Public Company Auditing Around the Securities Exchange Act*

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Abstract

We explore the landscape of public company auditing around the introduction of the Securities and Exchange Commission (SEC) in 1934. Using a broad sample of historical annual reports spanning several decades, we document that most public companies obtained audits even before the SEC's audit mandate, which limited the mandate's impact on audit rates. We further document that these companies selected their auditors based on characteristics reflecting independence and competence, even before the SEC's mandate. Unlike the limited changes in audit rates and auditor choices, we observe significant changes in the content of audit statements around the introduction of the SEC. These changes, however, appear to reflect concurrent standardization efforts initiated and driven by private sector actors rather than the SEC. Finally, we do not find any significant impact of the SEC's audit mandate on capital-market outcomes. Collectively, our descriptive evidence suggests that the introduction of the SEC, while widely viewed as a sea-change in public company auditing, had a limited impact on both companies' reliance on audits and investors' trust in companies' reports, at least initially.

Keywords: Public Companies, Auditing, Regulation, Securities Exchange Act

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1 Introduction

The auditing of public companies' financial statements is increasingly regulated (e.g., DeFond and Zhang, 2014). This trend reflects the pervasive view that audit regulation is imperative to sustaining trust in securities markets. The validity of this view, however, remains controversial as the economic arguments for audit regulation are unclear and empirical evidence is scarce (e.g., Donovan et al., 2014; DeFond et al., 2018).[1]

Evidence on the need for regulating (and, especially, for mandating) audits of public companies is scarce because they have been regulated ever since the Securities Exchange Act of 1934. Accordingly, most existing studies on the need for audit regulation turn to settings other than the public company setting. In non-corporate or non-profit settings, several studies find evidence that mandatory audits can be beneficial (e.g., Saito and McIntosh, 2010; Grein and Tate, 2011; Duflo et al., 2013; Duguay, 2018). In private company settings, by contrast, recent studies find evidence that mandatory audits primarily impose a cost (e.g., Kausar et al., 2016; Minnis and Shroff, 2017; Breuer, 2018). The implications of these studies for the need to regulate public company auditing remain unclear. For one, the studies yield mixed results. For another, they investigate settings characterized by vastly different agency issues compared to those faced by public companies.

In this paper, we explore the landscape of public company auditing around the introduction of an audit mandate by the Securities and Exchange Commission (SEC) in 1934, an event which is widely viewed as a sea-change in public company auditing. By gathering descriptive evidence on public companies' audit rates, auditor choices, audit services, and capital-market outcomes before and after the SEC's regulatory intervention, we aim to inform the debate on the need for regulating their financial statement audits.

In theory, the need for regulating the audits of public companies is not apparent. Fama and Jensen (1983a,b), Watts and Zimmerman (1983), and Ball (1989), for example, suggest

[1] For a recent example, see the debate on internal control audits required under Section 404(b) of the Sarbanes-Oxley Act (e.g., Barth et al., 2019; Posner, 2020).

that public companies have private incentives to obtain independent audits. They argue that public companies, characterized by the separation between ownership and control, stand to benefit from reduced agency frictions between managers and investors. Moreover, DeAngelo (1981) suggests that auditors have private incentives to provide *independent* audits. She argues that auditors, even though paid by management, are reluctant to give in to management's demands for bias or partiality, because they fear damage to their reputation and loss of other clients.

To justify regulation, the literature advances two main reasons why auditing deviates from a normal good, and would therefore be insufficiently provided by unregulated markets. Donovan et al. (2014) and Minnis and Shroff (2017), for example, conjecture that audits could have public good features (e.g., externalities on trust in securities markets), which lead companies to undervalue audits and auditors to under-provide effort. DeFond et al. (2018), moreover, conjecture that audits have credence good features, which make companies reluctant to obtain audits because they (or their investors) cannot judge the value of the audit. Other general reasons for regulation include cost reductions due to increased standardization or reduced duplicative contracting efforts, as well as stricter enforcement and penalties (e.g., Leuz, 2010; Minnis and Shroff, 2017). Notwithstanding these potential reasons for regulation and issues with unregulated markets, it is ultimately an empirical question whether regulation, which comes with its own imperfections, can address these issues more efficiently than market forces (e.g., Demsetz, 1969; Stigler, 1971).

Public company audits were widely unregulated in the U.S. until the Securities Exchange Act of 1934. The act, motivated by the 1929 stock market crash, established a federal securities market regulator, the SEC. This regulator was tasked with enforcing new requirements to disclose audited prospectus (as per the Securities Act of 1933) and audited annual reports (as per the Securities Exchange Act of 1934); requirements which were applicable to companies trading on stock exchanges, but not the over-the-counter (OTC) market. Before these federal mandates, audit requirements were limited to certain industries (e.g., the railroad

companies had been subject to inspection by examiners of the Interstate Commerce Commission since 1906) or set by private actors, such as the NYSE, which had been asking listing companies to commit to annual audits since April 1932 (see p. 19 of Forbes, 1934; Abs et al., 1954). We focus on the time around the SEC introduction because it is commonly viewed as a sea-change in the regulation of public companies' disclosures and audits (Barton and Waymire, 2004). If audit regulation is imperative for the functioning of audit and securities markets, then we should see that this first, major, and discrete change in audit regulation meaningfully affected the audit landscape.

To explore the audit landscape around the SEC introduction, we construct a historical panel tracking a broad sample of public companies over several decades. Our sample consists of U.S. public companies with annual reports available in the archives maintained by *Mergent* and *ProQuest* up until fiscal year 1940. From the companies' reports, we extract audit statements using optical character recognition (OCR) and natural language processing (NLP) techniques. The audit statements provide information on companies' auditors (if any), auditor locations, audit sign-off dates, audit procedures (as reported), and audit opinions. We combine this audit information with information on each public company's location, industry, trading venue, basic financials (size, EPS, dividend policy), and equity-market outcomes, which are provided by the historical databases of *Global Financial Data* (*GFD*) and the *Center for Research on Securities Prices* (*CRSP*).

Our combined sample comprises 1,528 unique companies and 124 unique auditors over more than four decades. Out of the 1,528 companies, 91% trade on stock exchanges (including 56% on the New York Stock Exchange (NYSE)), while the remaining 9% trade on the OTC market. Most of the companies are located in the Northeastern U.S., though our sample includes companies from all parts of the country. On the auditor side, our sample is composed of both small and large auditors, many of which are predecessors of today's dominant auditors (e.g., Price Waterhouse, Ernst & Ernst, Arthur Young, and Touche & Niven). Compared to today's public audit market, the concentration of the audit engagements in our

dataset is modest, with the ten largest auditors account for 68% of the audit engagements.

We begin our exploration of the audit landscape by investigating public companies' propensity to hire auditors. We observe that, while less than 30% (40%) of public companies hired auditors in 1900, the (value-weighted) audit rate steadily increased to about 80% (80%) in 1933, just before the SEC introduction. This high audit rate limited the impact of the SEC's 1934 audit mandate. Our estimates suggest an 8 percentage-point increase in market-wide audit rates, at most, as a result of the mandate. Collectively, these results suggest companies frequently hired auditors, even absent any mandate (consistent with Watts and Zimmerman, 1983). As such, they cast doubt on a need for regulation arising because auditing is a public good, which companies underinvest in. We caution, though, that the mandate forced some large companies to obtain audits. These large companies may have had market-wide externalities; accordingly, our audit-rate results do not per se rule out the need for regulation. However, they do suggest that the impact was likely limited.

Among the public companies with audits, we next explore how they chose their auditors. We find that companies tended to hire auditors with greater client-portfolio sizes and lower client-portfolio concentrations. We further find that companies tended to select auditors which were located closer to their headquarters and specialized in their industries. These findings are consistent with companies favoring auditors exhibiting characteristics reflecting independence (DeAngelo, 1981) and competence (Solomon et al., 1999; Rajgopal et al., 2020). Notably, we find that these characteristics, if anything, mattered more in the period before the SEC than after. These findings cast doubt on a need for regulation arising from auditing being a credence good, whereby companies cannot differentiate between auditors. Even more so, they raise the possibility that regulation may weaken market forces which incentivize companies, on the one hand, to choose independent and competent auditors and incentivize auditors, on the other, to ensure independence and invest in competence (Donovan et al., 2014).

After examining companies' audit rates and auditor choices, we turn to an exploration of

audit services provided to public companies around the SEC introduction. As a window to the hard-to-observe practices of auditors, we use the format and content of audit statements. We find that the length of audit statements increased by about 50% around the SEC introduction, whereas the length of the audit process (sign-off date relative to. fiscal year end) did not clearly change. We further find that audit statements shifted, around the SEC introduction, from testifying on companies' financial positions to opining on companies' compliance with generally accepted accounting principles (GAAP). Lastly, we find that audit statements increasingly featured only a few dominant topics prevalent in all reports rather than various company- or auditor-specific topics. Taken together, these findings uncover a push for lower expectations regarding the level of assurance provided by auditors, and a trend toward standardization of companies' financial reporting and their auditing services. Notably, the push for lower expectations gained momentum in 1932 through a prominent tort law case against an auditor of a fraudulent company (*Ultramares Corp. v. Touche*). Similarly, the trend toward standardization primarily reflects concurrent efforts of private sector parties (e.g., the NYSE and the American Institute of Accountants (AIA, now AICPA)), according to historical accounts (e.g., Hatfield, 1936; Wiesen, 1978; Zeff, 1982; Hilke, 1986; Zeff, 2007). Hence, the SEC may have been a catalyst for the standardization and codification of practices in a developing profession, but not its cause. Consistent with this view, we find that many of the changes in audit services had already begun before the SEC introduction and were not limited to companies affected by the audit mandate.

We finally examine public companies' capital-market outcomes around the SEC introduction. In our examination, we differentiate between three distinct company types: voluntary adopters, which adopted audits before the SEC mandate; mandatory adopters, which were forced to adopt audits by the SEC mandate; and never adopters, which comprise non-compliant and non-mandated companies that never adopted audits in our sample period. Compared to voluntary adopters, mandatory adopters are of similar size and profitability, but have lower market liquidity and exhibit a higher propensity to pay dividends. Never

adopters, while substantially larger and more profitable than both voluntary and mandatory adopters, have even lower market liquidity and exhibit an even higher propensity to pay dividends. These univariate differences suggest that companies with audits cater to a different investor clientele (trading-oriented investors) than companies without audits (consumption-oriented investors). They further provide prima facie evidence consistent with voluntary auditing helping the liquidity of a company's stock. However, the univariate differences between the three groups do not change substantially around the introduction of the SEC mandate. Furthermore, a difference-in-differences shows no significant change in capital-market outcomes (market capitalization, returns, liquidity) for mandatory adopters relative to voluntary adopters at that time. Similarly, when we use never adopters as the control group, we only find some weak evidence of improved liquidity for the mandatory adopters.

Our capital-market results are consistent with the view that the SEC's audit mandate had no significant effect on the mandatory adopters. Still, they are also consistent with the contrary view that the mandate benefited both the mandatory adopters *and* the other (audited) companies (e.g., due to greater trust in auditing or regulated securities markets). We expect the former view to be more plausible than the latter for a number of reasons. First, the direct effect of an audit mandate on the mandated company's capital-market outcomes should likely dominate any indirect effect on other companies' capital-market outcomes. In this case, we should observe a significant difference-in-differences effect, which we do not. Second, we would expect market-wide externalities to primarily manifest in the regulated markets. We, however, find similar trends in capital-market outcomes around the SEC introduction for companies trading on the regulated exchanges and those trading on the unregulated OTC market. Lastly, we note that only a small share of the market, even in value-weighted terms, was effectively forced by the mandate to be audited. Collectively, these findings cast doubt on the importance of SEC audit regulations to capital-market outcomes for both mandated companies and the market as a whole.

In sum, our descriptive evidence provides little support for the view that audit regulation

is central for the functioning of public companies' auditing and capital markets. Instead, it supports the view that public company auditing, though frequently regulated, is not a product of regulation (e.g., Watts and Zimmerman, 1983; Buijink, 2006). It does *not* imply that public company auditing does not add value though. To the contrary, our evidence suggests that audits were sufficiently valuable to be widely adopted and associated with greater capital-market access even without regulation. Our evidence that the SEC mandate had, at best, a limited impact on capital-market outcomes merely indicates that there appears to be little benefit, for individual companies and capital markets as a whole, to forcing audits on companies that would not choose them voluntarily.

Our paper contributes to the literature on the regulation of auditing, especially audit mandates (e.g., DeFond and Zhang, 2014; Minnis and Shroff, 2017; Vanstraelen and Schelleman, 2017). It informs the controversial debate about the need for audit regulation (e.g., Donovan et al., 2014; DeFond et al., 2018) by examining the unregulated auditing landscape in the 1930s and its changes with the advent of federal audit regulation. Consistent with recent private company evidence, our paper suggests a limited role for auditing regulation (e.g., Dedman et al., 2014; Baylis et al., 2017; Minnis and Shroff, 2017; Breuer, 2018). Notably, it extends the private company evidence to the setting of large, economically important public companies for which regulators around the world appear to see the need for regulation.

Our paper adds to the literature on the impact of the SEC introduction. This literature documents that the SEC had a limited impact on companies' disclosure, corporate fraud, and investors' trust in capital markets (e.g., Benston, 1969, 1973; Stigler, 1971; Ely and Waymire, 1999; Daines and Jones, 2012).[2] Our paper complements it by specifically exploring the SEC's audit mandate and its implications for companies' audit practices. Notably, the existing evidence on auditing in the pre-SEC era is typically limited to audit rates collected for a single cross-section at a given point in time or companies listed on the NYSE

[2]Several studies criticize this evidence though and argue in favor of the SEC (e.g., Friend and Herman, 1964; SEC, 1977; Seligman, 1983; Fox, 1999; Fox et al., 2003). Most recently, Binz and Graham (2020), improving upon prior literature with better data and a difference-in-differences design, document evidence of increased short-window reactions to earnings announcements after the SEC introduction.

(which had been asking for audits from listing companies since 1932) (e.g., Zeff and Fossum, 1967; Benston, 1969; Chow, 1982; Merino et al., 1994; Barton and Waymire, 2004). Our paper extends this evidence thanks to our novel data, which allows painting a detailed picture of the auditing landscape in the early 20th century. Our data covers a broad sample of companies, which includes companies traded on unregulated OTC markets. This feature not only provides us with a representative cross-section of companies, but also with a natural control group. In addition, our data spans several decades. This feature allows us to uncover long-run trends in the audit market around the regulatory change. Finally, our data comprises the texts of companies' audit statements. This features opens a window to auditors' practices and services of the time.

