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# Interim Analysis Report

Evidence on the Initial Impact of New  
Requirements for Auditing Accounting  
Estimates and the Auditor's Use of the  
Work of Specialists

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## INTRODUCTION

This report provides insights and perspectives from the Public Company Accounting Oversight Board (PCAOB) on the initial impact of new requirements for [auditing accounting estimates, including fair value measurements](#) ("Estimates Requirements") and the [auditor's use of the work of specialists](#) ("Specialists Requirements"). The new requirements took effect for audits of fiscal years ending on or after December 15, 2020.

The new Estimates Requirements establish a uniform, risk-based approach to auditing accounting estimates and strengthening requirements under the existing substantive testing approaches. The requirements emphasize the application of professional skepticism, including addressing potential management bias in accounting estimates. The requirements also provide more direction on addressing certain aspects unique to auditing the fair values of financial instruments, including the use of pricing information from third parties such as pricing services and brokers or dealers in securities.

The new Specialists Requirements strengthen requirements for evaluating the work of a company's specialist, whether employed or engaged by the company, and apply a risk-based supervisory approach to both auditor-employed and auditor-engaged specialists.<sup>1</sup> The requirements are risk-based and scalable, so that the auditor's work effort to evaluate a specialist's

work is commensurate with the risk of material misstatement associated with the financial statement assertion to which the specialist's work relates and the significance of the specialist's work to that assertion.

As part of the PCAOB's commitment to robust economic analysis, the staff of the PCAOB's Office of Economic and Risk Analysis conducted extensive stakeholder outreach and performed large-sample statistical analysis to inform its evaluation of the initial impact of the new Estimates Requirements and Specialists Requirements on the quality of audit services, as well as on audit committees, preparers, and audit firms.<sup>2</sup> The staff has also evaluated whether early evidence from initial implementation of the new requirements is suggestive of significant costs, benefits, or unintended consequences.<sup>3</sup> Technical details of the staff analysis and additional results are available in two [staff white papers](#). We expect analysis of additional years of data after implementation of the new requirements will provide a deeper understanding of the impacts.

## KEY FINDINGS FROM STAFF ANALYSES

- **About one-third of the audit firms in the staff's survey reported that the new Estimates Requirements and Specialists Requirements improved auditing practices, while others reported that effects were**

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<sup>1</sup> As used in the [Adopting Release for the Specialists Requirements](#), a specialist is a person (or firm) possessing special skill or knowledge in a particular field other than accounting or auditing.

<sup>2</sup> One important limitation on our ability to study separately the impacts of the Estimates Requirements and the Specialists Requirements is that we adopted these new requirements simultaneously. These new requirements took effect on the same date and cover interrelated matters. Many audit firms also indicated that they implemented the new Estimates Requirements and Specialists Requirements jointly for these same reasons.

<sup>3</sup> The staff is unable to evaluate all possible costs and benefits of the new Estimates Requirements and Specialists Requirements, in part because some potential effects may take more time to manifest or stabilize. In addition, in some cases, results are based on limited data and may not be generalizable to the relevant population. We encourage interested readers to review the [staff white papers](#), which provide additional results and the technical details of the staff analysis. The PCAOB Adopting Releases for the [Estimates Requirements](#) and the [Specialists Requirements](#) contain further discussion of economic considerations related to the respective requirements.

**limited and did not significantly change how engagement teams conducted audits.<sup>4</sup>**

Among other things, some firms and audit engagement partners reported that the new Estimates Requirements prompted increased engagement team focus on the risks of material misstatement within components of accounting estimates (i.e., methods, models, data, and assumptions). Similarly, some auditors reported that the new Specialists Requirements improved audit engagement team coordination with auditor's specialists. Audit firms and engagement partners reporting more limited effects generally asserted that their prior policies and methodologies were already largely aligned with the new requirements.

