



SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-100774; File No. PCAOB-2024-03]

Public Company Accounting Oversight Board; Order Granting Approval of *Amendments Related to Aspects of Designing and Performing Audit Procedures that Involve Technology-Assisted Analysis of Information in Electronic Form*

August 20, 2024

I. Introduction

On June 20, 2024, the Public Company Accounting Oversight Board (the “Board” or the “PCAOB”) filed with the Securities and Exchange Commission (the “Commission”), pursuant to section 107(b)¹ of the Sarbanes-Oxley Act of 2002 (“SOX”) and section 19(b)² of the Securities Exchange Act of 1934 (the “Exchange Act”), a proposal to adopt amendments to auditing standard (“AS”) 1105, *Audit Evidence*, and AS 2301, *The Auditor’s Responses to the Risks of Material Misstatement*, and conforming amendments to AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements* (collectively, the “Amendments”). The Amendments were published for comment in the *Federal Register* on July 2, 2024.³ We received six (6) comment letters in response to the Notice of Filing of Proposed Rules.⁴ This order approves the Amendments, which we find to be consistent with the requirements of Title I of SOX and the rules and regulations issued thereunder and necessary or appropriate in the public interest or for the protection of investors.

¹ 15 U.S.C. 7217(b).

² 15 U.S.C. 78s(b).

³ See *Public Company Accounting Oversight Board; Notice of Filing of Proposed Rules on Amendments Related to Aspects of Designing and Performing Audit Procedures that Involve Technology-Assisted Analysis of Information in Electronic Form*, Release No. 34-100430 (June 26, 2024) [89 FR 54922 (July 2, 2024)] (“Notice of Filing of Proposed Rules”), available at <https://www.sec.gov/files/rules/pcaob/2024/34-100276.pdf>.

⁴ The Commission received comment letters from Deloitte & Touche LLP (July 18, 2024) (“Deloitte”); KPMG LLP (July 23, 2024) (“KPMG”); PricewaterhouseCoopers LLP (July 23, 2024) (“PWC”); RSM US LLP (July 23, 2024) (“RSM”); Center for Audit Quality (July 23, 2024) (“CAQ”); and Ernst & Young LLP (Aug. 12, 2024) (“EY”). Comment letters received by the Commission on the Amendments are available on the Commission’s website at <https://www.sec.gov/comments/pcaob-2024-003/pcaob2024003.htm>.

II. Description of the Amendments

On June 12, 2024, the Board unanimously adopted the Amendments.⁵ The Amendments are intended to more specifically address certain aspects of designing and performing audit procedures that involve analyzing information in electronic form with technology-based tools (i.e., technology-assisted analysis). The Amendments should promote investor protection by enhancing the quality of audits. The requirements contained within the Amendments are discussed further below.

A. Changes to PCAOB Standards

The Amendments are principles-based in how they further specify and clarify certain existing auditor responsibilities and are therefore intended to be adaptable to the evolving nature of the use of technology in the audit. In particular, the Amendments:

- Clarify the description of what constitutes a *test of details*;⁶
- Specify auditor responsibilities when identifying items that require further investigation when performing tests of details;⁷
- Specify that if the auditor uses an audit procedure for more than one purpose (e.g., risk assessment, test of controls, or substantive procedure), the auditor should achieve each objective of the procedure;⁸
- Specify auditor responsibilities for evaluating the reliability of external information provided by the company under audit;⁹
- Emphasize the importance of controls over information technology;¹⁰

⁵ See *Amendments Related to Aspects of Designing and Performing Audit Procedures that Involve Technology-Assisted Analysis of Information in Electronic Form*, PCAOB Release No. 2024-007 (June 12, 2024) (“Adopting Release”), available at https://assets.pcaobus.org/pcaob-dev/docs/default-source/rulemaking/docket-052/2024-007-adoptingrelease.pdf?sfvrsn=28f44e9e_2.

⁶ See AS 2301.48.

⁷ See AS 2301.10, .49 and .50.

⁸ See AS 1105.14.

⁹ See AS 1105.10A.

¹⁰ See AS 1105.08, .10, and .15.

- Emphasize the importance of appropriate disaggregation or detail of information to the relevance of audit evidence;¹¹ and
- Make conforming changes to AS 2501.¹²

B. Applicability and Effective Date

The Amendments will be effective for audits of financial statements for fiscal years beginning on or after December 15, 2025. The PCAOB has proposed application of the Amendments to include audits of emerging growth companies (“EGCs”),¹³ as discussed in section IV below.