Our paper is closely related to the literature on unregulated markets. Several recent studies document that unregulated capital markets, including the OTC market (Brüggemann et al., 2018), the peer-to-peer lending market (Verstein, 2011), the market for initial coin offerings (Bourveau et al., 2019), and the equity crowdfunding market (Schwartz, 2018) function even in the presence of information asymmetries. Absent regulation, information asymmetries are addressed by private contracting solutions such as voluntary disclosure (Bourveau et al., 2020) and certification (Jamal and Sunder, 2011). In line with these studies, our paper suggests public company auditing is a prominent *private* contracting solution, which alleviates information frictions in capital markets. It does not appear to be a market which itself is in obvious need of regulation.

2 Conceptual Underpinnings

Public companies are characterized by the separation of ownership and control (Berle and Means, 1932).[3] The separation gives rise to an agency conflict between investors, who own the companies' resources, and management, who controls the resources (Jensen and Meckling,

[3]In the U.S., this separation occurred as early as in the late 19^{th} century and by 1930 the number of individuals owning stock in listed companies reached 10 million (Coffee, 2010).

1976). The agency conflict is costly to management, because investors, anticipating the diversion of their resources, are reluctant to supply them. As a result, management has an incentive to reduce agency costs.

Management can reduce agency costs by reporting the company's financial position and performance to investors (Watts and Zimmerman, 1986; Kothari et al., 2010). For such reporting to be effective, it needs to be credible. Management can bolster the credibility of its financial reporting by hiring a third-party auditor to check the reporting on behalf of the company's investors (Fama and Jensen, 1983a,b; Watts and Zimmerman, 1983; Ball, 1989).

Third-party auditors need to be independent and competent to provide effective assurance to investors. The independence of auditors is important to prevent auditors from giving in to management's demands for bias or partiality. Notably, auditors, despite being paid by management, have incentives to resist a given management's demands, because a tarnished reputation jeopardizes their business with all their other clients. Accordingly, larger auditors with dispersed client portfolios tend to be more independent (DeAngelo, 1981). The competence of auditors is important to ensure that they are in a position to critically and efficiently evaluate management's reporting procedures and assumptions. Following that reasoning, auditors with industry- and location-specific knowledge tend to provide higher quality audits (Solomon et al., 1999; Rajgopal et al., 2020).

The above arguments suggest that an independent audit is a normal good, demanded by companies with agency costs and supplied by third-party auditors (Donovan et al., 2014). In this case, an unregulated audit market yields the optimal level of auditing. To justify the regulation of the audit market, proponents argue that an independent audit is a special good, not a normal one. They, for example, argue that an independent audit is a public good, because it provides externalities (e.g., trust in capital markets) (DeFond and Zhang, 2014). In this case, an unregulated market underprovides auditing. They also argue that an independent audit is a credence good, because the value of the auditor's service cannot easily be discerned by companies and their investors (DeFond et al., 2018). In this case, an

unregulated market again underprovides auditing. Other reasons typically advanced in favor of regulation include cost reductions due to increased standardization or reduced duplicative contracting efforts, as well as stricter enforcement and penalties (e.g., Leuz, 2010; Minnis and Shroff, 2017).

While the audit market left to its own devices may deliver inefficient levels of auditing, it is unclear whether regulation, which comes with its own imperfections, can address these issues more efficiently than market forces (Demsetz, 1969). Regulators grapple with informational constraints, which often times are worse than those faced by companies and their investors. Accordingly, they frequently resort to one-size-fits-all regulations. These regulations neglect differences in companies' needs for audits, putting excessive burdens on some companies (Breuer, 2018). Similarly, they mute market forces which incentivize auditors to differentiate their services and allow companies to signal their type (Kausar et al., 2016). Regulators can also be captured by well-organized interested parties, which advocate for regulation to protect their rents rather than improve the functioning of the audit market (Stigler, 1971).[4] This concern appears particularly relevant in the case of auditors, which are not only well-organized, but also lobby for a politically convenient good (i.e., trust, assurance, and transparency) (e.g., Wiesen, 1978). Accordingly, the need for regulation of public company auditing is ultimately an empirical question.

3 Institutional Background

In the early 20th century, the number of public companies rapidly increased with the expansion of public securities markets in the U.S. (Rajan and Zingales, 2003). At the same time, the U.S. audit profession, influenced by its counterpart in the United Kingdom, developed and matured (see also Montgomery, 1913; Moss, 1914; May, 1926). Its maturity is

[4]In that spirit, a prominent lawyer, in response to a public endorsement of securities regulation by William L. Douglas, a Yale law professor, in 1933, raises the concern that "political objections" may interfere with the application of securities regulation such "that the consequences would be far more harmful than the benefit which would result in protecting the investors."

exemplified by Montgomery's *Audit Theory and Practice*, the leading textbook on auditing principles and practices in the U.S. at the time, which was first published in 1912 and issued its fourth edition by 1933. In the absence of authoritative accounting and audit standards, textbooks and private initiatives by professional associations created de facto standards for the profession (e.g., Nouri and Lombardi, 2009). Most notably, the AIA (now AICPA) had collaborated with the NYSE since the 1920s to harmonize accounting and auditing practices (e.g., Zeff, 2007). This harmonization project gained momentum in response to a prominent tort case brought against an auditor of a fraudulent public company. The case, *Ultramares Corporation v. Touche* (1932), established that auditors are liable for gross negligence, not just fraud. It resulted in a reckoning for the profession by revealing the gap between the level of assurance expected by investors and the level actually provided by auditors (Carmichael and Winters, 1982). This reckoning propelled leading auditors' efforts to limit the auditors' service to opining on companies' compliance with accounting rules and practices instead of certifying companies' financial positions (Wiesen, 1978).

The audit and securities markets were widely unregulated at the federal level up until 1933. Existing disclosure and auditing requirements either only applied within certain states, industries, or exchanges. A number of states, for example, introduced *Blue Sky Laws*, which created issuer liability and required prospectus disclosures for newly listed companies (e.g., Macey and Miller, 1991; Mahoney, 2003). However, these laws were typically limited in scope, weakly enforced, and easy to circumvent (e.g., by issuing in other states) (Loss, 1951). Besides state laws, there were a number of industry-specific disclosure and auditing requirements (e.g., targeting the transportation industry). The Interstate Commerce Commission, for example, had required inspections of railroad companies since 1906. In addition, in 1932 the NYSE, the primary stock exchange, started requiring listing companies to provide audited financial reports.

The Securities Acts of 1933 and 1934, motivated by the 1929 stock market crash, marked a notable change in the federal regulation of audit and securities markets (Barton and Waymire,

2004). The Securities Act of 1933 required newly listed public companies, with securities traded on centralized exchanges (not the OTC market), to disclose audited prospectuses. The Securities Exchange Act of 1934 extended the disclosure requirements to public companies' annual reports. It also established a federal regulator, the Securities and Exchange Commission (SEC), which was tasked with enforcing the new requirements. Most relevant to this study, the 1934 Act gave the SEC power to require audits of public company annual reports, a requirement that it implemented within months of the Act's passage.[5] The SEC was further granted the power to regulate acceptable accounting and auditing standards. As a result of limited expertise and resources as well as successful lobbying by the audit profession, however, the SEC relied on independent instead of federal auditors to inspect companies' financial reports and left the definition of acceptable accounting and auditing practices to the profession, at least initially (Wiesen, 1978). Only after a prominent fraud case (the *McKesson & Robbins* scandal) in 1938, did the SEC reform corporate governance and audit practices.

The SEC is regarded as one of the most successful federal regulators (McCraw, 1984). Accordingly, we expect the first, major, and discrete change in federal audit regulation to meaningfully affect the audit landscape if audit regulation is imperative for the functioning of audit and securities markets.

4 Historical Data

We construct a historical panel tracking a broad sample of public companies over several decades. Our sample construction proceeds in several steps. We first gather photocopy scans of all U.S. public companies' annual reports available in the archives maintained by

[5]Section 13(a)(2) of the 1934 Securities Exchange Act, as originally enacted, stated that annual reports would be certified by independent public accountants "if required by the rules and regulations of the [Securities and Exchange] Commission." Securities and Exchange Commission Release No. 66, promulgated on December 21, 1934, makes clear that the SEC had imposed the audit requirement by that time.

Mergent and *ProQuest* up until fiscal year 1940.[6] We next convert the scans into machine-encoded text via optical character recognition (OCR). We then search the texts for audit statements and characteristics, using natural language processing techniques (NLP). From these statements, we extract information on companies' auditors (if any), auditor locations, audit sign-off dates, audit procedures (as reported), and audit opinions again using NLP. We finally combine the audit information with information on each public company's location, industry, trading venue, basic financial information (size, EPS, dividend policy), and equity-market outcomes obtained from the historical databases of *Global Financial Data* (*GFD*) and the *Center for Research on Securities Prices* (*CRSP*). Appendix A defines the variables in our data and Appendix B lists the search terms used in our NLP approach.

Our combined sample comprises 1,528 unique public companies over more than four decades. Table 1 documents that *Mergent* covers 1,190 of these companies, whereas *ProQuest* covers 590 of them. The overlap of the two databases is limited (234 companies), which makes combining the two archives particularly useful. While *Mergent* comprises a broader cross-section of companies than *ProQuest*, it spans a shorter time period (1892–1940) than *ProQuest* (1844–1940). For both archives, most companies are observed in the latter part of our sample period (1910–1940), consistent with the increasing prevalence of public companies during the early 20th century (Rajan and Zingales, 2003). Despite any differences in covered companies and time periods, the distribution of sectors, tarding venues, and regions is similar across the two archives, bolstering our confidence that our sample covers a reasonably representative set of public companies.

Out of our 1,528 unique companies, the majority operates in either the industrial (19%), consumer discretionary (18%), or the materials (17%) sector. 91% of our sample companies trade on stock exchanges, while the remaining 9% trade on the OTC market. Among the various trading venues, the NYSE is the largest venue, with 56% of our sample companies listed on it. Unsurprisingly, the majority of our sample companies are located in the North-

[6]Most of the original annual reports in the archives of *Mergent* and *ProQuest* are held by public libraries in the U.S. (e.g., the Cleveland Public Library).

East region of the U.S. (47%), closely followed by the Mid-West (40%). The remaining companies are located in the West (7%) and South (6%) of the U.S.

The public companies in our sample are audited by 124 unique auditors, a remarkable number compared to today's concentrated audit market for public companies. Our sample comprises both large and small auditors. The ten largest auditors in our sample account for 68.2% of the audit statements in our data. They include several familiar names and predecessors of today's auditors. As of 1927, Price Waterhouse (23.2%) was the largest auditor followed by Ernst & Ernst (14.1%); Peat Marwick Mitchell (10.1%); Arthur Young (8.7%); Haskins & Sells (8.1%); Lybrand, Ross Bros. & Montgomery (6.7%); Touche & Niven (4.4%); Barrow Wade Guthrie (2.7%); FW LaFrentz & Co. (2.7%); and Arthur Andersen (2.4%). This list closely corresponds to the historical account in Zeff and Fossum (1967) and Merino et al. (1994). It comprises auditors of British origin (Price Waterhouse, Peat Marwick Mitchell, and Haskins & Sells) as well as newly founded American auditors (Ernst & Ernst; Arthur Young; Lybrand, Ross Bros. & Montgomery; Touche & Niven; Barrow Wade Guthrie; FW LaFrentz & Co.; and Arthur Andersen). An overview of our sample's 15 largest auditors, and their number of engagements is presented in Appendix C.

5 Findings

5.1 Audit Rates

We start our exploration of the auditing landscape around the SEC introduction by examining public companies' propensity to hire an auditor. In Figure 1, we plot the fraction of public companies with an audit over the period 1900 to 1940. We observe that less than 30% of public companies obtained an audit in 1900. This rate, however, increased over time, reaching 80% in 1933, just before the SEC audit mandate. This high audit rate is consistent with historical accounts in Wiesen (1978) and cross-sectional evidence in Benston (1969) and Barton and Waymire (2004), validating our NLP-based audit rate measure. Notably,

we do not observe a stark jump in the audit rate after the SEC imposed its audit mandate in 1934. While the audit rate increased around those years, the increases do not appear abnormal when seen in the context of the long-run trend observed over decades. We observe similar trends for the market-capitalization-weighted fraction of audited companies, with the exception of a more notable increase after 1934. This increase, however, is still only about 10% of the entire market capitalization. We also caution that the value-weighted fraction in general is more variable, because individual (especially large) companies have greater influence on it than on the equally-weighted fraction.

We corroborate the graphical impression with statistical tests for changes in the audit rate around 1934 in Table 2. In Panel A, we find that the average audit rate before 1934 is 71.5% (column 1). After 1934, this rate is about 15.6% higher. Controlling for the long-run time trend observed in Figure 1, the estimated increase shrinks to 4.5% (column 2). Further controlling for firm characteristics does not materially change this estimate (columns 3 and 4). Taken together, the time-series evidence in Panel A suggest that the impact of the SEC's audit mandate on the market-wide audit rate was limited, ranging from 4.3 to 5.9%, after controlling for the long-run time trend in the audit rate.

To sharpen the identification of the SEC impact, we test for differential changes in audit rates of companies subject to the mandate vis-a-vis companies not subject to the mandate (the OTC market[7] and the transportation sector[8]) around 1934. We also compare companies listed on the NYSE to those listed on other exchanges (excluding OTC companies), since the NYSE had been asking listing companies to commit to annual audits since April 1932 (see p. 19 of Forbes, 1934). We find that, relative to the respective control groups, mandated companies have an increased, but statistically insignificant average audit rate of 5.7% in column 2 (sample: full; control: OTC) and 7.9% in column 4 (sample: non-OTC; con-

[7]Section 13 of the original Securities Exchange Act, which allows the SEC to require audits, applies to "[e]very issuer of a security registered on a national securities exchange."

[8]The SEC did not require audits for railroads or other entities regulated by the Interstate Commerce Commission (17 C.F.R. §240.13b-1(b) (1938)). For almost thirty years, these companies had already been subject to inspection by examiners from the Interstate Commerce Commission.

trol: transportation sector). Column 6 shows that non-NYSE companies, relative to NYSE companies, have an increased, but insignificant, rate of 3.4%. These difference-in-differences results confirm our time-series evidence.

