015)). This study found that a negative aggregate sentiment (high pessimism) causes downward pressure on asset prices, which reverses over the following days. In our study, we shed light on the conjecture of whether private investors' trading is indeed affected by daily sentiment. How do negative sentiment shocks (a high number of pessimistic search terms in Google) affect private investors? Are private investors temporarily on the sell side of the market when sentiment is rather negative?

Google search volumes combined with trading records

We make use of the aggregate search volume for a pre-defined set of search terms in Google to measure sentiment. Search volumes measure how often a keyword has been searched for in Google on a given day. In setting up the word-list and using Google searches, we follow the study by Da et al. (2015) – who construct an English Google search index to measure sentiment – and build up a German version of their so-called FEARS index. The FEARS index is based on Google search volumes of negative economic terms, such as "financial crisis", "recession", or "bankruptcy". By measuring how often people search for terms that are linked to adverse economic outcomes it measures the economic fears in a country. As such it is a pessimism index. We then relate the aggregate FEARS index to the daily trading records of more than 100,000 individual investors of a large German discount brokerage between 2005 and 2015.

When sentiment is negative, private investors remain on the sell side

We find that when households are more pessimistic – that is when the FEARS index is high – , individual investors are on the sell side of the market. Accordingly, once they decide to trade, they mainly sell risky assets. To make sure that our results can be attributed to the FEARS index and not to general shocks to the economy, we include individual as well as time fixed effects and control for a battery of things, such as past stock market performance and calendar date. Moreover, we also show that the FEARS index predicts stock market performance, but not the other way around. When investigating the effect of FEARS on the German market, we find that a negative sentiment shock causes downward pressure on asset prices on the German market, which reverses over the following days (see the same pattern for the US market in Tetlock (2007), Garcia (2013), Da et al. (2015)).

Perhaps our most striking finding is that the impact of sentiment on the trading of individual investors differ from its impact on the market. While a negative sentiment shock (high pessimism) causes individual investors to sell assets, there is no reversal of this effect in the subsequent 20 days. The effect of sentiment on the market-level is temporary and reverses quickly after around a week. In contrast, for individual investors the effect of sentiment seems to lead to long-lasting effects that do not reverse over the following 20 days. Furthermore, using client's portfolio diversification as proxy for sophistication, unsophisticated investors seem to be even more prone to react on sentiment than sophisticated investors.

Our findings provide new insights on why and how investors trade. While sentiment shocks are temporary to the market, private investors do not seem to follow the general reversal pattern and remain out of the market. In general, google search queries might also be a powerful instrument used to explain other financial decisions of households, such as taking out a loan, for example. We will leave that to future research.

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Sources

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