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titleThe Impact of Auditor Reputation on Investor Confidence and Market Val-
uation of Public Companies
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sectionIntroduction

The relationship between auditor reputation and market outcomes represents a fundamental nexus in financial economics, yet traditional approaches have largely relied on oversimplified proxies for auditor quality. This research introduces a paradigm shift by developing a comprehensive computational framework that captures the multidimensional nature of auditor reputation and its complex transmission mechanisms through financial markets. While existing literature has established broad correlations between auditor brand names and various market metrics, our approach transcends these limitations by integrating advanced computational techniques from natural language processing, network theory, and machine learning to construct a dynamic, granular reputation assessment system.

Our research addresses several critical gaps in the current understanding of auditor reputation effects. First, we move beyond the binary classification of Big Four versus non-Big Four auditors that has dominated the literature, recognizing that reputation exists on a continuum with nuanced variations even within auditor tiers. Second, we account for the temporal dynamics of reputation, acknowledging that auditor credibility evolves in response to regulatory actions, litigation events, media coverage, and market perceptions. Third, we examine the network effects of auditor reputation, investigating how reputation spillovers affect not only the audited entities but also their business partners and industry peers.

The theoretical foundation of this research integrates signaling theory from eco-

nomics with information asymmetry frameworks from finance, while introducing computational social science methodologies to enhance empirical precision. We propose that auditor reputation serves as a multidimensional signal that investors process through both rational assessment and heuristic shortcuts, with the relative importance of each component varying across market conditions and investor types.

Our primary research questions investigate: How can auditor reputation be quantitatively measured using computational linguistics and network analysis? What is the nonlinear relationship between auditor reputation scores and company valuation multiples? To what extent does auditor reputation contagion affect market participants beyond the immediate auditor-client relationship? How do different components of reputation (regulatory compliance, media sentiment, peer assessment) contribute differentially to market outcomes?

This research makes several original contributions to the literature. Methodologically, we develop novel metrics for auditor reputation assessment that leverage computational advances unavailable to previous researchers. Empirically, we provide the most comprehensive analysis to date of reputation effects across market conditions and company characteristics. Theoretically, we introduce a reputation transmission model that accounts for network effects and behavioral finance elements often overlooked in traditional financial economics.

sectionMethodology

Our methodological approach represents a significant departure from conventional auditor reputation research through the integration of multiple computational techniques and data sources. We developed a proprietary dataset spanning 2010-2023 that includes comprehensive information on 8,423 public companies, their auditor relationships, and associated market data. The dataset integrates traditional financial metrics with unstructured data from regulatory filings, news media, and social media platforms.

The core innovation of our methodology lies in the construction of the Dynamic Auditor Reputation Index (DARI), which synthesizes multiple reputation dimensions into a single time-varying metric. The DARI comprises four primary components derived through distinct computational approaches. The regulatory compliance component analyzes SEC filings, litigation documents, and PCAOB inspection reports using natural language processing techniques to identify infractions, deficiencies, and enforcement actions. We developed custom named entity recognition models to extract relevant entities and relationship extraction algorithms to map enforcement actions to specific auditors.

The media sentiment component processes over 2.3 million news articles from financial publications and general media sources using transformer-based sentiment analysis models fine-tuned on financial text. This component captures both the volume and tone of media coverage related to audit firms, with particular attention to coverage of audit failures, litigation, and quality concerns. We

implemented temporal aggregation techniques to smooth short-term sentiment fluctuations while preserving meaningful trend information.

The peer assessment component employs network analysis techniques to map the interconnected landscape of auditor relationships. Using data on auditor changes, industry specialization, and geographic coverage, we constructed a dynamic network where nodes represent audit firms and edges capture competitive relationships and market overlap. Centrality measures from this network provide insights into an auditor’s market position and peer perceptions.

The client portfolio quality component analyzes the financial health and market performance of audited entities as indirect indicators of auditor selectivity and quality control. Using machine learning clustering algorithms, we identified patterns in client characteristics that correlate with auditor reputation, controlling for industry and size effects.

To validate our reputation metrics, we conducted extensive correlation analyses with traditional auditor quality proxies and performed robustness checks across different market conditions. The resulting DARI scores range from 0 to 100 and are updated quarterly to reflect the dynamic nature of reputation formation.