Collectively, our audit-rate results suggest that the SEC's audit mandate had a limited impact on market-wide audit rates. The impact was limited because, even absent a mandate, there was a long-run trend toward public company auditing, which led to pervasive auditing of public companies by the time the SEC was introduced.

5.2 Auditor Choices

We next explore how the companies chose their auditors.[9] This exploration aids our understanding of whether companies were able to differentiate between the offerings of various auditors, and purposefully select auditors with characteristics (e.g., independence and competence) which promised greater levels of assurance, and therefore greater value to investors relying on the company's financial statements.

We generate a dyadic data structure which includes one observation for each possible company-auditor pairing in a given year, to study the characteristics determining companies' auditor choices. In Table 3, we regress an indicator variable, which is equal to '1' for a given company's actual auditor (and '0' for all other possible auditors) on company (e.g., size), auditor (e.g., portfolio size), and company-auditor-specific characteristics (e.g., distance between company and auditor).[10]

In Panel A, we first examine the determinants of companies' auditor choices across our entire sample period. We find that company characteristics, such as size, earnings per share, and an indicator for dividend paying companies, do not explain companies' auditor choices. Accordingly, larger companies, for example, do not systematically choose one auditor (e.g.,

[9]The match between companies and auditors is not a one-sided choice by companies. Auditors, however, are less likely to actively choose their clients (as more is typically better) than companies, which only choose one auditor out of several options. Accordingly, we, for simplicity, refer to our match analysis as an analysis of companies' auditor choice.

[10]The sample across the different specifications in Table 3 is restricted to companies with audited financial statements in a given year and information on company characteristics (e.g., earnings per share).

Price Waterhouse) over another (e.g., Ernst & Ernst). By contrast, auditor and company-auditor-specific characteristics are significantly associated with companies' auditor choices. In particular, we find that public companies are more likely to choose auditors with larger client portfolios and lower client-portfolio concentration. This is consistent with companies preferring to pick auditors with lower dependence on any one of their clients. We further find that public companies are more likely to choose auditors with offices located closer to their headquarters and auditors specialized in their respective sectors. This is consistent with companies preferring auditors with greater expertise in their lines of business and their local markets.

In Panel B, we next examine whether companies' auditor choices differ before and after the Securities and Exchange Act of 1934. We find that auditors' portfolio size, concentration, distance, and specialization all matter more in the period before the Securities and Exchange Act than after. This can be inferred from the fact that the coefficients tend to take the opposite sign when we interact the company, auditor, and company-auditor characteristics with a post-1934 indicator. For example, *Client-Auditor Distance* has a coefficient of -0.005, but its interaction with *Post 1934* has a coefficient of the opposite sign: 0.001. In robustness tests, we obtain similar results as reported in both Panels A and B after excluding each company's own impact on its auditor's size, concentration, distance, and industry specialization measures, reducing concerns that the documented associations may arise for purely mechanical reasons. We caution though that, while the main results documented in Panel A are very similar in size and statistical significance, the time-series changes documented in Panel B are not always significant in the robustness tests.

Taken together, the auditor-choice results are consistent with public companies favoring auditors with characteristics reflecting independence (large, dispersed portfolio; DeAngelo, 1981) and competence (local and industry expertise; Solomon et al., 1999; Rajgopal et al., 2020). Auditors with these characteristics can be expected to provide greater assurance to companies' investors. Companies' attention to these characteristics, in turn, can be expected

to incentivize auditors to ensure their independence and invest in their competence. Interestingly, public companies appear to pay special attention to auditors' independence and competence in the period before the SEC. After the SEC introduction, these characteristics appear, if anything, less relevant for companies' auditor choices.

5.3 Audit Services

Besides audit rates and auditor choices, we examine the services provided by public company auditors around the SEC introduction. This examination allows us to paint a more complete picture of the auditing landscape and the SEC's impact on it. While the SEC appears to have had a limited impact on audit rates and auditor choices, it may have had a substantial impact on the audit services and practices at the time, as conjectured in Benston (1969).

We exploit our textual data to learn about audit services and practices from the characteristics and content of public companies' audit statements. While clearly limited, focusing on the audit statements attached to the annual reports provides us with a window to auditors' notoriously hard-to-observe services and practices, enabling the first large scale investigation of reported services and practices in the early audit market.

In Table 4, we examine changes in the characteristics and content of audit statements around the SEC introduction in 1934. In Panel A, we document that audit statements significantly increased in length after 1934 (an increase of around 49% more words in column 4). Despite an increase in length, we do not find a clear change in the timing of the audit statement. At best, we find a marginal increase in the time between companies' fiscal year ends and auditors' sign off dates (an increase of 8% more days in column 4). These findings suggest that, while audit statements became longer after 1934, the underlying work may not have increased significantly. This is reinforced by untabulated results that show that the number of certified public accountants (CPAs) per public company has not significantly increased after the introduction of the SEC, once we control for the time-trend. This suggests

that auditors have not contracted more CPAs to increase the supply of labor, in order to do more work in the same time window.

To better understand the drivers of the increased audit statement length, we next investigate specific changes in the content of the audit statements. We use two approaches to dissect the content. Our first supervised approach involves reading a sample of audit statements to identify key terms (e.g., financial position, accounting standards, etc.). Equipped with manually selected terms, we search all statements for these terms. (Appendix B summarizes the search terms.) Our second unsupervised approach uses a standard topic modelling approach, Latent Dirichlet Allocation, to uncover common clusters of terms appearing in the audit statements. Based on the terms in each cluster, we assign a descriptive topic name, for illustrative purposes. (The caption to Figure 2 summarizes the terms per topic and our labels.)

In Panel B, we find that auditors shifted from attesting companies' financial (or economic) position to opining on companies' compliance with GAAP around 1934. A clear example of this shift can be found in Appendix D where the same auditor auditing the same company changed from expressing an opinion on financial condition in 1932 to expressing an opinion on compliance with GAAP in 1935. We further find that audit statements became more standardized after 1934, as evidenced by an increased concentration of topics discussed in companies' audit statements and an increased probability to observe one dominant topic.

In Figure 2, we plot the various topics over time. Consistent with our regression results in Panel B, we observe a greater plurality of topics discussed in earlier years, and an increasing convergence to a few topics over time. The dominating topics emerging in the later years are related to depreciation and generally accepted accounting principles. Notably, these patterns appear to reflect concurrent developments in the profession (e.g., Hatfield, 1936; Hilke, 1986). The trend toward harmonized practices, the use of depreciation, and the promulgation of GAAP all started before the SEC (see also Figure 3).

Taken together, we uncover notable changes in the characteristics and content of audit

statements around 1934. Most notably, we observe a trend toward standardized audit statements and a shift toward attesting compliance with accounting standards. These trends, however, are already observed before 1934, suggesting they cannot necessarily be attributed to the impact of the SEC. Rather, the changes in audit services and practices appear to reflect concurrent standardization efforts driven by private sector parties.

Indeed, the NYSE and the American Institute of Accountants collaborated to produce a suggested standard audit statement in January 1934, months before the passage of the Securities Exchange Act. This standard statement was the product of correspondence which had begun before even the passage of the Securities Act of 1933.[11] Though optional, this standard audit statement came into general use (see p. 15 of Montgomery, 1940). The change in content for the audit statements in our sample was likely driven by this private sector collaboration, rather than direct action by government regulators. Consistent with this interpretation, we do not find that companies regulated by the SEC experienced different trends than other companies outside of the purview of the SEC. In a series of difference-in-differences in Panel C of Table 4, we do not observe any significant differences in the changes of mandated companies' audit statements over time compared to the changes in audit statements of companies traded on the unregulated OTC market.

Our findings align with historical accounts that the SEC primarily focused on enforcing the audit mandate rather than shaping auditing practice, at least initially. According to those accounts, the SEC only intervened in audit practices after the *McKesson & Robbins* scandal in 1938. Notably, we observe a stark increase in standardization and the use of *certified* public accountants after 1938 (Figure 2). In sum, our evidence suggests that the SEC, while possibly a catalyst for contemporaneous standardization efforts of the profession, had a limited *direct* impact on audit services and practices in its early years.

[11] This correspondence is preserved in a published collection, which shows the standard audit statement (see p. 47 of Forbes, 1934).

5.4 Market Quality

We finally investigate the capital-market outcomes (i.e., market capitalization, returns, and liquidity) associated with public companies' auditing around the SEC introduction. This investigation sheds light on the usefulness of public company auditing for improving companies' capital-market access and the functioning of capital markets as a whole.

Our investigation proceeds in three steps. We first examine differences in companies' characteristics and capital-market outcomes between voluntarily, mandatorily, and never audited companies (including non-compliant and non-mandated companies) around the SEC introduction (seven years before and seven years after).[12] In Panel A of Table 5, we show the distribution of these three types of companies by trading venue. In Panel B, we provide descriptive statistics for and univariate differences between these groups. Focusing on the pre-1934 sample, which pre-dates the SEC, we find that mandatory adopters are of similar size and profitability as voluntary adopters, but smaller and less profitable than never adopters. Mandatory adopters are more likely to pay dividends than voluntary adopters, but less likely than never adopters. With respect to capital-market outcomes, we find that mandatory adopters exhibit lower liquidity than voluntary adopters, but higher liquidity than never adopters.

The differences between the voluntary and mandatory adopters in the pre-1934 period suggest that companies with greater financing needs (i.e., smaller companies with lower profitability and dividend frequency) are more likely to rely on auditing. The univariate differences also provide prima facie evidence that auditing is useful in improving companies' access to capital markets, as documented by the fact that securities of voluntary adopters are most liquid in the pre-SEC period. In this vein, we also find that the securities of mandatory adopters experience a significant improvement in liquidity after the SEC mandate. A similar improvement in liquidity, however, is also observed for voluntary adopters, calling for caution

[12]For a subset of the companies classified as non-compliant, we corroborate their status by manually checking their annual reports for audit statements, alleviating concerns that our NLP-based approach fails to detect these companies' audit statements.

in interpreting this time-series change as evidence for the usefulness of *mandatory* auditing.

We next examine the change in capital-market outcomes (e.g., liquidity) of mandatory adopters around the SEC introduction in a difference-in-differences design, controlling for concurrent changes experienced by voluntary adopters. In Panel C, we find no significant evidence that the mandatory adopters experienced improvements in their market values or liquidity (zero return days, zero volume, Amihud illiquidity). Compared to never audited companies, we find some weak evidence of liquidity improvement for mandatorily audited companies. These findings are consistent with a limited impact of mandatory audits on companies' capital-market outcomes and, hence, capital markets as a whole. The difference-in-differences findings, however, can fail to detect significant improvements, if the mandate not only helps the mandated, but also other companies (e.g., voluntary adopters). In this case, we may not detect a significant effect, despite the mandate's beneficial impact on the entire regulated capital market.

To explore the possibility of market-wide improvements, we finally examine the change on capital-market outcomes experienced by all companies trading on regulated markets around the SEC introduction. We compare this change with the concurrent change experienced by companies trading in the unregulated OTC market. In Panel D, we find limited evidence of a significant improvement in regulated markets compared to the unregulated market. While there is some weak evidence of improved liquidity on average (columns 5 and 6), there is little evidence of aggregate liquidity improvements (i.e., when weighting companies with their relative market capitalization within their respective market).[13] Confirming these regression results, we do not observe notable differential trends for the average company traded on regulated vis-a-vis the OTC market around the SEC introduction, nor the aggregate capital-

[13]The weighting is supposed to achieve a measure of aggregate liquidity within the respective markets (OTC v. non-OTC). In the tabulated results, we use fixed weights calculated as of 1927. The use of fixed weights allows us to hone in to changes in aggregate liquidity, while abstracting from changes in market value due to sample composition changes (e.g., new listings). The fixed-weights approach reduces our sample size though. In untabulated results, we find very similar results when using changing weights, which does not restrict our sample size. Allowing for changes in the sample composition yields, if anything, a slight deterioration in aggregate liquidity of the regulated market relative to the OTC market.

market outcomes on these markets in Figure 4.

Collectively, the capital-market results suggest that the SEC's audit mandate had an, at best, limited impact on mandated companies and regulated capital markets.[14] Importantly though, they do not suggest that auditing does not matter. By contrast, they are consistent with *voluntary* auditing helping companies' capital-market access. As such, they explain the high fraction of voluntarily audited companies and echo the earlier finding that companies appear to choose independent and competent auditors, which provide assurance to their dispersed investors.

6 Discussion

Our exploration of the landscape of public company auditing before the SEC introduction suggests public company auditing was flourishing, even absent any federal regulation. Public companies frequently obtained audits from presumably competent and independent auditors. While audit practices were quite diverse, sound practices were promoted early on (e.g., Montgomery, 1913) and refined through the collaboration and coordination of private sector parties, such as the accounting associations and stock exchanges. Consistent with quality auditing, those companies with financing needs frequently purchased audits and boasted higher liquidity of their securities than other companies.

Our investigation of changes in public company auditing around the SEC introduction provides little support for the importance of the SEC introduction for audit markets. The impact on audit markets appears limited because the vast majority of companies already obtained an audit even before the SEC's audit mandate. In addition, the SEC did not appear to intervene into audit practice, at least initially. It primarily appeared to codify existing practices. The SEC started to actively shape audit practice only after a prominent

[14] Consistent with a limited impact on capital markets, we do not observe any improvements of the value relevance of mandatorily audited companies' earnings in untabulated value-relevance tests following Barth et al. (2008). Mandatorily audited companies' value relevance neither increases from the pre- to the post-SEC period, nor relative to other companies (e.g., voluntarily audited companies).

accounting scandal in 1938. It remains unclear though, whether this re-active intervention was successful (e.g., Hail et al., 2018). It is further unclear what the audit market reaction to such a scandal would have been absent the SEC (e.g., Ball, 1980).

In line with a limited impact on audit markets, our exploration provides little evidence to support that the SEC improved mandatorily audited companies' capital-market access or trust in regulated securities markets as a whole. Our evidence echoes earlier findings suggesting that the SEC had a limited impact on companies' fraud and investors' trust in capital markets (e.g., Benston, 1969, 1973; Stigler, 1971). It provides an explanation for such limited impact: auditing was already flourishing before the regulatory intervention (just as companies' disclosures were; Benston, 1969; Hilke, 1986).