- **The staff analysis finds that audit firms had significant variation in the amount of time they spent to support implementation of the new Estimates Requirements and Specialists Requirements and in training firm personnel for these new requirements.** This variation reflects (1) differences in client portfolios, (2) differences in implementation approaches, and (3) variation in auditing practices prior to the effective date of the new requirements. Compared to larger audit firms, smaller audit firms spent less time to support implementation and train personnel, and they also spent a greater proportion of time at the partner level for both implementation support and training.
- **At the audit engagement level, almost all firms and audit engagement partners reported that the new Estimates Requirements and Specialists Requirements**

**did not result in significant increases in audit hours or audit fees.**

The majority of engagement partners interviewed estimated that the additional time spent was less than 1% of total audit hours. None of the partners reported increasing audit fees due to the new requirements. Audit committee chairs and preparers also reported that the initial impact of the new requirements on issuers was limited.

- **The staff's statistical analysis of PCAOB inspections data finds evidence of changes in specialist usage following implementation of the Specialists Requirements.<sup>5</sup>** Engagement teams were more likely to use auditor's specialists in the post implementation period, and this change mostly occurred among smaller audit firms. However, among the engagements that used auditor's specialists, the average amount of time specialists spent per engagement did not change. Results from available data at larger audit firms suggest that auditor's specialists spent more of their efforts in the planning stage of the audit process.
- **The staff has not found evidence of significant unintended consequences or implementation challenges associated with the new Estimates Requirements and Specialist Requirements.** Results from the staff analysis suggest that the impacts of the new requirements on auditors and issuers have on the whole been positive thus far, although these impacts tend to be marginal and engagement-specific. Although outreach data was not indicative of significant implementation challenges, results from the

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<sup>4</sup> The staff surveyed a targeted set of firms and audits with more extensive specialist use and more complex accounting estimates to assist in the analysis. We intentionally targeted such audits in order to capture an "upper bound" on the impact of the requirements. The staff acknowledges that this is not a random sample and cautions against extrapolating from the results to other audit firms and engagement partners in the market that fall outside the scope of this research.

<sup>5</sup> The staff's statistical analysis is intended to be descriptive in nature, not causal. That is, while we can describe a particular trend that we have observed, we cannot say with certainty that it was caused by the new Specialists Requirements, given the presence of contemporaneous changes in auditing standards, accounting standards, and the broader economy that confound our ability to estimate the causal relationship using statistical analysis.

PCAOB's 2021 inspections program suggest discrepancies between global network firms (GNFs) and non-affiliate firms (NAFs) in the number of deficiencies related to the new Estimates Requirements.<sup>6</sup>

The Board will continue to monitor implementation of the new requirements and their impact on the quality of audit services, as well as on audit committees, preparers, and audit firms.

## RESULTS IN DETAIL

### Audit Firm Survey

A selection of 17 U.S. audit firms,<sup>7</sup> including nine annually inspected firms and eight of the larger triennially inspected firms,<sup>8</sup> participated in a survey in August 2021 on the processes and procedures they developed to prepare for and implement the Estimates Requirements and Specialists Requirements, including associated costs.

- All participating firms developed infrastructure and conducted training to support the implementation of the Estimates Requirements and Specialists Requirements by their audit engagement teams. Firms implemented the Estimates Requirements and Specialists Requirements through a variety of initiatives including: (1) revisions to audit methodologies and guidance, (2) development of new or revised tools and work paper templates, (3) training sessions

to educate personnel on implementation of the new requirements and new or revised firm supporting tools, and (4) ongoing engagement team implementation support and monitoring.

- Among the Big Four firms, through April 2021, the average amount of time spent to support implementation of the Estimates Requirements and Specialists Requirements was 20,200 hours (37% at the partner level), while the average amount of time personnel spent attending training on these requirements was 48,700 hours (9% at the partner level). One of the firms reported substantially more hours than the other three. Excluding this outlier, the average amount of time spent on implementation support and personnel training by the other three firms are 8,300 hours and 23,900 hours, respectively.
- Among the other five annually inspected firms included in our survey, through April 2021, the average amount of time spent to support implementation of the Estimates Requirements and Specialists Requirements was 1,200 hours (52% at the partner level), and the average amount of time personnel spent attending training on these new requirements was 1,800 hours (24% at the partner level).
- Among the eight triennially inspected firms included in our survey, through April 2021, the average amount of time spent to support implementation of the Estimates Requirements and Specialists Requirements was 800 hours (76% at the partner level), while the average amount of time personnel spent

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<sup>6</sup> In prior inspection years, NAFs tended to have higher rates of deficiencies related to auditing accounting estimates compared to GNFs. The difference in the rate of deficiencies was higher in 2021 compared to prior years, but we caution that the rates are not directly comparable between inspection years since selected engagements are not a random sample.

