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CEO Vocal Cues Can Influence Company Performance

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DURHAM, N.C. -- Want the inside track on predicting a company's profitability and stock returns for the next six months? Listen closely to the CEO.

Whether it's excitement about an unpublished research result in biotech or disappointment over an order cancellation in manufacturing, top executives' voices contain hints about the company's future performance, according to research from Duke University's Fuqua School of Business published in the American Finance Association's Journal of Finance.

Fuqua professors William Mayew and Mohan Venkatachalam analyzed the voices of chief executive officers and chief financial officers during earnings conference calls for nearly 700 major U.S. corporations. Using commercial software, the researchers monitored subtle vocal cues indicating positive or negative emotional states. They then culled financial records to see if future earnings, stock prices or analysts' recommendations corresponded with the vocal cues.

When the managers were excited (a positive emotional state), the stock market responded favorably, future unexpected earnings were higher, and their firms issued positive news releases in the next six months, the researchers found. Conversely, the market viewed a negative emotional state as bad news.

"The more negative the emotional state, the lower the future stock returns," Venkatachalam said.

The stock market's response was strongest when company leaders underwent pointed questioning by analysts and investors during the conference calls, Mayew said.

"The positive and negative effects on stock prices are most pronounced when there is scrutiny," he said. "It may be that people's emotions are easier to observe when they are being questioned."

Although markets reacted to the vocal cues, analysts were slow to pick up on the soft negative information signals, acting only on positive emotions, the researchers discovered. Even after question-and-answer sessions that Mayew described as "interrogations," analysts did not revise their stock recommendations to reflect a manager's negative vocal cues.

"The results are consistent with other research showing that if analysts hear something negative, they want to confirm it before acting, so they hold off making a formal recommendation. We're uncovering it again in our setting," Mayew said.

The 1,647 conference calls among 691 unique firms took place between Jan. 1 and Dec. 31, 2007, and the audio files were obtained from Thomson Reuters' StreetEvents, an online archive of corporate transcripts, briefings, filings and reports. The professors used a digital vocal emotion analysis software program provided by Nemesysco Ltd. of Israel that detects changes in speech.

Among the many positive and negative emotions available, Mayew and Venkatachalam chose one of each: excitement (positive) and emotions stemming from cognitive dissonance (negative). Cognitive dissonance is a state of discomfort and anxiety created by conflict between someone's beliefs and actions. For an executive, cognitive dissonance could mean putting a positive spin on a financial report when underlying firm data aren't so rosy.

With more and more audio and video files of company CEOs now available, Venkatachalam believes voice analysis will become an important tool for investors, analysts and auditors.

"I believe this is a starting point for us and others to ask more poignant questions about how communication can identify financial success stories and failures," he said. "We have preliminary results from follow-up work showing a very strong association between negative emotions and the likelihood of misreporting. Utilizing voice analysis, could we have detected Enron's troubles before they escalated, or some of the more recent financial scandals we have witnessed?"

A copy of the report is available at http://www.afajof.org/afa/forthcoming/8893p.pdf.