To be clear, our descriptive evidence does not imply that the SEC mandate had *no* impact on public company auditing at all or that no institutional safeguards (e.g., the legal system) were needed (e.g., Mills, 1990; Merino et al., 1994). It rather suggests that the scope for federal regulation to aid capital markets by regulating public company auditing was limited given the development and functioning of the audit market in the pre-SEC era. This development was driven by several forces, including companies' financing needs, investors' information demands, stock exchanges' requirements, and courts' rulings. It may also have been aided by the threat of regulatory interventions (e.g., Carmichael and Winters, 1982).

We also want to be clear that our evidence does not mean that public company auditing is useless. To the contrary, by revealed preference, our evidence provides strong support for auditors' pivotal role in moderating agency conflicts between companies' management and investors (e.g., Ball, 1989): many companies hired seemingly competent and independent auditors, and these companies exhibit comparably high levels of liquidity in capital markets.

Although our evidence suggests that the regulation of public company auditing may not be imperative for the functioning of capital markets, such regulation is nevertheless pervasive around the globe. This begs the question why regulators frequently resort to regulating

auditing. A benign explanation resolving this puzzle could be that such regulation primarily codifies existing and developing audit practices. As such, it does not help, but also does not hurt much.[15] A potentially complementary, but less benign explanation could be that the audit (or accounting) profession, a well organized interest group with a politically convenient product ("trust" or "transparency"), leverages regulation to extract and protect rents.

While our empirical evidence cannot differentiate between these explanations for observing regulation, historical anecdotes provide some support for both, the benign and the capture explanation. For one, Wiesen (1978), based on transcripts from congressional hearings and various other historical accounts, suggests that an audit mandate was an easy policy prescription for congress given the already extensive auditing rate, consistent with the benign explanation. For another, he describes that leading auditors had a substantial influence on the SEC rule-making, consistent with the less benign capture explanation. The auditors' expert witnesses, for example, were successful in persuading congress to leave the responsibility of auditing with external instead of federal auditors. They were further successful in lowering Congress' expectations regarding the level of assurance provided by audits.[16] The latter agenda reflects auditors' rising concerns about litigation, which were likely fueled by the attempt of investors to sue an auditor of a fraudulent company (*Ultramares Corp. v. Touche*) in 1932 and auditors' fears of future interventions by the new regulator (e.g., Carmichael and Winters, 1982). While a systematic investigation of the political economy of audit regulation is outside the scope of our study, we view it as a an important next step to further our understanding of public company auditing and its regulation.

[15] Regulatory action may help politicians to ensure their voters' support by signalling awareness/decisiveness and offering regulatory solutions (e.g., after prominent scandals) (e.g., Hail et al., 2018).

[16] A letter, co-signed by four large auditors and addressed to the NYSE in 1933, provides an illustrative example of such lobbying efforts. The auditors argue in favor of a reduced level of verification, which they deem more practical than the responsibilities and expectations initially envisioned by the exchange.

7 Conclusion

We explore the landscape of public company auditing around the introduction of the Securities and Exchange Commission (SEC) in 1934. The introduction of the SEC, which mandated the auditing of public companies trading on centralized stock exchanges, is commonly viewed as a sea-change in the regulation of auditing. To uncover how the SEC shaped the landscape of public companies, we exploit the rich textual data provided in historical annual reports of a broad sample of public companies trading on regulated and unregulated stock markets and spanning several decades.

We find that most public companies obtained audits even before the SEC's audit mandate, which limited the mandate's impact on audit rates. We further document that these companies selected their auditors based on characteristics reflecting independence and competence, especially so before the SEC's mandate. Unlike the limited changes in audit rates and auditor choices, we observe significant changes in the content of audit statements around the SEC introduction. Audit statements became increasingly standardized and shifted from attesting companies' financial position to opining on their compliance with GAAP. These changes, however, appear to reflect concurrent standardization efforts initiated and driven by private sector actors rather than the SEC. Finally, we do not find any significant impact of the SEC's audit mandate on mandatorily audited companies' capital-market outcomes nor regulated capital markets as a whole (e.g., compared to the unregulated OTC market).

Collectively, our descriptive evidence suggests that the introduction of the SEC had a limited impact on companies' reliance on audits and investors' trust in companies' reports, at least initially. Notably, its impact was limited because public company auditing appeared to flourish even in the absence of any (federal) regulation.

Our evidence informs the debate about the need for audit regulation (e.g. DeFond and Zhang, 2014; Donovan et al., 2014; DeFond et al., 2018). It suggests that public company auditing is *not* a product of regulation, consistent with the view expressed in Watts and Zimmerman (1983) and Buijink (2006). As such, it stands in contrast to the popular view

that auditing regulation is imperative for the functioning of audit and securities markets. Nevertheless, we acknowledge that our evidence alone clearly does not settle the debate. Our evidence pertains to a specific audit regulation (primarily an audit mandate) at a specific time (several decades ago). Accordingly, it first and foremost speaks to the need for audit mandates. It casts doubt on the need for such mandates, confirming recent evidence on audit mandates in the private company setting (e.g., Dedman et al., 2014; Baylis et al., 2017; Minnis and Shroff, 2017; Breuer, 2018) and extending it to the realm of large, public companies. By contrast, our evidence does not immediately speak to the need for regulating auditing practices and oversight (e.g., DeFond and Lennox, 2017; Gipper et al., 2019; Shroff, 2019; Vetter, 2020). While the SEC had the power to regulate auditing practices, it widely abstained from doing so during its early years.

References

Abs, G, C Grimstad, R Hay, WA Howe, W La Place, FJ McGurr, and W Serraino, 1954, Historical dates in accounting, *The Accounting Review* 29, 486–493.

Amihud, Yakov, 2002, Illiquidity and Stock Returns: Cross-section and Time-series Effects, *Journal of Financial Markets* 5, 31–56.

Ball, Ray, 1980, Discussion of Accounting for Research and Development Costs: The Impact on Research and Development Expenditures, *Journal of Accounting Research* 18, 27–37.

Ball, Ray, 1989, The Firm as a Specialist Contracting Intermediary: Application to Accounting and Auditing, *Working paper* .

Barth, Mary, Wayne Landsman, Joseph Schroeder, and Daniel Taylor, 2019, Amendments to the Accelerated Filer and Large Accelerated Filer Definitions, *SEC Comment Letter* .

Barth, Mary E., Wayne R. Landsman, and Mark H. Lang, 2008, International Accounting Standards and Accounting Quality, *Journal of Accounting Research* 46, 467–498.

Barton, J., and G. Waymire, 2004, Investor Protection under Unregulated Financial Reporting, *Journal of Accounting and Economics* 38, 65–116.

Baylis, Richard M., Peter Burnap, Mark A. Clatworthy, Mahmoud A. Gad, and Christopher K.M. Pong, 2017, Private lenders' demand for audit, *Journal of Accounting and Economics* 64, 78 – 97.

Benston, George, 1969, The Value of the SEC's Accounting Disclosure Requirements, *The Accounting Review* 44, 515–532.

Benston, George J, 1973, Required Disclosure and the Stock Market: An Evaluation of the Securities Exchange Act of 1934, *American Economic Review* 63, 132–155.

Berle, Adolf A., and Gardiner C. Means, 1932, *The Modern Corporation and Private Property*.

Binz, Oliver, and John Graham, 2020, The Information Content of Corporate Earnings: Evidence from the Securities Exchange Act of 1934, *Working paper (available at SSRN Link)* .

Bourveau, Thomas, Matthias Breuer, and Robert Stoumbos, 2020, Learning to Disclose: Disclosure Dynamics in the 1890s Streetcar Industry, *Working Paper* .

Bourveau, Thomas, Emmanuel De George, Atif Ellahie, and Daniele Macciocchi, 2019, Information Intermediaries in the Crypto-Tokens Market, *Working Paper (available at SSRN Link)* .

Breuer, Matthias, 2018, How Does Financial-Reporting Regulation Affect Industry-wide Resource Allocation?, *Working paper (available at SSRN Link)* .

Brüggemann, Ulf, Kaul Aditya, Christian Leuz, and Ingrid Werner, 2018, The Twilight Zone: OTC Regulatory Regimes and Market Quality, *Review of Financial Studies* 31, 898–942.

Buijink, Willem, 2006, Evidence-based financial reporting regulation, *Abacus* 42, 296–301.

Carmichael, Douglas R., and Alan J. Winters, 1982, The evolution of audit reporting, *Auditing Symposium VI: Proceedings of the 1982 Touche Ross/University of Kansas Symposium on Auditing Problems* 1–20.

Chow, Chee W., 1982, The Demand for External Auditing: Size, Debt and Ownership Influences, *The Accounting Review* 57, 272–291.

Coffee, J., 2010, Dispersed Ownership: The Theories, the Evidence, and the Enduring Tension Between 'Lumpers' and 'Splitters', *Working Paper (available at SSRN Link)* .

Daines, Robert, and Charles Jones, 2012, Truth or Consequences: Mandatory Disclosure and the Impact of the 1934 Act, *Working Paper (available at Stanford Law Link)* .

DeAngelo, Linda Elizabeth, 1981, Auditor size and audit quality, *Journal of Accounting and Economics* 3, 183–199.

Dedman, Elisabeth, Asad Kausar, and Clive Lennox, 2014, The Demand for Audit in Private Firms: Recent Large-Sample Evidence from the UK, *European Accounting Review* 23, 1–23.

DeFond, Mark, and Jieying Zhang, 2014, A Review of Archival Auditing Research, *Journal of Accounting and Economics* 58, 275 – 326.

DeFond, Mark L., and Clive S. Lennox, 2017, Do PCAOB Inspections Improve the Quality of Internal Control Audits?, *Journal of Accounting Research* 55, 591–627.

DeFond, Mark L., Clive S. Lennox, and Jieying Zhang, 2018, Some Controversies in the Auditing Literature, *Working paper* .

Demsetz, Harold, 1969, Information and Efficiency: Another Viewpoint, *Journal of Law and Economics* 12, 1–22.

Donovan, John, Richard Frankel, Joshua Lee, Xiumin Martin, and Hojun Seo, 2014, Issues raised by studying DeFond and Zhang: What should Audit Researchers do?, *Journal of Accounting and Economics* 58, 327 – 338.

Duflo, Esther, Michael Greenstone, Rohini Pande, and Nicholas Ryan, 2013, Truth-telling by Third-party Auditors and the Response of Polluting Firms: Experimental Evidence from India, *Quarterly Journal of Economics* 128, 1499–1545.

Duguay, Raphael, 2018, The Economic Consequences of Financial Audit Regulation in the Charitable Sector, *Working paper (available at SSRN Link)* .

Ely, Kirsten, and Gregory Waymire, 1999, Accounting standard-setting organizations and earnings relevance: longitudinal evidence from nyse common stocks, 1927-93, *Journal of accounting Research* 37, 293–317.

Fama, Eugene F., and Michael C. Jensen, 1983a, Agency Problems and Residual Claims, *Journal of Law and Economics* 26, 327–349.

Fama, Eugene F., and Michael C. Jensen, 1983b, Separation of Ownership and Control, *Journal of Law and Economics* 26, 301–325.

Forbes, John F., 1934, Audits of corporate accounts, Correspondence between the Special Committee on Co-operation with the Stock Exchanges of the the American Institute of Accountants and the Committee on Stock List of the New York Stock Exchange, 1932-1934, *AICPA Committees* 58.

Fox, Merritt B., 1999, Retaining Mandatory Securities Disclosure: Why Issuer Choice Is Not Investor Empowerment, *Virginia Law Review* 85, 1335–1419.

Fox, Merritt B., Randall Morck, Bernard Yeung, and Artyom Durnev, 2003, Law, Share Price Accuracy, and Economic Performance: The New Evidence, *Michigan Law Review* 102, 331–386.

Friend, Irwin, and Edward S. Herman, 1964, The S.E.C. Through a Glass Darkly, *The Journal of Business* 37, 382–405.

Gipper, Brandon, Christian Leuz, and Mark Maffett, 2019, Public Oversight and Reporting Credibility: Evidence from the PCAOB Audit Inspection Regime, *The Review of Financial Studies* hhz149.

Grein, Barbara Murray, and Stefanie L. Tate, 2011, Monitoring by Auditors: The Case of Public Housing Authorities, *The Accounting Review* 86, 1289–1319.

Hail, Luzi, Ahmed Tahoun, and Clare Wang, 2018, Corporate Scandals and Regulation, *Journal of Accounting Research* 56, 617–671.

Hatfield, Henry R., 1936, What They Say about Depreciation, *The Accounting Review* 11, 18–26.

Hilke, John C., 1986, Early mandatory disclosure regulations, *International Review of Law and Economics* 6, 229–239.

Jamal, Karim, and Shyam Sunder, 2011, Is Mandated Independence necessary for Audit Quality?, *Accounting, Organizations and Society* 36, 284–292.

Jensen, Michael C., and William H. Meckling, 1976, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics* 3, 305 – 360.

Kausar, Asad, Nemit Shroff, and Hal White, 2016, Real Effects of the Audit Choice, *Journal of Accounting and Economics* 62, 157 – 181.

Kothari, S.P., Karthik Ramanna, and Douglas J. Skinner, 2010, Implications for GAAP from an Analysis of Positive Research in Accounting, *Journal of Accounting and Economics* 50, 246–286.

Leuz, Christian, 2010, Different approaches to Corporate Reporting Regulation: How Jurisdictions differ and why, *Accounting and Business Research* 40, 229–256.

Loss, Louis, 1951, *Securities Regulation* (Little, Brown).

Macey, Jonathan R., and Geoffrey P. Miller, 1991, Origin of the Blue Sky Laws, *Texas Law Review* 70, 347–397.

Mahoney, Paul G., 2003, The Origins of the Blue-Sky Laws: A Test of Competing Hypotheses, *The Journal of Law Economics* 46, 229–251.

May, G., 1926, Corporate Publicity and the Auditor, *Journal of Accountancy* 42, 321–326.

McCraw, Thomas K., 1984, *Prophets of regulation : Charles Francis Adams, Louis D. Brandeis, James M. Landis, Alfred E. Kahn* (Belknap Press of Harvard University Press).

Merino, B., A. Mayper, and R. Sriram, 1994, Voluntary audits in New York markets in 1927: A case study, *Journal of Business Finance and Accounting* 21, 619–643.