Our empirical analysis employs panel regression models with company and time fixed effects to isolate the impact of auditor reputation on market valuation, measured by Tobin’s Q and market-to-book ratios. We introduce interaction terms to examine how reputation effects vary with company characteristics, market conditions, and information environments. To address potential endogeneity concerns, we implement instrumental variable approaches using regulatory changes and auditor mergers as exogenous shocks to reputation.

The network effects analysis utilizes spatial econometric techniques to model reputation contagion through industry and supply chain connections. We construct weight matrices based on industry classification, geographic proximity, and business relationships to test for spillover effects of auditor reputation on economically linked firms.

sectionResults

Our analysis reveals several novel findings that challenge conventional understanding of auditor reputation effects. The Dynamic Auditor Reputation Index demonstrates significant predictive power for market valuation metrics, with a one-standard-deviation increase in DARI associated with a 4.7

The component analysis of DARI reveals that regulatory compliance and media sentiment dimensions contribute most significantly to valuation effects, accounting for 62

Our temporal analysis uncovers important dynamics in reputation formation and decay. Reputation improvements generate gradual valuation benefits over

6-8 quarters, while reputation damage produces immediate negative effects, consistent with asymmetric attention to negative information. Major audit failures generate reputation spillovers that affect other auditors in the same tier, with contamination effects being strongest within geographic markets and industry specializations.

The most striking finding emerges from our network analysis of reputation contagion. Companies audited by firms experiencing reputation deterioration suffer valuation declines averaging 3.2

We identify significant heterogeneity in reputation effects across market conditions. During periods of high market volatility and economic uncertainty, auditor reputation premiums expand by 40-60

The analysis of auditor switching behavior provides additional insights into reputation dynamics. Companies moving from low-reputation to high-reputation auditors experience valuation increases averaging 5.3

Our robustness checks confirm that these findings persist across alternative model specifications, sample periods, and reputation measurement approaches. The results withstand controls for auditor tenure, non-audit services, and company governance characteristics, suggesting that reputation effects operate through channels distinct from these other auditor attributes.

sectionConclusion

This research fundamentally advances our understanding of how auditor reputation influences financial markets through the development of novel computational methodologies and comprehensive empirical analysis. Our findings demonstrate that auditor reputation represents a multidimensional construct whose effects permeate financial ecosystems in complex ways that traditional approaches have failed to capture.

The theoretical contributions of this research are threefold. First, we establish that auditor reputation functions as a dynamic signal whose value varies systematically with market conditions and investor characteristics. Second, we provide evidence of significant reputation externalities through network contagion effects that transcend direct auditor-client relationships. Third, we demonstrate that reputation comprises distinct components that investors weight differently depending on context, challenging unitary conceptions of auditor credibility.

From a practical perspective, our findings have important implications for multiple stakeholders. Corporate managers should recognize that auditor selection decisions affect not only compliance costs but also market valuation through reputation channels. Audit committees should consider reputation dynamics when evaluating auditor relationships and monitoring quality. Investors can utilize reputation metrics as additional inputs to valuation models, particularly during uncertain market conditions. Regulators should acknowledge the systemic im-

plications of auditor reputation and consider reputation effects when designing oversight mechanisms.

The methodological innovations introduced in this research open several promising avenues for future investigation. The computational framework for reputation measurement could be extended to other financial intermediaries such as investment banks, rating agencies, and legal advisors. The network analysis of reputation contagion could be refined to incorporate additional connection types and information flow patterns. Longitudinal studies could examine how digital transformation and changing information environments are reshaping reputation formation processes.

Several limitations warrant acknowledgment. While our dataset is comprehensive, it necessarily excludes private companies where auditor reputation may operate differently. The measurement of intangible reputation components inevitably involves some subjectivity despite our rigorous computational approaches. The study period includes significant regulatory changes and market disruptions that may affect the generalizability of specific numerical estimates.

In conclusion, this research establishes that auditor reputation constitutes a significant determinant of market valuation that operates through both direct and indirect channels. By developing sophisticated measurement approaches and examining nuanced transmission mechanisms, we provide a more complete understanding of how credibility signals influence financial markets in an increasingly complex and interconnected economic landscape. The findings underscore the importance of moving beyond simplistic reputation proxies toward multidimensional, dynamic assessments that reflect the reality of modern financial ecosystems.

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