<sup>7</sup> We selected these 17 firms by considering PCAOB inspections data to determine which firms were most likely to be impacted by the Estimates Requirements and Specialists Requirements. We acknowledge that this is not a random sample, and we caution against extrapolating from the results to other audit firms in the market that fall outside the scope of this research.

<sup>8</sup> Under the Sarbanes-Oxley Act of 2002 and as explained in detail in PCAOB Rule 4003, the PCAOB inspects annually those registered public accounting firms that issue audit reports for more than 100 issuers, while those that issue audit reports for 100 or fewer issuers are inspected at least once every three calendar years.

attending training on these new requirements was 1,100 hours (33% at the partner level). One of the firms reported substantially more hours in implementation support than the others. Excluding this outlier, the average amount of time spent on implementation support by the other seven firms is 400 hours.

- Differences in time spent by audit firms to support implementation of the Estimates Requirements and Specialists Requirements and train firm personnel reflect differences in underlying audit client portfolios. Big Four firms have an average of 818 issuer clients; the other five annually inspected participating firms have an average of 162 issuer clients; and the eight triennially inspected participating firms have an average of 84 issuer clients.<sup>9</sup>
- Only a few participating firms reported challenges when implementing the new Estimates Requirements and Specialists Requirements. Four non-Big Four participating firms reported that they and their issuer clients are encountering constraints in the pool of available specialists, although these firms generally attributed these constraints to environmental factors (e.g., the COVID-19 pandemic, and mergers and acquisitions activity) rather than the new Specialists Requirements. Three participating firms also raised questions regarding application of the new Estimates Requirements, such as scalability of the requirements and definition or scope of what is considered an accounting estimate. However, these questions were not thematic or indicative of widespread implementation issues.

## Engagement Partner Interviews

From August 2021 to February 2022, the staff conducted voluntary interviews of 31 engagement partners from the 17 audit firms that participated

in the firm survey. The interviews sought information about the experiences of engagement partners in implementing the Estimates Requirements and Specialists Requirements for audit engagements that involved more extensive use of the work of specialists and more complex accounting estimates.

- Engagement partners generally reported that the Estimates Requirements and Specialists Requirements had minor, yet positive, impacts on how engagement teams conducted audits. Most engagement partners stated that they did not make major changes to the audit procedures performed, but many believed that the engagement team documented more of their discussions and thought processes and had a higher level of focus on certain areas addressed in the Estimates Requirements and the Specialists Requirements.
- Among auditors who reported that the Estimates Requirements had an impact on their audit engagements, the most commonly reported effects were (1) more focus during the planning phase of the audit, and consequent better understanding of the components of accounting estimates (i.e., methods, models, data, and assumptions) and identifying potential risks of material misstatement within those components and (2) more thorough documentation of the engagement team's risk assessments and the audit procedures performed to address the identified risks.
- Among auditors who reported that the Specialists Requirements had an impact on their audit engagements, the most commonly reported effects were (1) improved coordination and communication between engagement teams and auditors' specialists, and (2) enhanced documentation of the work performed by specialists.

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<sup>9</sup> Data on the number of issuers is based on Form AP filings for issuers with fiscal year end between April 1, 2020 and March 31, 2021.

## Audit Committee Chair and Preparer Interviews

Between September 2021 and March 2022, the staff conducted in-depth interviews of 12 audit committee chairs and nine financial statement preparers (whose titles included Chief Financial Officer, Chief Accounting Officer, and Controller) from a total of 13 audit engagements, representing audits of four large accelerated filers and nine non-large accelerated filers.<sup>10</sup> The interviews provided insight regarding issuer experiences with auditor implementation of the Estimates Requirements and Specialists Requirements.

- Audit committee chairs and preparers reported that the initial impact of the new Estimates Requirements and Specialists Requirements on issuers was limited.
- Most respondents reported that they did not observe any changes in their auditor's approach to auditing accounting estimates. A few observed a more in-depth process and enhanced audit procedures around accounting estimates.
- Most preparers and audit committee chairs did not identify any change in their auditor's use of specialists. A few respondents observed more in-depth auditor questioning of company specialists.

