

Reaction to referee report Nr. 1

Sven-Kristjan Bormann

“ **Missing literature.**

Concerning the literature involved, in the introduction the author makes reference to the literature concerning investor sentiment and its interpretation in financial economics, but does not make any reference whatsoever to the more standard literature of sentiment in consumers business cycle analysis. However, in those fields references to Sentiment indicators are quite common and in my opinion they should be acknowledged in the paper: albeit they are not crucial to the discussion about the influence of sentiment in financial markets, they however provide insightful information about how the concept of “sentiment” is currently discussed in the economic literature. Suggested literature include the original contributions by George Katona on the role of Sentiment for consumption decision and some of the subsequent literature stemming from it, and the European Commission work for producing both Business and Consumers sentiment indicators. In this respect, indeed, reference to the German indexes in session 1.4 may well be substituted or integrated with the reference to the Harmonised EU survey, of which both the IFO and GfK surveys are only the “national branch”.”

I thank the referee for the literature advises. In the literature about sentiments in the financial markets this literature is commonly not mentioned. Hence I did not consider it.

I will review the mentioned literature and incorporate it into a further discussion of the role of sentiments in the economic literature and decision making. However I believe that the role of sentiments on financial markets is a bit different from the one on the consumer markets. While on consumer market the sentiment of an individual consumer has no/little impact on the resources available to another consumer and the decision making process, on financial markets the investors compete against each other for return. If sentiment data allows them to get further information about the potential

decisions (to invest or not to invest) of other investors, then they can adjust their own behaviour accordingly. Hence improve their profit. This feature of sentiment data is absent in the case of consumer sentiment. In that case sentiment might be a relevant decision variable whether to consume or not a certain product, but the spillover to other consumers is not important. The consumer sentiment is rather important for suppliers like supermarkets, specialised store, etc. and for predicting consumption expenditures on the macro level.

Description of the data. I have found the description of the Sentix survey in session 3 rather poor. There are no information about: 1) the questionnaire; 2) how sample is selected; 3) how individual information are aggregated to obtain the sentiment indicators. A graphical analysis comparing the 12 sentiment indicators discussed in the analysis and the actual 6 indexes they are referred to would also be most useful: how those indicators actually correlate with the stock market indexes they are supposed to proxy?

I included a link to a sample questionnaire in the data description. But if necessary I could put the sample questionnaire in the appendix and describe it in more detail. The original questionnaire is only available for participants of the survey.

I don't understand what you mean by your question "2) how sample is selected;". Everyone who likes to participate in this survey can register themselves on the sentix website. If you register yourself as an institutional investor, they will try to confirm whether you are really representing an institution link an investment bank, pension fond, etc. Hence there is no special sampling process nor an underlying population of which the participants are sampled. They are in principle self selected. The individual information are aggregated by just calculating the bull-bear-spread for existing answers. There is no special aggregating scheme involved. A graphical analysis can be added as well as a correlation analysis of the sentiment indices with their underlying stock market indices.

Something similar may in principle be tried with regard to financial markets: even if you suppose to find some relationship among sentiment and the stock market indexes (an analysis that is altogether is missing from the paper in the current version), one still may want to be sure if this relationship really tells that sentiment as an influence on stock market indicators independently from that of the market fundamentals. In other words, how can we be

sure that sentiment as measured by the sentix survey is not just a proxy of market fundamentals??

This kind of analysis is usually not done in the literature of sentiments on financial markets. The focus in this literature is whether sentiment data help to predict stock markets or not. Whether sentiments cause the movements of stock markets independently from the movements of market fundamentals is not important for investors. Only the potential informational content of sentiment data is important and *not* the potential causal influence, since it may help to improve trading strategies. As long as sentiment data aggregate existing information or add new information, they are useful for investors. Even if sentiment data contained no “real” information, as long as enough participants on the financial markets believe in the credibility of this data, it will be useful for investors.

Like I already mentioned above, the financial market is different from the consumer market. Seemingly stable causal behavioural relationships on the financial market tend to vanish, once everybody tries to exploit these relationships to make more profit if they are not supported from forces outside of the market. This is not the case on consumer markets. Hence I am rather sceptical about the benefit of estimating the (causal) influence of market fundamentals and sentiment data on stock market movement. Any causal relationship found might be spurious as well or vanish if it becomes widely known. At the moment we don't have an explicit knowledge about how and why people make certain decisions on the financial market. All we have are information on market fundamentals, sentiment data and maybe even some data about the motivation and goals of investors, but this data can provide us only up to a certain degree with information about the cause of an investment decision. And investment decisions cause the market movements. Hence I prefer to look at the weaker concept of predictability instead of causality.

Of course, sentiments as measured by the sentix survey might be just a proxy of market fundamentals or rather an interpretation of the market fundamentals. Like I described in section 2 of the article, feelings represent/are created as/by an interpretation/evaluation of an event/information. Hence observable market fundamentals are judged and interpreted by investors. These interpretations form their sentiment, so sentiment indices might only measure an average interpretation of market fundamentals. But this “finding” is exactly one of my points why sentiment data might contain useful information about the further development of a stock market index.

To verify my idea about information being aggregated in the sentiment indices I should probably estimate a regression with the sentiment indices as the dependent variable and the market fundamentals as the independent

variables to determine how strong the influence of the market fundamentals on the sentiment indices is. However this analysis might be worth another paper, which I could then combine with the proposed confirmatory factory analysis of the second referee.