

Chapter 8

Linguistic Certainty in Managerial Announcements

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ABSTRACT

This chapter provides a review of the prior literature examining the relations between text-based measures of risk and uncertainty in managerial announcements and various economic measures of risk. The authors also present new empirical analyses examining the antecedents, characteristics of contemporaneous numerical disclosures, and market consequences of linguistic certainty in managerial forecast announcements. The results show that prior forecast accuracy increases the certainty of the diction accompanying management's current period forecast, that linguistic certainty reinforces the precision of the contemporaneously provided numerical forecast, and that higher levels of managerial textual uncertainty increase the market's uncertainty regarding the value of the firm. The review of the limited extant literature, together with the new results presented here, suggest numerous additional avenues for further investigation of the economic risk relevance of linguistic measures of uncertainty.

INTRODUCTION

It is widely accepted that information plays a critical role in the allocation of capital in well-functioning capitalist economies. In order to be relevant in the context of a rational stock price-setting process, information must shed light on either the firm's future cash flows or the uncertainty of those cash flows (see, e.g., Demers & Vega (2012) and Tudor & Vega (2013) for more extensive discussions of this relationship). Cor-

porate managers, who know more about their firms than do outside investors or analysts, are important sources of such firm-specific information. The market's response to the release of mandated historical, and voluntarily-provided forecasts of, accounting information has been the focus of extensive research for over four decades (e.g., Ball & Brown (1968); Patell (1976); Lev (1989); Lev & Penman (1990); Kothari (2001); and Hirst, Koonce & Venkataraman (2008)). Over time, however, researchers have discovered that

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a significant portion of the share price reaction surrounding these events is attributable to other, non-accounting information (e.g., Shiller (1981); Roll (1988); and Mitchell & Mulherin (1994)), and, furthermore, that the proportion of the market's response that is attributable to this contemporaneously released information is on the rise (Francis, Schipper & Vincent (2002) and Brandt, Kishore, Santa-Clara, & Venkatachalam (2008)). One such important contemporaneous disclosure that accounting and finance scholars have only recently begun to analyze in large sample studies is the linguistic content of the text that accompanies manager-provided accounting information.

Most of the textual content research in the capital markets area focuses on the text's negativity or net positivity,¹ linguistic measures that are expected to be related to share prices because they contain information about the *first moment* (i.e., the levels) of the firm's future cash flows.² In the current study, we examine the information content of linguistic certainty for the *second moment* of the firm's future cash flows. Our DICTION-based measure of linguistic certainty is designed to capture the forthrightness (as opposed to ambiguity) of management's discourse, and we conjecture that it is also indicative of the managers' level of confidence about the prospects of the firm for which they are reporting. We therefore expect that this measure will be a significant uncertainty-related signal to the stock market that will affect the firm's share price and cost of capital.

Prior research has examined the information content of "risk" or "uncertainty" linguistic features of the text contained in mandatory corporate filings for various dimensions of firm-specific economic risks (Li (2006) and Demers & Vega (2012)), while other studies have examined the risk-relevance of managerial linguistic negativity and positivity in particular contexts (e.g., Kothari, Li & Short (2009) and Balachandran & Bartov (2011)).³ In the current paper, we review these studies and extend this work by examining the risk relevance of a modified measure of DICTION's

textual certainty score in the setting of managers' voluntarily released earnings forecasts.

Management forecast press releases are fundamentally different from mandatory filings that contain relatively well understood, more clearly defined, lower noise earnings or other (e.g., restatement) information. In the voluntary forecast setting, managers convey earnings *expectations* that are inherently less reliable than the previously studied announcements of earnings *realizations*. Furthermore, the voluntary provision of this information is expressly intended to inform market participants about managers' expectations regarding the firm's prospects rather than to merely comply with statutory requirements. The differences between our voluntary forecast setting and the prior studies of mandatorily disclosed items are particularly notable in the conveyance of uncertainty; in the unconstrained setting of voluntary disclosures, managers have numerous quantitative options available to communicate the uncertainty associated with their forecasts (e.g., by rounding their forecasts, issuing open-ended forecasts, or offering wider ranged forecasts).

Our investigations contribute to the literature by documenting a number of interesting relations between linguistic characteristics and forecast antecedents, contemporaneously disclosed quantitative (i.e., non-linguistic) forecast features, and stock market consequences of the forecast press releases. Specifically, we find that managers of firms with better past forecasting accuracy express less uncertainty in the text of their current period forecasts, suggesting that past accuracy increases managers' confidence in the current estimates being provided. We also show that linguistic certainty is positively associated with the level of precision conveyed in the contemporaneously disclosed numerical component of management forecasts, suggesting that language is used to reinforce this quantitative conveyance of managerial uncertainty. Finally, we provide evidence that the market at least partially understands and responds to the uncertainty in managers' statements. Spe-

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