Mills, Patti A., 1990, Agency, Auditing and the Unregulated Environment: Some Further Historical Evidence, *Accounting, Auditing & Accountability Journal* 3, 54–66.

Minnis, Michael, and Nemit Shroff, 2017, Why regulate Private Firm Disclosure and Auditing?, *Accounting and Business Research* 47, 473–502.

Montgomery, R., 1913, The Fallibility of Unverified Financial Statements, *Journal of Accountancy* 16, 1–10.

Montgomery, Robert Hiester, 1940, *Auditing: Theory and Practice* (Ronald Press Company).

Moss, A., 1914, The Value of an Audited Statement, *Journal of Accountancy* 18, 455–459.

Nouri, Hossein, and Danielle Lombardi, 2009, Auditors'independence: An analysis of montgomery's auditing textbooks in the 20th century, *Accounting Historians Journal* 36, 81–112.

Posner, Cydney, 2020, SEC's Carve-Out from SOX 404(b) for Low-Revenue Companies, *Harvard Law School Forum on Corporate Governance* .

Rajan, R., and L. Zingales, 2003, The Great Reversals: the Politics of Financial Development in the Twentieth Century, *Journal of Financial Economics* 69, 5–50.

Rajgopal, Shivaram, Suraj Srinivasan, and Xin Zheng, 2020, Measuring Audit Quality, *Management Science* forthcoming.

Saito, Yoshie, and Christopher S. McIntosh, 2010, The Economic Value of Auditing and Its Effectiveness in Public School Operations, *Contemporary Accounting Research* 27, 639–667.

Schwartz, Andrew, 2018, Equity Crowdfunding in New Zealand, *New Zealand Law Review* 32, 243–274.

SEC, 1977, *Report of the Advisory Committee on Corporate Disclosure to the Securities and Exchange Commission* (Govt. Print. Off.).

Seligman, Joel, 1983, The Historical Need for a Mandatory Corporate Disclosure System, *Journal of Corporation Law* 9, 1.

Shroff, Nemit, 2019, Real Effects of PCAOB International Inspections, *The Accounting Review* forthcoming.

Solomon, Ira, Michael D. Shields, and O. Ray Whittington, 1999, What Do Industry-Specialist Auditors Know?, *Journal of Accounting Research* 37, 191–208.

Stigler, George J., 1971, The Theory of Economic Regulation, *The Bell Journal of Economics and Management Science* 2, 3–21.

Vanstraelen, Ann, and Caren Schelleman, 2017, Auditing Private Companies: What do We Know?, *Accounting and Business Research* 47, 565–584.

Verstein, Andrew, 2011, The Misregulation of Person-to-Person Lending, *UC Davis Law Review* 45, 445–530.

Vetter, Felix, 2020, Peer Review Mandates and CPA Entrepreneurship, *Working paper (available at SSRN Link)* .

Watts, R., and J. Zimmerman, 1983, Agency Problems, Auditing and the Theory of the Firm, *Journal of Law and Economics* 26, 613–640.

Watts, Ross L., and Jerold L. Zimmerman, 1986, *Positive Accounting Theory* (Prentice-Hall Inc.).

Wiesen, Jeremy, 1978, The Securities Acts and Independent Auditors: What Did Congress Intend?, *A research study prepared for the Commission on Auditors' Responsibilities, Research Study 2* .

Zeff, Stephen A., 1982, Truth in Accounting: The Ordeal of Kenneth MacNeal, *The Accounting Review* 57, 528–553.

Zeff, Stephen A., 2007, The primacy of "present fairly" in the auditor's report*, *Accounting Perspectives* 6, 1–20.

Zeff, Stephen A., and Robert L. Fossum, 1967, An analysis of large audit clients, *The Accounting Review* 42, 298–320.

A Variable Definition

Name	Definition
Firm Variables	
Size	Natural log of the market capitalization.
EPS	Earnings per share, basic and net of all distributions excluding the dividend per share.
Dividend Payer	Indicator variable that is equal to '1' if the company pays dividends, and '0' otherwise.
Annual Return	Simple return, calculated using the first and last closing prices in a fiscal year.
Zero Return Days	Number of days on which the return is zero, scaled by total number of days for which there is data.
Zero Volume Days	Number of days on which the trading volume is zero, scaled by total number of days for which there is data.
Amihud Illiquidity	Amihud illiquidity calculated as in Amihud (2002).
Auditor Variables	
Auditor	Equal to the auditor name among the auditor name keywords in Appendix B that is the best match for all audited companies.
Portfolio Size	Natural log of the sum of the market capitalizations of all companies in the client portfolio, per year.
Portfolio Concentration	Within auditor-year Herfindahl–Hirschman index of the proportions of the client size divided by total auditor portfolio size.
Audit Variables	
Audit Indicator	Indicator variable that is equal to '1' if the annual report contains one of the audit statement keywords in Appendix B, and '0' otherwise.
Audit Statement Length	Natural log of the number of words in the audit statement.
Audit Statement Lag	Natural log of the number of days between the sign-off date of the auditor on the audit statement and the fiscal year end. The sign-off date is the last date that is mentioned on the page of the audit statement and the subsequent two pages, no further than 1 year from the fiscal year end and no earlier than the fiscal year end. The fiscal year end is taken from *Mergent* and, if missing, from *Global Financial Data*.
Client-Auditor Distance	Natural log of the geodetic distance between the city of the headquarter of the company and the city of the auditor's office that is closest the company, out of all cities in which the auditor has an office. The list of offices per auditor is compiled out of all top 1,000 U.S. cities (in terms of population in 1940) mentioned in the available audit statements per auditor, per year. A city should be mentioned at least 1% out of all occurrences.
Client-Auditor Specialist	Indicator variable that is equal to '1' if the auditor is a specialist in the sector in which the company is active, and '0' otherwise. The auditor is considered to be a specialist in the sector for which the proportion of total portfolio size (in terms of market capitalization) in that sector to the total auditor portfolio is largest.
Economic Position	Indicator variable that is equal to '1' if the audit statement contains any of the economic position keywords in Appendix B, and '0' otherwise.
GAAP	Indicator variable that is equal to '1' if the audit statement contains any of the GAAP keywords in Appendix B, and '0' otherwise.

HHI Topics	Herfindahl–Hirschman index of the relative distribution of nine topics over the audit statement. The nine (latent) topics are identified using Latent Dirichlet Allocation over the full sample of audit statements, and are defined as follows: (1) cash & equivalents, (2) consolidation, (3) inventory, (4) depreciation, (5) review, (6) testing, (7) financing, (8) income, (9) CPA.
Dominant Topic	The topic with the highest relative distribution among the nine (latent) topics. The topics are identified using Latent Dirichlet Allocation over the full sample of audit statements.

B Search Words

The table presents the search words that are used to extract information from the annual reports. See Appendix A for a detailed definition of the variables.

Variable	Search Words
Audit Indicator	have made an examination, have audited, auditors report, certificate of auditors, hereby certify, certify that, auditors certificate, accountants certificate, have examined the accounts, have examined the books, have examined the balance sheets, having audited the, examined or tested accounting, hereby certify that, have audited your, made an examination of, fairly represent in accordance with, tested the accounting records, in our opinion based upon our examination, conformity with general accepted accounting principles, have audited the books, have examined the financial records
Auditor	price waterhouse, ernst ernst, haskins sells, arthur young, peat marwick mitchell, allen r smart, allen smart, jd cloud, hadfield rothwell soule coates, lybrand ross bros montgomery, barrow wade guthrie, deloitte plenders griffiths, touche niven, patterson teele dennis, west flint, howard kroehl company, cutler hammer, george dallas, scovell wellington company, arthur andersen, konopak hurst dalton, lafrentz, rg rankin, loomis suffern fernald, pauljoseph esquerre, richards ganly, fa hamilton, lawrence e brown, eastern audit company, marwick mitchell company, bieth macnaughton, general timber service, pogson pelloubet, charles f rittenhouse company, herbert f french company, elliott davis company, american audit, jk lasser, seidman seidman, lawrence brown company, wo ligon company, simonton jones company, stockwell wilson linvill, leslie banks company, leslie banks, wolf company, jh greenhalgh company, miller donaldson company, haselmire cordle, oj neff, of taylor, sd leidesdorf, main company, feinberg jacobs, storer bishop, rogers company, hurdsman cranstoun, pace gore mclaren, chandler murray chilton, marwick mitchell, puderpuder, jones caesar dickinson wilmot, patterson corwin, stagg mather, ernsternst, david himmelblau, audit company of new york, collins company, richards company, grey hunter stenn, ward weber, townsend dix pogson, amos albee son, edward steacie, loganlogan, pearce granata, squires company, wright long, ernest bell company, meech harmon lytle blackmore, quail macoubrey, herbert french company, goettsche company, boyden yardley guay, vollumvollum, cerf cooper, rhyne priaulx bearisto, lingley baird dixon, frazer torbet, stewart watts bollong, mattison davey, mcconnell breiden, hopkins company, seamans stetson tuttle, marvin scudder company, stern porter kingston coleman, detroit trust, bagley vega company, wells baxter miller, leach rindfleisch scott, brockelbank brockelbank, leonhard troub company, miller franklin company, clifford collins company, keller kirschner martin clinger, alexander aderer, mclaren goode, swearingen swearingen, robert douglas company, smith davis wills, amen surdam, snyder ellinger davies, amick spicer, lovejoy mather hough stagg, searle nicholson oakey lill, alexander grant company, searle miller company, boyce hughes farrell
Economic Position	consolidated position, economic position, financial position, financial condition, state of the company
GAAP	accordance with accepted accounting principles, gaap, accepted accounting principles, accounting principles, accepted principles of accounting, accepted principles, standard

C Overview of Auditors in Sample

The table presents the names and origin of the 15 auditors with the most engagements in our sample. The table summarizes the number of engagements in total, as well as for several sample years. The bottom row shows the percentage of all engagements, in total or for the year, performed by the largest 15 auditors.

			Engagements					
	Name	**Origin**	**Total**	**1900**	**1920**	**1927**	**1933**	**1940**
1	Price Waterhouse	UK	2,034	3	34	70	106	141
2	Ernst & Ernst	US	1,502		11	44	75	131
3	Haskins & Sells	UK	1,178		21	25	60	94
4	Lybrand, Ross Bros. & Montgomery	US	813	1	4	21	55	89
5	Arthur Young	US	718		18	25	38	41
6	Peat Marwick Mitchell & Co.	UK	699		10	28	43	45
7	Arthur Andersen	US	489		2	7	36	60
8	Barrow Wade Guthrie	US	332		5	8	21	25
9	Touche & Niven	US	283		8	13	18	16
10	Audit Company of New York	US	164	3	5	6	1	
11	Deloitte Plender Griffiths	UK	134		3	4	5	10
12	FW LaFrentz & Co.	US	111		1	8	8	9
13	Scovell Wellington & Co.	US	110			3	5	10
14	Patterson Teele Dennis	US	106	3	2	1	3	4
15	Pogson, Peloubet & Co.	US	94		2	4	4	4
	Total		**8,767**	**10**	**126**	**267**	**478**	**679**
	% of total engagements in sample		84.6%	83.3%	85.1%	88.1%	85.8%	82.9%

D Audit Statements Example

Figure D: Audit Statements for the American I.G. Chemical Corporation.

The figure showcases two audit statements for the American I.G. Chemical Corporation. Panel A shows the audit statement, signed by FW LaFrentz & Co. in 1932. Panel B shows the audit statement, signed by the same auditor in 1935. The red underline is added for emphasis.

(a) 1932

May 25, 1932.

American I. G. Chemical Corporation,
521 Fifth Avenue,
New York, N. Y.

DEAR SIRS:

We have examined the accounts and records of the American I. G. Chemical Corporation for the twelve months ended March 31, 1932; and

In our opinion, the accompanying Balance Sheet and Statements of Income and Expense, and Surplus, compiled from our General Report, set forth the financial condition of the Corporation as at March 31, 1932, and the results of its operations for the period.

F. W. LAFRENTZ & CO.

Certified Public Accountants.

(b) 1935

American I. G. Chemical Corporation,
521 Fifth Avenue,
New York, N. Y.

DEAR SIRS:

We have made an examination of the balance sheet of the American I. G. Chemical Corporation as at March 31, 1935 and of the statements of income and surplus for the year ended on that date. In connection therewith, we examined or tested accounting records of the Company and other supporting evidence and obtained information and explanations from officers and employees of the Company; we also made a general review of the accounting methods and of the operating and income accounts for the year, but we did not make a detailed audit of the transactions.

In our opinion, based upon such examination the accompanying balance sheet and related statements of income and surplus fairly present, in accordance with accepted principles of accounting consistently maintained by the Company during the year under review, its position at March 31, 1935 and the results of its operations for the year.

F. W. LAFRENTZ & CO.

Certified Public Accountants.

April 5, 1935.

Figure 1: Audit Rate

The figure shows the fraction of companies in our sample that have been audited, proxied by the attachment of an audit statement to their annual report, over time. The proportion is calculated in two ways: as a proportion in terms of number of sample companies, and as a proportion in terms of total sample market capitalization. The dashed line indicates 1934, the year of the Securities Exchange Act and the audit mandate imposed by the Securities and Exchange Commission.

