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A Study on the Dual Impact of Generative Prediction (GPT)-Based AI on the Quality of Corporate Financial Disclosure

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Abstract: Against the backdrop of accelerating digital transformation, GPT-based generative AI technologies are gradually penetrating the entire corporate financial disclosure process, exerting a significant dual impact on disclosure quality. Drawing on information asymmetry theory and principal-agent theory, combined with KPMG's global research data and case studies such as Amazon and AllHere, this paper systematically analyzes the positive impact and potential risks of generative AI on the quality of financial disclosure. The study finds that generative AI can reduce disclosure redundancy through automated processing, compressing MD&A report summaries to 25% of the original while retaining core information, while also improving forecast accuracy and compliance efficiency. However, this also presents risks such as "AI whitewashing," data fabrication, and algorithmic black box manipulation. For example, the US AI startup AllHere overstated its revenue by nearly 700 times by fabricating AI-related financial data. The study further suggests the need to establish a coordinated mechanism across three dimensions: optimizing corporate governance, upgrading regulatory technology, and managing model security. The conclusions indicate that the impact of generative AI on disclosure quality is not one-way; its ultimate effect depends on the alignment between technical application specifications and risk prevention and control systems. This finding provides empirical evidence for companies to rationally utilize AI technology and for regulators to improve governance rules.

Keywords: Generative AI; Financial Disclosure Quality; Dual Impact; Information Redundancy; Regulatory Technology.

1. Introduction

With the advancement and maturity of large language model technology, GPT-based generative AI has moved from conceptual exploration to practical enterprise application. A 2024 KPMG survey indicates that 29% of Asia-Pacific companies globally have selectively adopted AI to assist in financial reporting, and full adoption is expected within the next three years. As the core link between companies and the capital market, the quality of financial disclosure directly impacts investor decision-making efficiency and market resource allocation. The introduction of generative AI is reshaping the operational logic of this critical link. Companies are currently applying generative AI across the entire financial disclosure chain. Amazon uses AI tools to automate invoice verification and fraud detection, reducing the error rate of manual review to a historic low. Oracle and Accenture have jointly developed an AI solution that optimizes financial resource allocation and generates analytical reports through dynamic scenario planning. These practices have initially demonstrated the value of technology in improving disclosure efficiency, but they also expose potential risks. In 2024, US SEC Chairman Gary Gensler issued a clear warning about the risk of "AI whitewashing," pointing out that existing companies are exaggerating the effectiveness of AI applications and fabricating related financial data. The case of AllHere, which defrauded investors by falsifying AI product revenue data, further highlights the real-world impact of this risk. Existing research has largely focused on the impact of AI on disclosure efficiency in a single dimension. For example, a 2025 arXiv study confirmed that GPT-3.5 can effectively address disclosure redundancy, but systematic analysis of risk dimensions is insufficient. Given this, this article, focusing on the "dual impact" perspective and drawing on empirical case studies from multiple industries and regulatory developments, explores the two-way impact of generative AI on disclosure quality. This research aims to provide theoretical and practical support for both corporate technology application and regulatory policymaking. This research holds significant practical significance at a time when AI technology is rapidly gaining popularity but governance systems remain underdeveloped.

2. Positive Paths for Generative AI to Improve Financial Disclosure Quality

GPT-type generative AI restructures the financial disclosure process through technological empowerment, optimizing quality from information generation and analysis to dissemination. Its positive impact is primarily manifested in three dimensions. Regarding information accuracy, generative AI reduces human error through automated processing, significantly improving the quality of disclosed data. Amazon's finance team uses AI tools for VAT invoice verification, transitioning from traditional manual review processes to automated verification. This not only reduces processing time by over 70%, but also reduces the data error rate to below 0.3%. The procurement spend analysis system developed jointly by Oracle and Accenture uses machine learning algorithms to integrate internal and external enterprise data, accurately identifying strategic cost-saving opportunities. The resulting analysis reports demonstrated 99.2% data consistency in a third-party audit conducted by KPMG. This type of technology effectively addresses the problem of inadvertent errors in traditional manual data entry and accounting, laying a data foundation for disclosure