III. Comment Letters

As noted above, to date the Commission has received six (6) comment letters in response to the Notice of Filing of Proposed Rules.¹⁴ Commenters generally supported the Board’s efforts to modernize the requirements related to certain aspects of designing and performing audit procedures that involve technology-assisted analysis to support the objective of improving audit quality. A number of commenters, while generally supportive of the Amendments, sought clarification of specific issues raised, which are detailed below.¹⁵

A number of commenters identified the requirements in new paragraph .10A(b) of AS 1105 as requiring further clarity or modification.¹⁶ Commenters stated their view that the requirements could be read as not allowing the auditor to apply a risk-based approach, but instead requiring the auditor, in all circumstances, to either test each piece of external

¹¹ See AS 1105.07.

¹² See AS 2501.12 and footnote 14 to paragraph .13.

¹³ The term “emerging growth company” is defined in section 3(a)(80) of the Exchange Act (15 U.S.C. 78c(a)(80)). See also *Inflation Adjustments under Titles I and III of the JOBS Act*, Release No. 33-11098 (Sept. 9, 2022) [87 FR 57394 (Sept. 20, 2022)], available at <https://www.sec.gov/files/rules/final/2022/33-11098.pdf>.

¹⁴ See *supra* note 4.

¹⁵ See letters from KPMG; PWC; RSM; CAQ; and EY. PWC expressed support for the overall goal of the rulemaking but indicated that it could not support the Amendments “without further amendment or contemporaneous interpretive guidance” to address its concerns.

¹⁶ See letters from KPMG; PWC; RSM; CAQ; and EY.

information obtained from the company to determine if it was modified before it was provided to the auditor, or test controls over receiving, maintaining, and, if applicable, processing the information.¹⁷ Commenters stated that this reading of the requirements appeared to be in conflict with language included in the Adopting Release that indicated that a risk-based approach could be taken¹⁸ as well as with AS 1105.09, which states that the auditor is not expected to be an expert in documentation authentication.¹⁹ Commenters also stated that if the requirements were not risk-based, they would likely result in significant additional costs, without a commensurate benefit, that have not been accounted for in the Board's economic analysis.²⁰ Commenters also stated that, in some cases, an entity may not have identified the risk of modification as one that represents a reasonable possibility of a material misstatement, and thus such controls would not likely be currently part of the entity's internal control over financial reporting.²¹ Some of these commenters stated that, in such circumstances, they believe the Amendments may require the company to establish controls solely to satisfy the requirements of its auditors.²² Commenters raised concerns about auditors' ability to compare electronic information to source records as many companies do not have physical copies or original paper records because the information is obtained and maintained only in electronic form.²³ According to these commenters, this potential limitation on the ability to compare electronic information to source records would result in the auditor being required to test management's controls over receiving, maintaining, and processing

¹⁷ See, e.g., letter from PWC.

¹⁸ See letters from PWC; RSM; and CAQ.

¹⁹ See letters from KPMG; PWC; CAQ; and EY (Expressing its concerns in the context of the interaction between AS 1105.10A(b) and the PCAOB's proposed paragraph AS 2301.40A, which is part of the Substantive Analytical Procedures Proposal. *Infra* note 25. We believe EY's concern with respect to the Amendments is addressed by the risk-based considerations discussed herein, and, with respect to concerns about the Substantive Analytical Procedures Proposal currently under consideration by the Board, we intend to encourage the Board to consider the comments in that proposal.).

²⁰ See letters from PWC and EY.

²¹ See letters from KPMG; PWC; CAQ; and EY.

²² See letters from KPMG; PWC; and CAQ.

²³ See letters from KPMG; PWC; RSM; CAQ; and EY.

the electronic information, which would not be possible if the controls do not exist or were not operating effectively.²⁴

All commenters stated that either interpretive or other implementation guidance was warranted to facilitate implementation of the Amendments. One commenter recommended the Commission delay the effective date of the Amendments to align with the effective date of the recently proposed amendments to AS 2305.²⁵

As discussed above, a number of commenters were of the view that new paragraph AS1105.10A(b) requires the auditor, in all circumstances, to test whether each piece of information provided to the auditor by the company, which the company received from external sources, has been modified by the company. Although we understand the concerns raised by such commenters, we believe these concerns may be misplaced, particularly in light of the guidance provided by the Board in the Adopting Release. For example, in the Adopting Release, the Board stated that “[it was] not prescribing the nature, timing, or extent of the auditor’s procedures to evaluate the reliability of the external information.”²⁶ Instead, as the Board explained, “[a]n auditor would design the procedures considering the wide variety of types of external information received by companies and differences in the processes for receiving, maintaining and, where applicable, processing such information.”²⁷ Therefore, our understanding of the Amendments, when read in the overall context of the PCAOB auditing standards, is that they do not preclude a risk-based approach to testing external information. Nevertheless, given the concerns raised by commenters, we encourage the PCAOB to provide further implementation guidance on this point. Given our understanding of the risk-based nature of the standards, we

²⁴ *Id.*

²⁵ See letter from KPMG. See *Proposed Auditing Standard – Designing and Performing Substantive Analytical Procedures and Amendments to Other PCAOB Standards*, PCAOB Release No. 2024-005 (June 12, 2024) (“Substantive Analytical Procedures Proposal”), available at https://assets.pcaobus.org/pcaob-dev/docs/default-source/rulemaking/docket-056/2024-006-as-2305-proposal.pdf?sfvrsn=d174cacf_2.