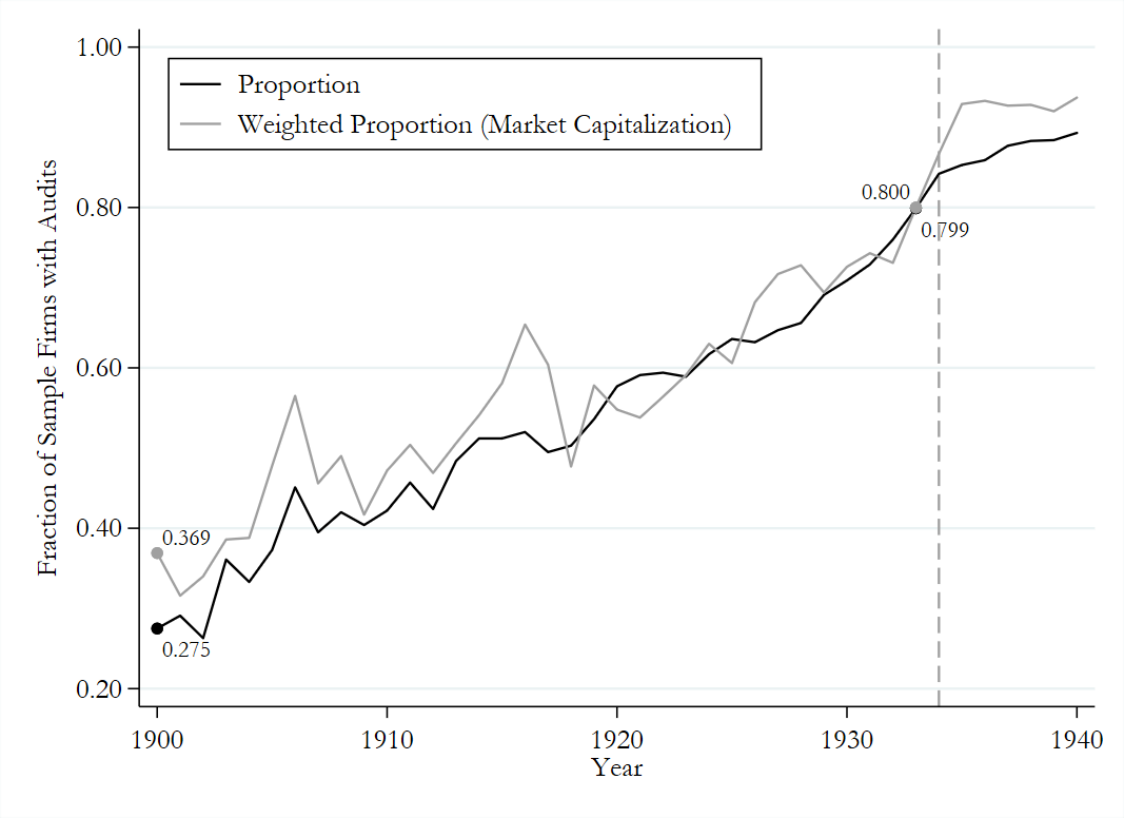


Figure 2: Audit Statement Topic Distribution

The figure shows the probability distribution of the nine topics that are discussed in the sample of audit statements over time. The nine topics are identified with Latent Dirichlet allocation (LDA) using the full sample of audit statements, and named based on the five most common words associated with the topic. The topics (associated words) are: *Cash & Equivalents* ('provision', 'security', 'cash', 'certificate', 'verify'), *Consolidation* ('report', 'examination', 'consolidate', 'asset', 'foreign'), *Inventory* ('inventory', 'cost', 'price', 'market', 'quantity'), *Depreciation* ('depreciation', 'amount', 'reserve', 'property', 'charge'), *Review* ('examination', 'information', 'accounting', 'review', 'obtain'), *Testing* ('accounting', 'test', 'precede', 'method', 'control'), *Financing* ('stock', 'liability', 'share', 'capital', 'note'), *Income* ('loss', 'profit', 'transaction', 'review', 'support'), *CPA* ('certify', 'book', 'accountant', 'public', 'condition'). The dashed line indicates 1934, the year of the Securities Exchange Act.

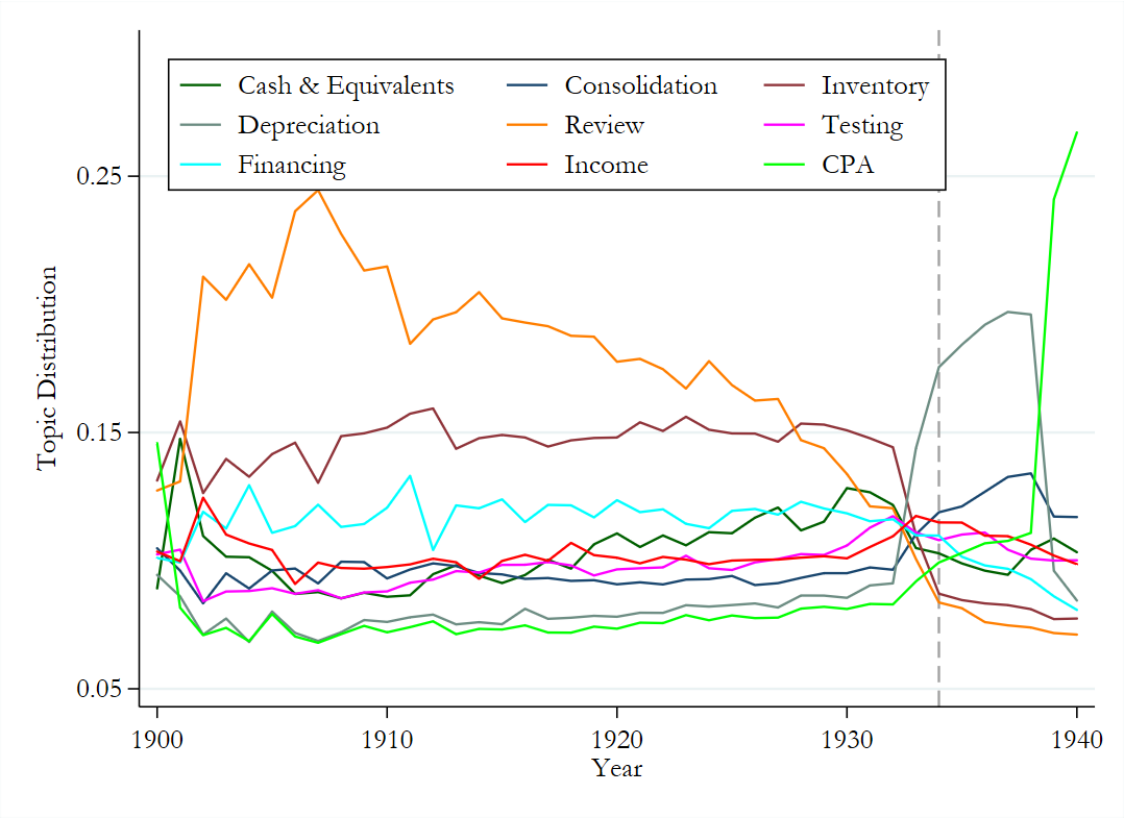


Figure 3: Attestation of 'Economic Position' vs. 'GAAP' Compliance

The figure shows the fraction of audit statements in our sample that mention any of the words that are associated with compliance with General Accepted Accounting Principles ('GAAP'), or with a company's 'economic position', over time. Appendix B gives an overview of the words that are associated with these two categories. The dashed line indicates 1934, the year of the Securities Exchange Act.

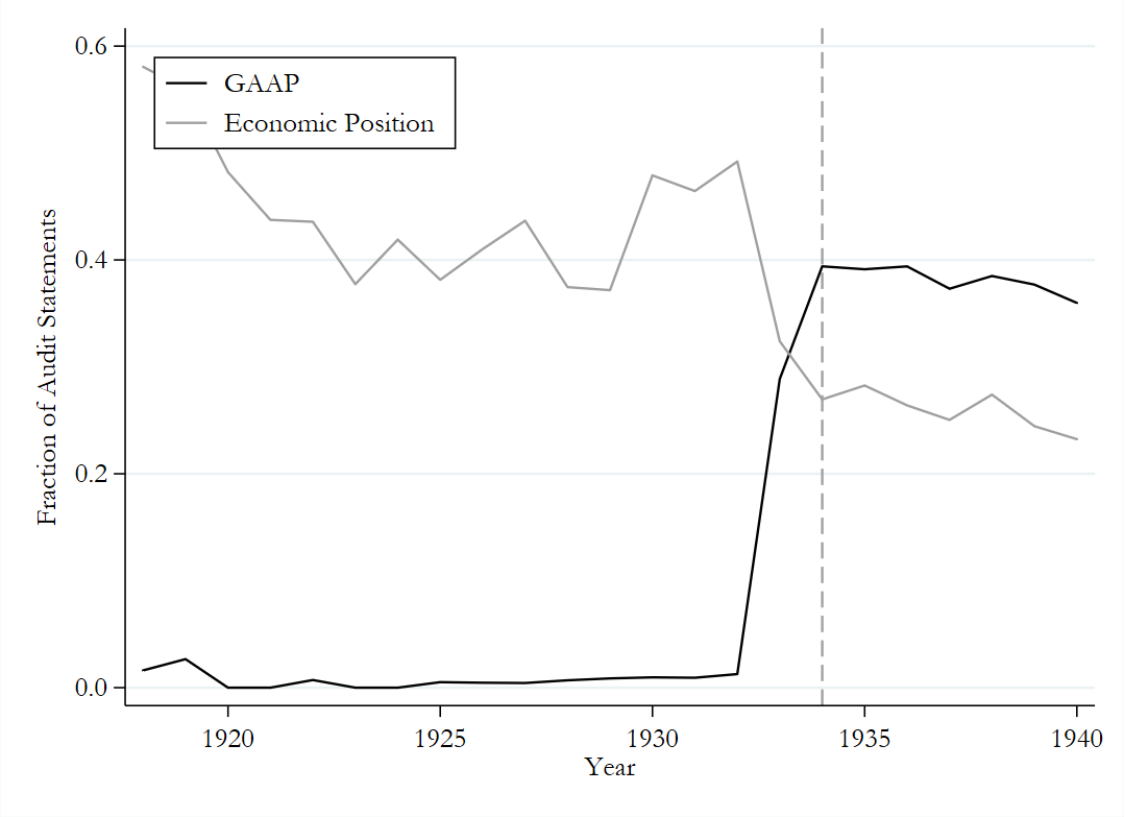
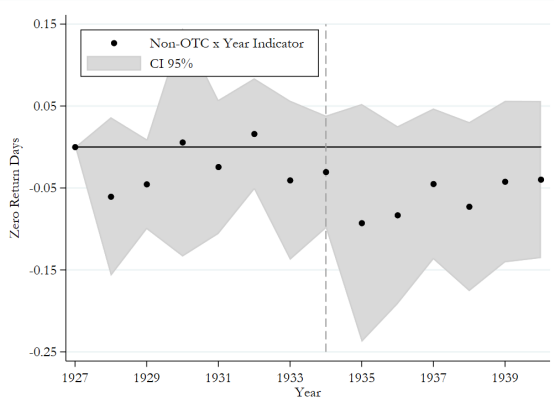


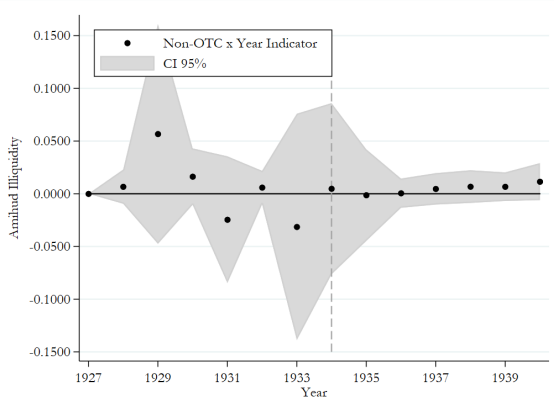
Figure 4: Capital-Market Quality

The figures compare the evolution of capital-market liquidity separately for companies trading on an exchange and stocks trading on the OTC market. The figures plot annual difference-in-differences coefficients, capturing the difference between companies traded on exchanges and those traded on the OTC market relative to the difference in the base year 1927. The underlying regressions account for firm and year fixed effects. The gray area provides the point-wise 95 confidence interval, based on standard errors clustered at the company level. The figures (a) and (b) are based on equally weighted company-year observations, whereas the figures (c) and (d) are based on market-capitalization (within-each market (exchanges vs. OTC) as of 1927) weighted company-year observations. The dashed line indicates 1934, the year of the Securities Exchange Act.

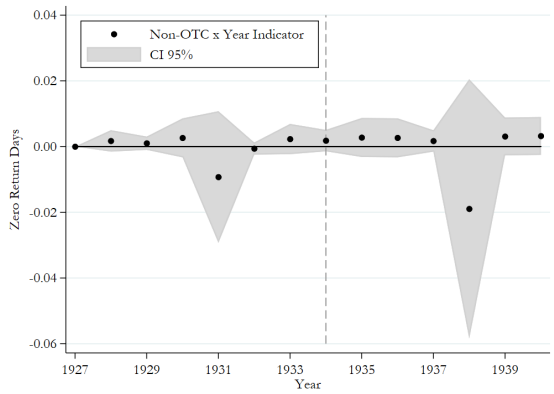
(a) Difference in *Zero Return Days*



(b) Difference in *Amihud Illiquidity*



(c) Weighted Diff. in *Zero Return Days*



(d) Weighted Diff. in *Amihud Illiquidity*

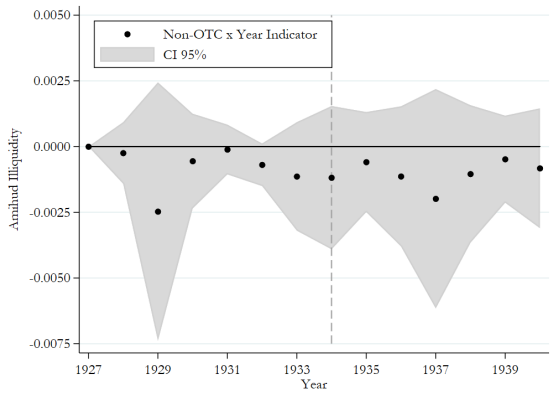


Table 1: Descriptive Statistics

The table presents the descriptive statistics for the variables used in the analyses. Panel A gives an overview of the sample. We start with annual reports from Mergent and ProQuest, and use the outer-join of both as our full sample of annual reports. Auditor data is proxied from the audit statements attached to the annual reports. Sector, trading venue, and market data is taken from Global Financial Data (GFD). Panel B presents the descriptive statistics for the full sample period, Panel C presents the descriptive statistics for the pre-1934 period, and Panel D presents the descriptive statistics for the post-1934 period. Variables are grouped on the level on which they are defined: 'company variables' are defined on the company-year level, 'auditor variables' are defined on the auditor-year level, and 'audit variables' are defined on the company-auditor-year level. See Appendix A for a detailed definition of the variables.