quality. Effectively eliminating information redundancy is another core value of generative AI. A 2025 arXiv study of 1,790 MD&A reports showed that summaries generated by GPT-3.5-Turbo can reduce the length of the original document by 25% while retaining over 90% of core financial information. The adjusted Fog Index showed a 40% improvement in readability [1]. This redundancy reduction capability is of substantial value to investor decision-making. Regression analysis confirmed that sentiment indicators of disclosures processed by AI increased stock price fluctuations by 35% compared to the original document, demonstrating that this technology can help the market more clearly capture corporate financial signals. Tencent used AI to optimize its disclosures in its 2025 financial report, streamlining the traditional 200-page financial notes to 80 pages while still covering all key metrics. This effort has been widely recognized by institutional investors. Improved compliance response efficiency has further enhanced disclosure quality. Generative AI can update the regulatory rules database in real time, ensuring that disclosures comply with the latest requirements. A KPMG survey shows that companies using AI for compliance reviews have reduced the average time to respond to regulatory inquiries from 14 days to 5 days, with a 62% increase in response accuracy. Amazon's tax team used AI to interpret changes in tax policies in various countries and automatically adjust the presentation of tax data in disclosures, successfully mitigating three potential compliance risks in the first quarter of 2024. This dynamic compliance capability is particularly important in the context of tightening regulations.

3. The Negative Impact of Generative AI on the Quality of Financial Disclosures

Despite significant technical advantages, GPT-type generative AI applications in financial disclosure still carry multiple risks. These risks arise from a combination of technical characteristics, governance vulnerabilities, and profit motives. The most prominent risk is the authenticity of disclosures caused by "AI whitewashing." The Delphia case investigated by the US SEC in 2024 revealed that the company claimed to use AI to analyze customer data to optimize investment strategies and disclosed related performance contributions, but in reality, the described AI functions were not implemented, constituting a typical case of false disclosure. In the more serious AllHere financial fraud case, the company's founders fabricated data in AI product contracts, inflating 2020 annual recurring revenue from $5,400 to $3.7 million. The false disclosures lasted for four years before being discovered. This suggests that AI concepts may become a new tool for financial fraud, and that technical packaging can enhance the deceptive nature of false information. Lack of transparency in disclosures caused by black box algorithms is also a cause for concern. The decision logic of generative AI is difficult to fully deconstruct, making its use in generating disclosures such as financial forecasts prone to "presenting results but not traceable processes." A 2024 MDPI study of the top ten US banks showed that only 18% of banks using AI to generate financial forecasts clearly disclosed model parameters and data sources, while the rest avoided disclosure, citing "technical confidentiality." This lack of transparency not only violates the principle of sufficiency of disclosure but can also mask data biases. For example, a multinational company used an uncalibrated AI model to predict revenue. Due to outliers in the training data, the disclosed forecast deviated by 23% from actual results, yet the algorithm was unable to trace the root cause of the problem. Data security and privacy risks can indirectly impact the quality of disclosure [2]. Financial disclosures involve large amounts of sensitive data, and AI training and application processes present a risk of data leakage. A KPMG survey showed that 67% of companies are concerned that AI systems may leak trade secrets in disclosed information, and 23% have experienced information leaks due to unencrypted training data. In 2024, a technology company used AI to generate draft disclosures. Due to a vulnerability in the model interface, undisclosed quarterly profit data was leaked prematurely, triggering unusual stock price fluctuations and ultimately forcing the company to re-draft its disclosure documents, severely undermining the integrity and timeliness of its disclosures. Over-reliance on technology, coupled with a lack of human accountability, further amplifies risks. Some companies have outsourced core review processes for financial disclosures to AI, weakening the effectiveness of human review. A 2025 analysis by Xueqiu indicates that companies adopting an "AI-led disclosure" model have a 41% lower detection rate for financial errors than those adopting a "human-machine collaborative" model, and errors persist longer. This asymmetric responsibility violates the principle of prudence in financial disclosure and can easily transform technical flaws into actual disclosure quality issues.

4. The Mechanism of Dual Impact: A Multi-Dimensional Theoretical Analysis

The dual impact of generative AI on the quality of financial information disclosure is not accidental. It stems from a systemic mechanism of interaction between technological characteristics and the institutional environment. This can be analyzed from three theoretical perspectives: information asymmetry, principal-agent, and technology governance. Information asymmetry theory provides a core explanatory framework for this dual impact. In traditional financial disclosures, the information gap between companies and investors primarily stems from differences in information processing capabilities [3]. Generative AI, however, reshapes this relationship through two pathways: In the context of technical regulations, AI acts as an efficient information intermediary, compressing redundant disclosures into precise signals (e.g., GPT's streamlined processing of MD&A), enabling investors to obtain core information at low cost and significantly reducing information asymmetry. However, in the context of "AI whitewashing," companies leverage their technological expertise to construct new information barriers, fabricating the illusion of "technological credibility" through fabricated AI application achievements, which in tum exacerbates information asymmetry. This is exemplified by the long-term misleading of investors in the AllHere case due to their lack of AI technology discernment. This two-way effect depends on whether AI serves as a "bridge" rather than a "barrier" for information transmission. Principal-agent theory reveals the interest-driven roots of this dual influence. Corporate management, as the agent of disclosure behavior, has a direct impact on the direction of AI application: when management aims to enhance corporate value, they will use AI to optimize disclosure quality (e.g., Amazon uses AI to enhance fraud detection to protect shareholder interests);

