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Doctoral Dissertation

Empirical Essays on R&D Narrative Disclosures and Their Implications

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Approval Form

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ABSTRACT

This dissertation investigates the role of Research and Development (R&D) narrative disclosures in shaping investor perceptions, influencing firm valuation, and reflecting the impact of corporate governance structures. Narrative disclosures serve as a critical channel through which managers provide context that bridges the gap between financial statement figures and the firm's underlying business fundamentals. The first chapter examines the hypothesis that more narrative R&D disclosure is perceived by market participants as information-related risk that can lead to higher required return. Consistent with this view, we find that more narrative R&D disclosure is positively related to subsequent stock returns—but only in asset-like firms, whose performance is not strongly tied to R&D. For option-like (i.e., growth-oriented) firms, which typically have more uncertain future cash flows, investors appear more tolerant of disclosure-driven uncertainty. These findings are robust to a range of firm-level controls and alternative measures of growth opportunities.

The second chapter addresses the limitations of traditional R&D indicators such as R&D expenditures, patents and citations by developing a novel text-based R&D narrative measure. Using a tailored lexicon and a core-contextual word-pairing approach, our method captures qualitative narratives of firms' innovation strategies. A comprehensive series of validation tests—including construct, discriminant, reliability, and predictive validity—confirms that the measure effectively captures firms' engagement in R&D activities and provides meaningful signals to investors. The results show that this R&D narrative-based proxy significantly improves the prediction of innovation outcomes, including patenting, citation frequency, and firm valuation, particularly for firms with missing or zero reported R&D data.

The third chapter examines the impact of California's board gender diversity mandate (SB 826) on R&D disclosure. Findings reveal a 13.8% increase in narrative R&D disclosures post-legislation, especially among high-tech firms. Interestingly, while the volume of disclosure increases, it does not lead to a significant rise in textual complexity. Tone analysis further indicates that more gender-diverse boards tend to adopt a more realistic and cautious language in their R&D reporting. Together, these three chapters demonstrate that while narrative R&D disclosures can offer valuable insights into firms'

innovation activities, their effectiveness depends on firm characteristics, investor interpretation, and governance structures.

Keywords: R&D measurement, narrative disclosure, corporate innovation, textual analysis, 10-K filings analysis, stock returns, content validations, reliability tests, predictive validity, SB 826, difference-in-differences