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What a CFO Doesn't Say Can Hurt

New research shows that during earnings calls, executives involuntarily emit nonverbal cues that could give analysts and investors more information than was intended.

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That carefully crafted oral presentation you put in play at your last earnings conference call might actually have delivered some messages other than those you intended.

Maybe you had some misgivings about the company's performance outlook that you aimed to have kept to yourself. But according to a new paper by two Duke University accounting professors, non-verbal vocal cues — things like voice pitch, tone, intensity, speed, volume, and inflection, and the time gap between syllables — probably communicated what you were truly thinking and feeling.

The professors used technology designed to interpret these vocal cues to make determinations about whether speakers are exhibiting positive or negative emotional states, according to the so-far-unpublished paper, titled "The Power of Voice: Managerial Affective States and Future Firm Performance."

Most analysts don't assimilate these cues, at least as can be demonstrated by the incidence of forecast revisions following calls, write the professors, William Mayew and Mohan Venkatachalam.

Yet, the paper states, negative emotions present during earnings conference calls predict that companies will be more likely to miss analysts' consensus earnings forecasts over the next three quarters than they did in the previous three.

Additionally, the professors calculated that 27 percent of executives who exhibit lower levels of negative emotion missed their earnings target in the next quarter. Those with higher levels of negative emotion missed 38 percent of the time.

Negative affective states also predict downward moves in stock returns over the following nine months. An investor who purchased stock in companies whose executives spoke with low negative emotion, and sold stock in companies whose executives spoke with high negative emotion, would earn a risk-adjusted return of about 9 percent over 180 days. Doing the opposite would result in a 9 percent loss.

No correlation is found between *positive* affective states and future performance, however.

On average, executives' non-verbal vocal cues are positive 10 percent of the time during earnings calls and negative 17 percent of the time, the research finds.

The professors used a software program customized for their purposes to analyze the non-verbal vocal content of CFOs and CEOs during 615 calls in the first quarter of 2007. The program employed Layered Voice Analysis Technology (LVA), invented by Nemesysco Ltd. in Israel in 1997. The technology's main purpose initially was lie detection, but it has been used by telephone call centers to detect customers' and employees' emotional states, by healthcare facilities to detect emotional stress in patients, and for insurance fraud detection.

The LVA technology uses 129 vocal parameters to detect minute, involuntary changes in speech waves. Among the many positive and negative emotions, though, it singles out just one of each to measure based on those changes: excitement (positive) and cognitive dissonance (negative).

The theory of cognitive dissonance is based on the notion that inconsistency between an individuals' beliefs and their actions creates feelings of discomfort and anxiety.

To apply this to an earnings call, the paper states, "Consider a manager who believes she is competent and in control of the firm. Information about firm performance would reflect her actions taken while running the firm. If the manager has private information that is inconsistent with her beliefs regarding her competence, an uncomfortable emotional state will arise."

An executive might exhibit a negative affective state if in possession of information suggesting that current earnings levels are transitory, or about impending lawsuits, product failures, or order cancellations, for example.

Well then, one might say, couldn't an executive looking to disguise his knowledge of such things simply adopt an excited tone? No — it is widely accepted in social psychology circles that one's voice is not easily controlled, the paper says. Professor Venkatachalam does allow, however, that checking emotions when speaking could be an area that executive coaches might eventually look into.

Certainly a company with negative current performance is more likely than not to have continued negative performance in upcoming quarters, but the study controlled for that variable and for all others the professors could identify in order to isolate the effect of non-verbal vocal cues, they claim. Among these variables was the presence of words with positive and negative connotations.

Previous research has shown that negative words or pessimism in media reports and earnings press releases predict future stock returns, and that increased activity on popular Internet message boards correlates to return volatility, according to the paper. And several studies have shown that the tone of a person's voice leaks information about emotional states that is not revealed by verbal content or facial expressions.

But the professors write that to their knowledge, their paper is the first to provide evidence on the role of nonverbal communication in a capital market setting. The paper is currently under review by a finance journal.

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