Summary of *CHATGPT AND CORPORATE POLICIES*

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Summarized by Li Ziming

1. **What are the research questions?**
   - Can ChatGPT help understand corporate policies and derive incremental information beyond existing measures of investment opportunities?
   - Does such information impact on asset prices and returns?
2. **Why are the research questions interesting?**
   - The market does not fully incorporate information already contained in public corporate earnings conference calls.
   - Analyzing these calls at a large scale and extracting the firm's expected investment policy is challenging, but revolutionary AI model like ChatGPT can extract such information efficiently.
3. **What is the paper's contribution?**
   - Contributes to the application of AI in financial and economic studies.
     - First to apply AI to extract managerial expectations and validate AI-based policy measures empirically.
     - Provides a new measure of expected investment that complements the q-theory.
   - Contributes to the literature on the investment-q relation.
     - Prior literature explain the weak empirical relation: employ GMM (Erickson and Whited, 2006); use bond prices (Philippon, 2009); include intangible capital (Peters and Taylor, 2017).
     - Extend: Generate AI-based investment score to provide new information for future investment opportunities that complements Tobin's q.
   - Contributes to the literature on managerial and firm expectations.
     - Prior literature: Regard agents' beliefs and expectations (Weber et al., 2022); study the relationship with policies (Candia et al., 2023); explain operations and decision-making processes (Graham et al., 2022).
     - Extend: Generates measures based on executives' plans and discussions for a large sample of firms, and provides a new set of tools and data for researchers.
   - Contributes to textual analysis.
     - Prior literature: Analyze unstructured text information such as the levels and extent of sentiment (Jha et al., 2021), political risk (Hassan et al., 2019), cyber risk (Florackis et al., 2023), business news topics (Bybee et al., 2023) or corporate culture (Li et al., 2021).
     - Extend: ChatGPT can extract information about complex concepts such as future corporate policies.
4. **What hypotheses are tested in the paper?**
   - H1: ChatGPT investment score is positively related to future investment, keeping constant other determinants of firm investment.
   - H2: ChatGPT investment score is negatively related to future stock returns.
   - H3: The predictive power of ChatGPT investment score is pronounced for more opaque firms and firms operating in a more dynamic and uncertain environment.

a) Do these hypotheses follow from and answer the research questions?

- Yes.

b) Do these hypotheses follow from theory? Explain logic of the hypotheses.

- Follow the theory of Investment-based asset pricing (Liu, Whited, and Zhang, 2009) which predicts that firms with lower expected returns invest more.

5. **Sample: comment on the appropriateness of the sample selection procedures.**
   - The sample period selected only reaches 2020, and post-epidemic data is not covered.
6. **Comment on the appropriateness of variable definition and measurement.**
   - The paper assigns zero to the score if no relevant information is provided related to the question, but no information does not represent no change in capital spending.
   - Whether can use ChatGPT to analyze the business environment and the industry competition rather than indicators.
7. **Comment on the appropriateness of the regress/predict model specification.**
   - The ChatGPT Investment Score has Strong correlation with the Tobin's q and capital expenditure, but the paper does not analyze the problem of multicollinearity of variables.
8. **What difficulties arise in drawing inferences from the empirical work?**
   - After mask the identities of firms, managers, and products in conference call transcripts, the significance of regression results is greatly reduced and becomes weak. Therefore, the results may be insignificant if we change another sample.
9. **Describe at least one publishable and feasible extension of this research.**
   - Employ ChatGPT in a similar way to obtain managerial expectations of changes in dividend payment and employment policies.
   - Use ChatGPT o1 to analyze the voice message in investor communications such as shareholders' meeting and earnings conference calls.