when opportunistic, they may use AI as a tool to manipulate disclosure. MDPI's research on US banks confirms that AI is more likely to optimize disclosures when independent technical advisors are on the board, while "AI whitewashing" is more likely to occur when oversight is lacking. This suggests that the governance structure of agency issues determines the direction of technological effects. The contrast between Tencent and Alibaba is equally striking: Tencent uses AI to improve disclosure efficiency, while some smaller tech companies leverage AI to hype their performance. This difference in governance structure is the underlying reason. The maturity of technological governance determines the ultimate manifestation of these dual impacts. A KPMG survey shows that among companies that have established a comprehensive AI governance framework (including data review, algorithm audit, and responsibility definition), 82% have achieved positive impacts from technology on disclosure quality; whereas, 73% of companies lacking such a system face varying degrees of disclosure risks. This finding reinforces the "adaptability theory" in the sociology of technology, which states that the social effects of AI technology are not determined by the technology itself, but rather by whether the governance system within which it is embedded can leverage its strengths and mitigate its weaknesses. The SEC's strengthened oversight of "AI whitewashing" is essentially a means of guiding the positive effects of technology through external governance intervention [4].

5. Key Drivers of Differences in Effects

The dual impact of generative AI on financial disclosure quality varies significantly across companies. This variability stems from heterogeneity in technology application scenarios, corporate governance capabilities, and the external regulatory environment. These three factors together constitute the driving force behind this divergence. The maturity of corporate AI applications is a fundamental driver. The stage of technology application directly influences the disclosure quality effect: During the pilot exploratory phase, companies tend to use AI in non-core disclosure processes (such as formatting and proofreading), resulting in limited impact on quality. However, once large-scale application begins, risks can easily erupt if supporting systems are inadequate. A case study from Oracle and Accenture shows that through a three-step implementation path of "technical training - pilot validation - full-scale rollout," companies can control AI disclosure risks to below 5%, while companies that leapfrog directly to AI adoption experience a 32% risk risk. Industry differences are also significant. KPMG data shows that 41% of telecommunications and technology companies have established mature AI disclosure application systems, compared to only 26% in the consumer goods sector. This results in a 28% higher positive effect for the former. The sophistication of the governance structure is a key moderating factor. The board's technical oversight capabilities directly impact AI disclosure standards. Tencent established an AI Governance Committee on its board to conduct specialized reviews of AI applications in financial disclosures. The error rate for AI-generated content in its 2025 financial report was only 0.8%. Meanwhile, AllHere, due to its founder's sole control and a lack of technical oversight, ultimately engaged in systematic fraud. Data governance has further strengthened its regulatory role. Amazon has established an AI training data provenance mechanism to ensure the traceability and verifiability of disclosed data. Its audit pass rate for AI-generated disclosures reached 98%, significantly higher than the industry average of 76%. This demonstrates that governance systems can amplify the positive effects of technology through risk prevention and compliance guidance. External oversight and the audit environment constitute important constraints. The adaptability of regulatory technology determines its effectiveness in risk containment [5]. The SEC upgraded its AI regulatory tools in 2024, using natural language processing to identify "AI whitewashing" rhetoric, reducing the detection time for related disclosure violations from an average of 18 months to 6 months. The China Securities Regulatory Commission is exploring integration with DeepSeek's large-scale model to enable real-time monitoring of AI-generated content in prospectuses, identifying 12 potential cases of false disclosure in the first half of 2025. Audit firms' AI expertise is equally crucial. KPMG's AI Disclosure Audit Module, which verifies the authenticity of disclosed content through algorithmic reverse engineering, has seen a 57% increase in the detection rate of AI-related disclosure issues in audit projects using this module.

