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The hazards of vague communication

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When market participants are uncertain about the content of an announcement, they may interpret market movements as an indication of the interpretation of others. As a result, releasing news that is open to subjective interpretation may increase uncertainty rather than reducing it.

In an environment of very low interest rates in all major economies, central banks have come to rely on communication more than they did before with the aim of better anchoring agents' expectations about future policy actions. However, this strategy has sometimes seemed to backfire with market uncertainty sometimes rising in response to important policy communications. One example is the "taper tantrum" episode during which the stock market uncertainty index in the United States reached a historical high after a speech by Ben Bernanke, Chair of the Board of Governors of the Federal Reserve System, on the possibility of a future tapering of the Federal Reserve's programme of asset purchases.^[2] How is it possible that uncertainty can rise after the provision of truthful information?

Communication and financial markets

This research bulletin article shows that, when information is prone to subjective interpretation, an announcement can generate more uncertainty than clarity as agents need to interpret the content of the information. In this process, they will look at movements in market prices to check how other recipients have interpreted the same piece of information, unintentionally amplifying financial noise.

Markets are important aggregators of information and their reaction to announcements matters in assessing the value of transparency in central bank communication. Nevertheless, the previous literature has studied the effects of communication abstracting from this role of markets. The seminal contribution by Morris and Shin (2002) stresses how noise in public announcements makes agents' forecast errors correlate, leading to inefficient fluctuations.^[3] To overcome this problem, Sims (2005) suggests that authorities release multiple sources of detailed information so that agents – having limited attention – will focus on different pieces of information; in this way, agents' forecast errors are likely to be uncorrelated and to smoothly vanish in the aggregate.

The research described in this article contradicts that view. It shows that even if policy announcements result in uncorrelated (mis)understandings, as Sims suggests, the presence of noise in financial markets can still induce correlated forecast errors, because agents look to market prices to improve their forecasts.

The analysis is based on a simple model where agents need to forecast the future price level to optimally save in a nominal asset. In the model, agents cannot distinguish whether price fluctuations are caused by an exogenous shock or by the market's expectation of the future price level. In this context, a policy authority releases its own forecast of the future price level in the benevolent attempt to improve agents' forecasts. However, its communication is imperfect, meaning that agents have different interpretations of the announcement. The less precise are the announcements, the more this is the case.

Therefore, while the policy authority announces its forecast about the future state of the economy to the best of its knowledge, agents disagree about the actual informational content of the announcement. The extent of disagreement varies with the precision of the news: less precise news is more prone to subjective interpretation. Precision may depend on the language used by the authority, or the ability of agents to understand policy announcements, or the extrinsic uncertainty surrounding the news.

Learning from prices leads to higher uncertainty

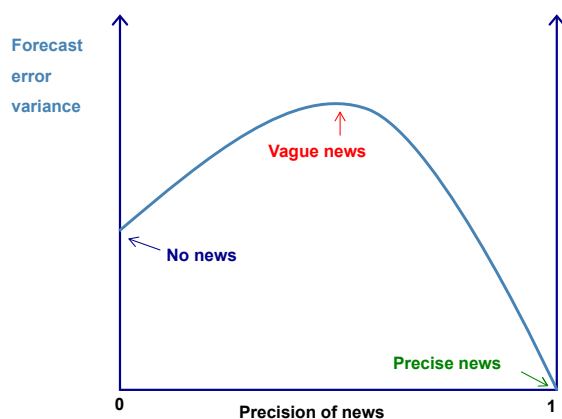
Agents' private understanding of an announcement is not the only piece of information that they have. Agents also observe the current price level, which is a noisy public signal of the aggregate expectation of the future price level. It is noisy because the current price level is subject to a shock which is not observed by agents and is assumed to be unrelated to the future price level. The presence of such an exogenous shock implies that the market price does not perfectly reveal how the market overall interpreted the information provided by the authority. Nonetheless, the market price contains information that can help agents to infer how others have interpreted the announcement.

Depending on the precision of the announcement, agents will use the information directly to form their own expectations, or will see how it has been interpreted by others by looking at (and thus reacting more to) the market price. A key result of this research is that agents react most strongly to the market price when the news has intermediate values of precision. When the announcement has no precision ("no news"), agents react neither to the announcement nor to the market price: they understand that the price does not contain any relevant new information because there was no new information. When the announcement has full precision ("precise news"), agents react fully to the announcement but do not react to the market price, as they do not need any information other than the announcement. When the announcement has only partial precision ("vague news"), however, agents react to both the announcement and the market price, as both signals are useful to refine their expectations.

This last scenario could explain experiences like the "taper tantrum". Although every agent was individually uncertain about the correct interpretation of the announcement, all were interpreting market price movements as a signal of the average understanding. By moving their beliefs closer to the average, agents created momentum in the financial markets, triggering excess volatility and making the future course of prices less predictable.

Therefore, although agents, as individuals, have an incentive to condition their expectations on market prices, their collective reaction inefficiently amplifies the impact of the noise that is reflected in market prices because of the presence of the unrelated shock. Imprecise announcements may then decrease agents' forecasting ability. Chart 1 shows that the forecast error variance may increase with the release of vague news with respect to the benchmark of no release (which is equivalent to a release of information with no precision). However, as the news approaches full precision, forecast errors will eventually vanish.

Chart 1: Forecast error variance as a function of the precision of news.



Conclusion

This article highlights recent research showing the importance of considering how financial markets aggregate information when assessing the effects of public announcements. It suggests that releasing information that is open to subjective interpretation may increase market uncertainty, especially in periods of already high financial turbulences. In such a case, communication may not improve on silence.

References

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[¹] Disclaimer: This article was written by Gaetano Gaballo (Economist, Directorate General Research, Monetary Policy Research Division). The author thanks Katrin Assenmacher, Luca Dedola, Paul Dudenhefer, Michael Ehrmann, Geoff Kenny, Silvia Margiocco and Stefano Nardelli for their comments. The views expressed here are those of the author and do not necessarily represent the views of the European Central Bank and the Eurosystem.

[²] The Chicago Board Options Exchange volatility index (VIX) increased by about 50% in one month after 22 May 2013, the day of Ben Bernanke's testimony before the Joint Economic Committee.

[³] This finding has been confuted by later studies (Angeletos and Pavan (2007) and Svensson (2006)).

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