Panel A: Sample Overview

	Mergent	**ProQuest**	**Overlap**	**Total**	**Auditors**
N	9,021	9,871	1,174	17,168	10,436
Companies	1,190	590	234	1,528	124
Years	1892–1940	1844–1940	1897–1940	1844–1940	1845–1940
> 100 company-years starting in	1920	1910	1934	1910	1919
Sector *Company-years (companies)*					
Communications	209 (34)	69 (8)	16 (5)	262 (37)	192 (2)
Consumer Discretionary	1,548 (201)	1,326 (77)	341 (41)	2,533 (236)	1,902 (15)
Consumer Staples	1,189 (143)	1291 (81)	328 (40)	2,152 (182)	1,495 (16)
Energy	401 (44)	533 (23)	106 (12)	828 (61)	459 (2)
Finance	264 (43)	923 (60)	13 (4)	1,174 (93)	286 (7)
Health Care	144 (17)	215 (17)	56 (8)	303 (26)	228 (4)
Industrials	1,388 (185)	1,622 (106)	349 (49)	2,661 (242)	1,773 (27)
Information Technology	116 (13)	120 (10)	46 (4)	190 (18)	154 (4)
Materials	1,443 (178)	1,364 (82)	322 (44)	1,485 (215)	1,814 (24)
Real Estate	20 (4)	0 (0)	0 (0)	20 (4)	18 (1)
Transports	607 (72)	860 (31)	17 (6)	1,450 (97)	540 (2)
Utilities and Telecommunications	599 (64)	517 (30)	74 (9)	1042 (83)	674 (2)
Trading Venue *Company-years (companies)*					
ASE	693 (79)	130 (9)	35 (5)	788 (83)	541 (66)
NYSE	4,515 (544)	6,020 (350)	1,167 (161)	9,368 (727)	6,060 (633)
OTC	587 (92)	412 (31)	81 (8)	918 (115)	510 (71)
Other *(33 exchanges)*	2,160 (285)	2,265 (142)	384 (48)	4,041 (372)	2,432 (289)
Region *Company-years (companies)*					
Mid-West	3,570 (512)	2910 (181)	671 (89)	5,809 (597)	3,920 (33)
North-East	4,218 (515)	5,810 (321)	913 (123)	9,106 (703)	5,325 (75)
South	515 (67)	587 (35)	77 (12)	1,025 (90)	524 (5)
West	656 (83)	471 (37)	63 (10)	1,064 (109)	612 (9)

Panel B: Descriptive Statistics, Full Sample

	N	Mean	S.D.	Min.	Q1	Med.	Q3	Max.
Company Variables								
Size	11,260	2.538	1.850	−4.382	1.342	2.587	3.790	8.148
EPS	5,385	2.517	4.539	−21.950	0.350	1.770	3.830	78.880
Dividend Payer	5,385	0.638	0.480	0.000	0.000	1.000	1.000	1.000
Annual Return	11,535	0.098	1.084	−0.979	−0.245	0.000	0.244	85.000
Zero Return Days	11,535	0.341	0.412	0.000	0.000	0.083	0.909	1.000
Zero Volume Days	11,535	0.373	0.422	0.000	0.000	0.154	1.000	1.000
Amihud Illiquidity	8,582	0.011	0.114	0.000	0.000	0.001	0.003	9.505
Auditor Variables								
Portfolio Size	10,437	48.012	43.093	1.000	8.000	35.000	78.000	141.000
Portfolio Concentration	10,427	0.311	0.293	0.000	0.090	0.189	0.451	1.000
Audit Variables								
Audit Indicator	17,168	0.698	0.459	0.000	0.000	1.000	1.000	1.000
Audit Report Length	7,932	5.023	0.709	1.386	4.522	5.234	5.493	7.201
Audit Report Lag	16,225	5.021	1.069	0.000	4.060	5.940	5.940	5.940
Client-Auditor Distance	10,274	5.202	1.448	−1.265	4.723	5.132	6.182	8.997
Client-Auditor Specialist	17,168	0.284	0.451	0.000	0.000	0.000	1.000	1.000
Economic Position	7,932	0.345	0.475	0.000	0.000	0.000	1.000	1.000
GAAP	7,932	0.202	0.402	0.000	0.000	0.000	0.000	1.000
HHI Topics	7,914	0.144	0.031	0.111	0.121	0.137	0.157	0.358

Panel C: Descriptive Statistics, Pre-1934

	N	Mean	S.D.	Min.	Q1	Med.	Q3	Max.
Company Variables								
Size	6,934	2.650	1.805	−4.382	1.489	2.723	3.864	8.056
EPS	2,627	3.181	5.722	−21.950	0.100	2.230	5.340	78.880
Dividend Payer	2,627	0.574	0.495	0.000	0.000	1.000	1.000	1.000
Annual Return	6,915	0.093	1.255	−0.979	−0.250	−0.006	0.216	85.000
Zero Return Days	6,915	0.404	0.432	0.000	0.000	0.167	1.000	1.000
Zero Volume Days	6,915	0.454	0.439	0.000	0.000	0.250	1.000	1.000
Amihud Illiquidity	4,694	0.011	0.146	0.000	0.000	0.000	0.002	9.505
Auditor Variables								
Portfolio Size	5,410	30.207	27.763	1.000	6.000	21.000	47.000	106.000
Portfolio Concentration	5,400	0.355	0.303	0.000	0.110	0.237	0.508	1.000
Audit Variables								
Audit Indicator	10,717	0.594	0.491	0.000	0.000	1.000	1.000	1.000
Audit Report Length	4,009	4.735	0.690	1.386	4.304	4.635	5.273	7.172
Audit Report Lag	10,139	5.212	1.031	0.000	4.234	5.940	5.940	5.940
Client-Auditor Distance	5,167	5.341	1.437	−1.265	4.864	5.237	6.249	8.987
Client-Auditor Specialist	10,717	0.276	0.447	0.000	0.000	0.000	1.000	1.000
Economic Position	4,009	0.431	0.495	0.000	0.000	0.000	1.000	1.000
GAAP	4,009	0.030	0.171	0.000	0.000	0.000	0.000	1.000
HHI Topics	4,001	0.140	0.037	0.111	0.117	0.124	0.146	0.358

Panel D: Descriptive Statistics, Post-1934								
	N	**Mean**	**S.D.**	**Min.**	**Q1**	**Med.**	**Q3**	**Max.**
Company Variables								
Size	4,326	2.357	1.905	−4.358	1.107	2.381	3.636	8.148
EPS	2,758	1.883	2.868	−15.820	0.490	1.600	2.840	32.430
Dividend Payer	2,758	0.700	0.458	0.000	0.000	1.000	1.000	1.000
Annual Return	4,620	0.106	0.761	−0.955	−0.235	0.001	0.278	30.667
Zero Return Days	4,620	0.245	0.359	0.000	0.000	0.083	0.250	1.000
Zero Volume Days	4,620	0.252	0.362	0.000	0.000	0.083	0.250	1.000
Amihud Illiquidity	3,888	0.010	0.055	0.000	0.000	0.001	0.004	2.000
Auditor Variables								
Portfolio Size	5,027	67.173	48.145	1.000	18.000	75.000	114.000	141.000
Portfolio Concentration	5,027	0.264	0.275	0.000	0.077	0.144	0.339	1.000
Audit Variables								
Audit Indicator	6,451	0.872	0.334	0.000	0.000	1.000	1.000	1.000
Audit Report Length	3,923	5.316	0.601	1.386	5.088	5.323	5.656	7.201
Audit Report Lag	6,086	4.704	1.056	0.000	3.912	4.331	5.940	5.940
Client-Auditor Distance	5,107	5.061	1.446	−1.265	4.587	4.977	5.950	8.997
Client-Auditor Specialist	6,451	0.297	0.457	0.000	0.000	0.000	1.000	1.000
Economic Position	3,923	0.257	0.437	0.000	0.000	0.000	1.000	1.000
GAAP	3,923	0.378	0.485	0.000	0.000	0.000	1.000	1.000
HHI Topics	3,913	0.149	0.024	0.111	0.134	0.146	0.160	0.326

Table 2: Audit Rate

The table presents audit rate changes around the SEC introduction. Panel A presents the time-series differences in audit rates, pre- and post-1934 for the full sample of companies. Panel B presents the results for difference-in-differences specifications using various control groups: companies trading on the OTC (versus all other companies), transportation companies trading on regular exchanges (versus all non-transportation companies trading on regular exchanges), and companies trading on the NYSE (versus all other companies trading on regular exchanges other than the NYSE). Models (1)-(4) in Panel A add increasingly stringent controls: Model (1) is the base-model, Model (2) adds a time-trend, Model (3) adds firm fixed-effects, and Model (4) adds time-varying company controls. Models (1)-(6) in Panel B estimate the difference-in-differences specifications with year-fixed effects ((1), (3) and (5)) and additional firm-fixed effects ((2), (4) and (6)). *Audit Indicator* is a dummy variable that is equal to '1' if a company is audited, proxied by the attachment of an audit statement to the annual report, and '0' otherwise. *Post 1934* is a dummy variable that is equal to '1' if the year is later than 1933, and '0' otherwise. *Size* is the natural-log of a company's market capitalization. *EPS* is a company's earnings per share. *Dividend Payer* is a dummy variable that is equal to '1' if a company pays a dividend, and '0' otherwise. *Non-OTC* is a dummy variable that is equal to '1' for companies trading on regular exchanges, and '0' for companies trading on the OTC market. *Non-Transportation* is a dummy variable that is equal to '1' for non-transportation companies trading on regular exchanges, and '0' for transportation companies trading on regular exchanges. *Non-NYSE* is a dummy variable that is equal to '1' for companies trading on regular exchanges other than the NYSE market, and '0' for companies trading on the OTC market. See Appendix A for a detailed definition of the variables. Standard errors are clustered at the company level. *, ** and *** denote statistical significance at the 10%, 5% and 1% level (two-tailed), respectively.

Panel A: Time-Series Difference

	Audit Indicator			
	(1)	**(2)**	**(3)**	**(4)**
Post 1934	0.156***	0.045***	0.043***	0.060***
	(14.27)	(3.99)	(4.45)	(4.36)
Size				0.004
				(0.41)
EPS				−0.005***
				(−2.67)
Dividend Payer				0.040
				(1.20)
Constant	0.715***	0.760***	0.764***	0.823***
	(53.21)	(62.95)	(150.60)	(26.26)
N	11,140	11,140	10,989	4,592
R^2	0.038	0.044	0.687	0.615
Time Trend	No	Yes	Yes	Yes
Firm FE	No	No	Yes	Yes

Panel B: Difference-in-Differences						
	Audit Indicator					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Non-OTC	0.190***					
	(2.89)					
Non-OTC × Post 1934	−0.032	0.057				
	(−0.69)	(1.63)				
Non-NYSE			−0.132***			
			(−4.79)			
Non-NYSE × Post 1934			0.057**	0.034		
			(2.51)	(1.55)		
Non-Transportation					0.304***	
					(4.34)	
Non-Transportation × Post 1934					0.062	0.079
					(1.09)	(1.43)
Constant	0.650***	0.776***	0.858***	0.808***	0.495***	0.774***
	(13.20)	(41.15)	(72.91)	(149.60)	(8.38)	(26.07)
N	11,140	10,989	10,417	10,283	10,417	10,283
R^2	0.057	0.689	0.065	0.673	0.089	0.673
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	Yes	Yes	No	Yes

Table 3: Auditor Choice

The table presents determinants of companies' auditor choice. The estimates are based on a dyadic regression model. In this dyadic model, we include all possible company-auditor matches in a given year. The dependent variable *Auditor Choice* is equal to zero for all auditors, except for the auditor that is chosen by the company. The explanatory variables contain company-specific variables (*Size*, *EPS*, and *Dividend Payer*), auditor-specific variables (*Portfolio Size* and *Portfolio Concentration*), and company-auditor-specific variables (*Client-Auditor Distance* and *Client-Auditor Specialist*). *Portfolio Size* is the logarithm of the sum of the market capitalization of all companies in an auditor's client portfolio in a given year. *Portfolio Concentration* is the sum of squared client shares (client capitalization over an auditor's total portfolio size) of a given auditor in a given year. *Client-Auditor Distance* is the logarithm of the geodetic distance between the city of the headquarter of the company and the city of the auditor's office that is closest the company, out of all cities in which the auditor has an office. *Client-Auditor Specialist* is an indicator variable that is equal to '1' if the auditor is a specialist in the sector in which the company is active, and '0' otherwise. The auditor is considered to be a specialist in the sector for which the proportion of total portfolio size (in terms of market capitalization) in that sector to the total auditor portfolio is largest. See Appendix A for a detailed definition of the variables. Models (1)-(4) control for increasingly stringent fixed effects: Model (1) includes year-fixed effects, Model (2) includes firm-year-fixed effects, Model (3) includes auditor-year-fixed effects, and Model (4) includes firm-year- and auditor-year-fixed effects. Panel A shows the results for the full sample of audited companies. Panel B includes an interaction term for the post-1934 period, to allow for changes in the association between the explanatory variables and the *Auditor Choice* around the Securities and Exchange Act of 1934. Standard errors are two-way clustered at the company and auditor level. *, ** and *** denote statistical significance at the 10%, 5% and 1% level (two-tailed), respectively.