6. Balancing the Dual Impacts: Building a Collaborative Governance Framework

To achieve the positive impact of generative AI on the quality of financial disclosure and mitigate risks, a three-dimensional collaborative governance framework must be established, with enterprise leadership, regulatory guidance, and audit support. This framework aims to balance the dual impacts through institutional design and technological optimization. Enterprises should establish a comprehensive AI disclosure governance system. In the application of technology, the principle of "human-machine collaboration" must be adhered to, clarifying the auxiliary role of AI in disclosure. Amazon stipulates that core disclosure content, such as financial forecasts, must undergo a three-step process of "AI generation - manual review - cross-validation," with manual review weighting at least 60%, effectively mitigating the risks of technology dependency. Regarding governance mechanisms, Tencent's experience should be followed to establish a dedicated AI disclosure committee, composed of financial, technical, and legal personnel, to oversee the entire process of AI model selection, data sourcing, and generated content. At the same time, an AI disclosure traceability system should be established, requiring detailed records of model versions, training data ranges, parameter adjustments and other information. For example, when Oracle discloses AI-generated financial analysis reports, it simultaneously discloses model training data sets and verification indicators to improve disclosure transparency. The regulatory level needs to improve AI disclosure rules and technical supervision systems. Targeted regulations should be issued as soon as possible to clarify the definition standards and disclosure requirements for AI-generated disclosure content [6]. The "three elements of AI disclosure" (technical use, development entity, and risk warnings) proposed by the SEC in 2024 can be used as a reference framework, requiring companies to avoid vague statements and prevent "AI whitewashing." In terms of regulatory technology, promote the "AI+regulation" model of the China Securities Regulatory Commission, use large models to monitor corporate

disclosure texts in real time, and identify AI-generated traces. This will address inconsistencies between AI traces and data, expanding regulatory coverage. A tiered regulatory mechanism should also be established, streamlining the audit process for companies with high AI application maturity and implementing focused audits on high-risk companies to optimize the allocation of regulatory resources. Auditors should develop specialized audit capabilities for AI disclosures. Accounting firms should upgrade their audit technology and develop audit tools tailored to AI-generated content. For example, KPMG's AI Disclosure Audit Module can verify the authenticity of generated content by comparing model output with original data. An "AI Governance Audit" component should be added to the audit process, focusing on verifying a company's internal control system for AI disclosures, including data security systems, algorithm review mechanisms, and accountability rules. Furthermore, specialized AI training for auditors should be strengthened to enhance their ability to identify AI technology risks and ensure that audits effectively cover AI-related disclosure risk points.

7. Conclusion

This paper, drawing on empirical case studies from multiple industries and academic research, analyzes the dual impact and mechanisms of GPT-like generation technologies on the quality of corporate financial information disclosures. Research has found that this technology can improve disclosure quality by enhancing information accuracy, eliminating redundant content, and strengthening compliance responses. Practices at companies like Amazon and Oracle demonstrate that standardized application can increase disclosure efficiency by over 40% and improve information readability by 35%. However, this also presents risks such as "AI whitewashing," algorithmic black-boxing, and data leakage. Case studies like AllHere confirm that technology can become a new vehicle for financial fraud, exacerbating information asymmetry. The divergence of these dual impacts is driven by multiple factors: the maturity of a company's technology application determines the baseline level of the effect, the sophistication of its governance structure moderates the direction of the effect, and the external regulatory environment forms the constraint boundary. The dynamic alignment of these three factors ultimately determines the net effect of technology on disclosure quality. This conclusion transcends the single-technology determinism and reveals the core logic of the interactive relationship between "technology characteristics and the governance environment" in determining the effect. Based on this research, this paper proposes a three-dimensional collaborative governance framework: companies need to establish a "human-machine collaboration" application mechanism and a full-chain traceability system; regulators should improve technology disclosure rules and build a technology regulatory system; and audit firms need to upgrade their specialized audit capabilities. The combined efforts of these three factors can achieve the goal of "amplifying positive effects while containing negative risks." This study is limited by data availability, and quantitative measurement of the dual impact was not conducted. Future work could incorporate financial data from listed companies to construct econometric models linking technology application intensity and disclosure quality, further analyzing the differential effects across industries and company sizes. Overall, the impact of GPT-based generation technologies on disclosure quality is malleable. By improving governance systems, the full value of technology can be unlocked, promoting an optimized information environment for the capital market.

References

[1] Yao Jinlan. The impact of artificial intelligence technology on corporate financial control [J]. China Market, 2025, (27): 121-124. DOI: 10.13939/j.cnki.zgsc.2025.27.029.

[2] Sriram H K. Integrating generative artificial intelligence into financial reporting systems to achieve automated insights and decision support [J]. SSRN 5232395, 2022. [

[3] Gao Lu. Discussion on the integration of AI technology in enterprise financial management system in the digital era [J]. Time-honored Brand Marketing, 2025, (15): 79-81.

[4] Li Jianping, Shen Yangfang, Sun Jinwen, et al. Research and practice of RPA+AI application in enterprise finance [J]. International Business Accounting, 2025, (13): 8-11+16.

[5] Lopez-Lira A. Prediction advantage: using generative artificial intelligence and ChatGPT to surpass the market in financial forecasting [M]. John Wiley & Sons, 2024.

[6] Sriram H K. Integrating generative artificial intelligence into financial reporting system to achieve automated insights and decision support [J]. SSRN 5232395, 2022.