- No respondents reported an increase in audit fees due to the new Estimates Requirements and Specialists Requirements.

## Large-Sample Statistical Analysis<sup>11</sup>

To supplement the outreach analysis on audit engagement level changes in specialist usage and hours associated with the implementation of the new Specialists Requirements, the staff performed large-sample statistical analyses to estimate differences in these outcomes by using PCAOB inspections data. These analyses complement, but are not directly comparable to, the outreach results discussed earlier in this report.

- The staff analysis finds that the probability that an auditor used one or more auditor-employed specialists on an audit engagement increased by a statistically significant 4.8 percentage points in the post-implementation period.<sup>12</sup> This difference is driven by audit engagements performed by smaller audit firms. Staff analysis also finds a 10.5 percentage point increase in the probability of auditors using the work of company's specialists in the post implementation period, again driven by audit engagements performed at smaller audit firms. No statistically significant change is identified in the likelihood of using an auditor-engaged specialist in the post-implementation period.

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<sup>10</sup> Large accelerated filers are defined by the U.S. Securities and Exchange Commission (SEC) as issuers having a market float of \$700 million or more, as of the last business day of the issuer's most recently completed second fiscal quarter.

<sup>11</sup> The large-sample statistical analysis focuses primarily on evaluating outcomes related to the new Specialists Requirements. The new Estimates Requirements emphasize that auditors need to apply professional skepticism, including addressing potential management bias, when auditing accounting estimates. Given the lack of structured and systematic data currently available to measure these emphases, the staff is not able to separately perform a large-sample statistical analysis to evaluate the initial impact of the new Estimates Requirements at this time. The staff will continue to monitor the implementation of the new Estimates Requirements and evaluate appropriate outcome variables, such as restatement of previously issued financial statements, for a more comprehensive, longer-term, post-implementation review to be conducted in the future.

<sup>12</sup> Because the new Specialists Requirements did not feature phased implementation, there is no natural control group for performing a quasi-experimental study. Therefore, any econometric analysis aimed at identifying and estimating causal relationships between the implementation of the new Specialists Requirements and economic outcomes of interest would be confounded by contemporaneous changes in these other auditing and accounting regulations, as well as the economic impact of the ongoing COVID-19 pandemic.



- Among audit engagements that used auditor-employed specialists, on average, there is no statistically significant difference in the hours these specialists spent per engagement between the pre- and post-implementation period. Staff analysis does find that the proportion of auditor-employed specialist hours allocated to the preliminary phase of the audit increased by 2.3 percentage points in the post-implementation period consistent with a broader shift in the allocation of total audit hours to earlier phases of the audit.

## Public Request for Comment

The staff issued a [public request for comment](#) to provide all interested parties the opportunity to provide information on initial impact of new Estimates Requirements and Specialists Requirements. The staff received 14 comment letters from audit firms, academics, industry associations, and financial service providers. Input from comment letters was generally consistent with findings from the PCAOB's other outreach and data analysis efforts.

- Many commenters stated that the effects of the Estimates Requirements and Specialists Requirements were limited since audit firms' previous policies and methodologies aligned well with the new requirements.
- Commenters reported that, in some instances, the new requirements improved audit quality, but overall did not have significant impacts on auditors or companies.

- Some commenters reported that the Estimates Requirements and Specialists Requirements led to increased auditor effort to understand and document assumptions underlying accounting estimates. A valuation service provider stated that their staff provided more robust pricing information to address demands from auditors for more extensive documentation.
- Among the changes identified by commenters, an industry association reported that, in some cases, the new Estimates Requirements resulted in more formalized discussions between auditors and audit committees in the planning phase of the audit.
- Commenters did not note any significant impact of the new audit requirements on audit fees or other costs.

## WHAT'S NEXT?

The PCAOB will continue to monitor the implementation of the new Estimates Requirements and Specialists Requirements. Because some effects of these new requirements may take several years to fully manifest or stabilize, the PCAOB will also continue to evaluate the timeline for developing any more comprehensive post-implementation review. Potential future analyses would further evaluate the benefits and costs of these new requirements, including any unintended consequences, so as to understand the overall effect of the requirements on users of financial statements, auditors, and public companies.

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