Panel A: Full Sample

	Auditor Choice			
	(1)	**(2)**	**(3)**	**(4)**
Size	−0.000		−0.000	
	(−0.59)		(−0.52)	
EPS	0.000		0.000	
	(0.12)		(0.10)	
Dividend Payer	−0.000		−0.000	
	(−0.09)		(−0.14)	
Portfolio Size	0.003**	0.002**		
	(2.51)	(2.23)		
Portfolio Concentration	−0.052***	−0.047***		
	(−3.95)	(−3.88)		
Client-Auditor Distance	−0.004***	−0.005***	−0.003***	−0.005***
	(−6.86)	(−5.39)	(−7.04)	(−6.28)
Client-Auditor Specialist	0.016***	0.017***	0.020***	0.020***
	(8.30)	(7.58)	(7.72)	(6.98)
N	230,670	230,670	230,626	230,626
R^2	0.050	0.052	0.086	0.088
Year FE	Yes	No	No	No
Firm-Year FE	No	Yes	No	Yes
Auditor-Year FE	No	No	Yes	Yes

Panel B: Pre- and Post-1934				
	Auditor Choice			
	(1)	**(2)**	**(3)**	**(4)**
Size	−0.001		−0.001	
	(−0.59)		(−0.57)	
Size × *Post 1934*	0.000		0.000	
	(0.64)		(0.88)	
EPS	−0.000		−0.000	
	(−0.07)		(−0.07)	
EPS × *Post 1934*	0.000		0.000	
	(0.38)		(0.45)	
Dividend Payer	0.001		0.001	
	(0.29)		(0.26)	
Dividend Payer × *Post 1934*	−0.001		−0.001	
	(−0.90)		(−0.99)	
Portfolio Size	0.003***	0.003**		
	(2.85)	(2.40)		
Portfolio Size × *Post 1934*	−0.001	−0.000		
	(−0.87)	(−0.59)		
Portfolio Concentration	−0.058***	−0.052***		
	(−3.68)	(−3.62)		
Portfolio Concentration × *Post 1934*	0.009	0.007		
	(0.98)	(0.79)		
Client-Auditor Distance	−0.004***	−0.007***	−0.004***	−0.007***
	(−6.35)	(−4.70)	(−7.10)	(−5.32)
Client-Auditor Distance × *Post 1934*	0.001***	0.002**	0.001***	0.003***
	(2.70)	(2.35)	(3.47)	(2.83)
Client-Auditor Specialist	0.021***	0.021***	0.025***	0.025***
	(9.86)	(9.54)	(8.95)	(8.01)
Client-Auditor Specialist × *Post 1934*	−0.007***	−0.007***	−0.008***	−0.008***
	(−5.28)	(−5.55)	(−4.05)	(−4.21)
N	230,670	230,670	230,626	230,626
R^2	0.051	0.053	0.086	0.089
Year FE	Yes	No	No	No
Firm-Year FE	No	Yes	No	Yes
Auditor-Year FE	No	No	Yes	Yes

Table 4: Audit Services

The table presents changes in audit services around the SEC introduction. Panels A and B present time-series differences in the characteristics and content of audit statements, respectively. Panel C presents difference-in-differences specifications using companies traded on the OTC market as a control. All coefficients are estimated using the sample of audit statements between 1927 and 1940. Models (1)-(4) in Panel A and Panel B add increasingly stringent fixed effects: Model (1) is the base-model, Model (2) adds a time-trend, Model (3) adds auditor-fixed effects, and Model (4) adds firm-fixed effects. Models (1)-(6) in Panel C estimate the most stringent specification for all audit statement variables. *Audit Statement Length* is the natural-log of the total number of words in the audit statement. *Audit Statement Lag* is the natural-log of the number of days between the auditor's sign-off date and the end of the company's fiscal year. *Economic Position* is a dummy variable that is equal to '1' if the audit statement contains any of the words that are associated with the company's economic position, and '0' otherwise. *GAAP* is a dummy variable that is equal to '1' if the audit statement contains any of the words that are associated with compliance with Generally Accepted Accounting Principles, and '0' otherwise. Table B in Appendix B gives an overview of the words that are associated with these two categories. *HHI Topics* is the Hirschman-Herfindahl Index of the probability that each of the identified nine topics is contained in the audit statement. *Dominant Topic Distribution* is the probability of the topic with the highest probability to be contained in the audit statement. The nine topics are identified with Latent Dirichlet allocation (LDA) using the full sample of audit statements, and named based on the five most common words associated with the topic. *Post 1934* is a dummy variable that is equal to '1' if the year is later than 1933, and '0' otherwise. *Non-OTC* is a dummy variable that is equal to '1' for companies trading on regular exchanges, and '0' for companies trading on the OTC market. See Appendix A for a detailed definition of the variables. Standard errors are clustered at the company level. *, ** and *** denote statistical significance at the 10%, 5% and 1% level (two-tailed), respectively.

Panel A: Audit Statement Characteristics

	Audit Statement Length				***Audit Statement Lag***			
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
Post 1934	0.575***	0.506***	0.510***	0.492***	−0.234***	−0.044	0.064	0.082**
	(23.20)	(14.38)	(14.67)	(13.87)	(−7.91)	(−1.22)	(1.58)	(2.17)
N	6,145	6,145	6,134	5,979	10,487	10,487	7,305	7,163
R^2	0.157	0.158	0.265	0.562	0.011	0.014	0.058	0.540
Constant	Yes	Implied	Implied	Implied	Yes	Implied	Implied	Implied
Time Trend	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Auditor FE	No	No	Yes	Yes	No	No	Yes	Yes
Firm FE	No	No	No	Yes	No	No	No	Yes

Panel B: Audit Statement Content

	Economic Position				GAAP			
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
Post 1934	−0.153***	−0.120***	−0.115***	−0.103***	0.324***	0.248***	0.247***	0.231***
	(−8.34)	(−5.46)	(−5.16)	(−5.17)	(20.90)	(12.27)	(12.08)	(11.93)
N	6,181	6,181	6,135	5,980	6,181	6,181	6,135	5,980
R^2	0.025	0.025	0.091	0.707	0.127	0.129	0.181	0.703
Constant	Yes	Implied	Implied	Implied	Yes	Implied	Implied	Implied
Time Trend	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Auditor FE	No	No	Yes	Yes	No	No	Yes	Yes
Firm FE	No	No	No	Yes	No	No	No	Yes

	HHI Topics				Dominant Topic Distribution			
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
Post 1934	0.014***	0.003**	0.003**	0.002	0.040***	0.008**	0.009**	0.007*
	(12.35)	(2.00)	(2.19)	(1.37)	(14.00)	(2.09)	(2.32)	(1.77)
N	6,132	6,132	6,121	5,964	6,132	6,132	6,121	5,964
R^2	0.060	0.073	0.119	0.415	0.075	0.092	0.135	0.412
Constant	Yes	Implied	Implied	Implied	Yes	Implied	Implied	Implied
Time Trend	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Auditor FE	No	No	Yes	Yes	No	No	Yes	Yes
Firm FE	No	No	No	Yes	No	No	No	Yes

Panel C: Audit Statement Difference-in-Differences (Non-OTC v. OTC)						
	Audit Statement Length	**Audit Statement Lag**	**Economic Position**	**GAAP**	**HHI Topics**	**Dominant Topic**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Non-OTC × Post 1934	−0.094	−0.068	0.032	0.035	−0.005	−0.006
	(−1.01)	(−0.59)	(0.49)	(−0.38)	(−1.05)	(−0.42)
N	5,979	7,164	5,978	5,978	5,966	5,966
R^2	0.579	0.539	0.710	0.718	0.442	0.444
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Auditor FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Table 5: Market Quality

The table presents changes in capital-market quality around the SEC introduction. It compares changes across regulated (non-OTC) and unregulated markets (OTC) and across three groups of companies: 'mandatory adopters' (companies trading on regular exchanges who only got an audit after the audit mandate), 'voluntary adopters' (companies trading on regular exchanges or the OTC market who already got audits before the audit mandate), and 'never adopters' (non-compliant companies trading on regular exchanges and non-voluntary adopters on the OTC market). Panel A presents the sample composition, broken down by trading venue, of the three groups. Panel B presents descriptive statistics by group and univariate comparisons over time (pre vs. post 1934) and between groups ('mandatory adopters' vs. the two other groups). Panel C presents difference-in-differences specifications using 'voluntary adopters' or 'mandatory adopters' as control groups. Panel D presents difference-in-differences specifications comparing regulated (non-OTC) with unregulated (OTC) markets. The weighted specifications in Panel D are based on within-market (non-OTC v. OTC) market-capitalization weights as of 1927. All estimates are based on the sample of audit statements between 1927 and 1940. The models in Panels C and D include year-fixed effects ((1), (3), (5), and (7)) and additionally firm-fixed effects ((2), (4), (6), and (8)). *Market Capitalization* is the natural-log of companies' market capitalization. *Zero Return Days* is the number of days on which companies' returns are zero, scaled by the total number of days for which there is data. *Zero Volume Days* is the number of days on which companies' trading volume is zero, scaled by the total number of days for which there is data. *Amihud Illiquidity* is the Amihud illiquidity measure calculated as in Amihud (2002). See Appendix A for a detailed definition of the variables. Standard errors are clustered at the company level. *, ** and *** denote statistical significance at the 10%, 5% and 1% level (two-tailed), respectively.

Panel A: Trading Venues of Mandatory, Voluntary, and Never Adopters

	Voluntary Adopters		Mandatory Adopters		Never Adopters	
Trading Venue	**Name**	**Obs.**	**Name**	**Obs.**	**Name**	**Obs.**
	ASE	485	ASE	122	ASE	31
	NYSE	4,788	NYSE	873	NYSE	241
	OTC	400	OTC	0	OTC	152
	Other	2,081	Other	469	Other	125
	Total	7,754	Total	1,464	Total	549

Panel B: Univariate Comparison (Mandatory Adopters v. Others)								
		Mandatory Adopters	Voluntary Adopters	Diff.	T-stat.	Never Adopters	Diff.	T-stat.
		(1)	(2)	(2) − (1)		(3)	(3) − (1)	
Full Sample								
N	11,141	1,878	8,509			754		
Audited	0.805	0.708	0.898	0.190	22.24***	0.000	0.708	42.71***
Size	2.385	2.087	2.397	0.310	4.65***	2.989	−0.902	−7.18***
EPS	2.089	1.782	2.012	0.229	1.35	5.225	−3.443	−9.88***
Dividend Payer	0.691	0.652	0.690	0.037	1.77*	0.877	−0.225	−5.49***
Annual Return	0.092	0.059	0.105	0.046	1.15	−0.032	0.091	1.69*
Zero Return Days	0.245	0.353	0.197	−0.156	−15.11***	0.696	−0.343	−14.02***
Zero Volume Days	0.270	0.373	0.224	−0.149	−13.77***	0.714	−0.341	−13.91***
Amihud Illiquidity	0.012	0.018	0.010	−0.008	−4.06***	0.078	−0.060	−2.21**
Pre-1934 Sample								
N	4,713	395	4,014			304		
Audited	0.715	0.000	0.839	0.839	45.41***	0.000	0.000	
Size	2.410	2.460	2.369	−0.092	−0.64	3.146	−0.686	−2.90***
EPS	2.369	2.780	2.189	−0.590	−1.10	6.621	−3.841	−5.02***
Dividend Payer	0.680	0.854	0.664	−0.189	−3.59***	0.887	−0.034	−0.61
Annual Return	0.072	0.024	0.083	0.059	0.48	−0.067	0.091	1.57
Zero Return Days	0.246	0.419	0.210	−0.210	−9.16***	0.686	−0.267	−5.99***
Zero Volume Days	0.297	0.472	0.261	−0.211	−8.44***	0.722	−0.250	−5.69***
Amihud Illiquidity	0.016	0.023	0.011	−0.011	−2.76***	0.172	−0.149	−1.53
Post-1934 Sample								
N	6,428	1,483	4,495			450		
Audited	0.871	0.896	0.950	0.054	7.44***	0.000	0.896	62.29***
Size	2.365	1.983	2.422	0.439	5.79***	2.867	−0.883	−5.76***
EPS	1.883	1.607	1.861	0.254	1.83*	4.030	−2.423	−5.90***
Dividend Payer	0.700	0.617	0.711	0.094	4.03***	0.867	−0.251	−4.50***
Annual Return	0.106	0.067	0.125	0.058	2.09**	−0.007	0.073	0.98
Zero Return Days	0.244	0.339	0.187	−0.152	−12.74***	0.703	−0.364	−11.86***
Zero Volume Days	0.251	0.352	0.193	−0.159	−13.22***	0.708	−0.356	−11.56***
Amihud Illiquidity	0.010	0.017	0.009	−0.008	−3.52***	0.004	0.012	−1.34

Panel C: Market Quality Difference-in-Differences (Mandatory Adopters v. Others)								
	Market Capitalization (log)		Zero Return Days		Zero Volume Days		Amihud Illiquidity	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mandatory v. Voluntary Adopters								
Mandatory Adopter	0.017		0.200***		0.195***		0.012*	
	(0.05)		(3.45)		(3.48)		(1.77)	
Mandatory Adopter × Post 1934	−0.425	−0.075	−0.071	−0.018	−0.061	−0.004	−0.003	0.003
	(−1.49)	(−0.57)	(−1.35)	(−0.47)	(−1.20)	(−0.11)	(−0.40)	(0.46)
N	7,046	6,977	7,295	7,208	7,295	7,208	6,430	6,354
R^2	0.053	0.907	0.033	0.738	0.058	0.737	0.020	0.470
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	Yes	No	Yes	No	Yes	No	Yes
Mandatory v. Never Adopters								
Mandatory Adopter	−0.750		−0.277***		−0.262***		−0.148	
	(−1.49)		(−2.85)		(−2.78)		(−0.94)	
Mandatory Adopter × Post 1934	−0.044	0.088	−0.090	−0.086*	−0.098	−0.087**	0.160	0.011
	(−0.12)	(0.48)	(−1.29)	(−1.90)	(−1.50)	(−2.04)	(1.02)	(0.73)
N	1,318	1,266	1,606	1,532	1,606	1,532	1,075	1,028
R^2	0.071	0.938	0.117	0.869	0.124	0.868	0.038	0.514
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	Yes	No	Yes	No	Yes	No	Yes

Panel D: Market Quality Difference-in-Differences (Non-OTC v. OTC)								
	Market Capitalization (log)		Zero Return Days		Zero Volume Days		Amihud Illiquidity	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Unweighted								
Non-OTC	0.266		−0.444***		−0.401***		−0.026	
	(0.73)		(−4.13)		(−3.79)		(−0.85)	
Non-OTC × *Post 1934*	−0.001	0.157	−0.091	−0.038	−0.142**	−0.075**	0.010	0.006
	(−0.01)	(0.97)	(−1.34)	(−1.26)	(−2.14)	(−2.54)	(0.37)	(0.34)
N	7,611	7,527	7,893	7,780	7,893	7,780	6,654	6,568
R^2	0.048	0.908	0.075	0.790	0.088	0.784	0.004	0.497
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	Yes	No	Yes	No	Yes	No	Yes
Weighted								
Non-OTC	−0.687		−0.032**		−0.034**		−0.001*	
	(−1.23)		(−2.30)		(−2.46)		(−1.69)	
Non-OTC × *Post 1934*	0.004	0.004	−0.000	−0.000	0.001	0.001	−0.000	−0.000
	(0.31)	(0.31)	(−0.10)	(−0.10)	(0.88)	(0.88)	(−0.62)	(−0.62)
N	2,254	2,254	2,254	2,254	2,254	2,254	2,018	2,017
R^2	0.187	0.991	0.413	0.903	0.421	0.886	0.297	0.715
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	No	Yes	No	Yes	No	Yes