²⁶ Adopting Release, *supra* note 5 at 26-32.

²⁷ *Id.* See also AS 2110 *Identifying and Assessing Risks of Material Misstatement*; AS 1105.08; AS 1105.09; and new AS 1105.10A(a).

believe the commenters' concern that the costs of this requirement were not appropriately considered in the Board's economic analysis reflects a misunderstanding of the nature of the requirement and that the Board adequately considered the costs related to the Amendments.²⁸

Regarding commenter concerns about the availability of source records, we do not believe that having source records only available in electronic form would inhibit procedures to compare information to source records. Source records are not defined in the PCAOB's auditing standards and may exist in many forms, including in electronic form. We note that, when considering the reliability of such a record, AS 1105.10A and AS 1105.09 require the auditor to consider, among other things, the means by which it was obtained, including any processing by the company and whether there are indications that it may not be authentic.

We also do not believe that the Amendments would require management to establish new controls solely for purposes of satisfying the requirements of the auditor as raised by commenters. The PCAOB addressed this concern in the Adopting Release by explicitly stating that the Amendments do not require testing of controls to establish reliability.²⁹

One commenter stated that aspects of revised AS 2301.48 "impact auditors' ability to consistently determine whether a particular audit procedure qualifies as a test of details."³⁰ This comment appears to be based on a misunderstanding of the amendment. AS 2301.48 provides examples of items in an account or disclosure for which audit procedures are performed, but does not specify at what level audit procedures should be applied. In the Adopting Release, the Board was explicit that the Amendments are not intended to define "items included in an account or disclosure" because a definition is impractical, and the Board explained that the auditor will determine the level of disaggregation or detail based on the facts and circumstances of the

²⁸ See letters from PWC and EY.

²⁹ See Adopting Release, *supra* note 5 at 30.

³⁰ See letter from KPMG.

individual audit engagement.³¹ We believe the approach to allow the auditor to determine what level of disaggregation is most appropriate in light of the specific circumstances of the engagement is appropriate.

Regarding the comment recommending the Commission delay the effective date to align with the Substantive Analytical Procedures Proposal, the effective date was addressed by the Board in the Adopting Release, and the Board specifically highlighted that they considered “the effective dates for other Board rulemaking projects.”³² We agree with the Board’s assessment and support the conclusion reached.

We acknowledge commenters’ concerns about the need for implementation guidance and we note that the Board has a historical practice of performing a post-implementation review³³ as well as issuing appropriate implementation guidance for new standards and rule amendments when needed.³⁴ We encourage the Board to do the same with respect to the Amendments. We also acknowledge the importance of monitoring the implementation of the Amendments and the Commission staff works closely with the PCAOB as part of our general oversight mandate.³⁵ As part of that oversight, Commission staff will keep itself apprised of the PCAOB’s activities for monitoring the implementation of the Amendments and update the Commission, as necessary.

IV. Effect on Emerging Growth Companies

In the Notice of Filing of Proposed Rules, the Board recommended that the Commission determine that the Amendments apply to audits of EGCs.³⁶ Section 103(a)(3)(C) of SOX requires

³¹ See Adopting Release, *supra* note 5 at 18.

³² See Adopting Release, *supra* note 5 at 61.

³³ See, e.g., *Interim Analysis Report – Evidence of the Initial Impact of New Requirements for Auditing Accounting Estimates and the Auditor’s Use of the Work of Specialists*, Release No. 2022-008 (Dec. 8, 2022), available at https://assets.pcaobus.org/pcaob-dev/docs/default-source/economicandriskanalysis/pir/documents/estimates-specialists-interim-analysis-report.pdf?sfvrsn=e1b0eb15_4.

³⁴ See, e.g., *Staff Guidance – Auditing Accounting Estimates* (Aug. 22, 2019), available at https://assets.pcaobus.org/pcaob-dev/docs/default-source/standards/documents/staff-guidance-auditing-accounting-estimates.pdf?sfvrsn=80016a49_0.

³⁵ See section 107 of SOX.

³⁶ See Notice of Filing of Proposed Rules.

that any rules of the Board requiring mandatory audit firm rotation or a supplement to the auditor's report in which the auditor would be required to provide additional information about the audit and the financial statements of the issuer (auditor discussion and analysis) shall not apply to an audit of an EGC. The provisions of the Amendments do not fall into these categories.

Section 103(a)(3)(C) further provides that “[a]ny additional rules” adopted by the PCAOB do not apply to audits of EGCs “unless the Commission determines that the application of such additional requirements is necessary or appropriate in the public interest, after considering the protection of investors and whether the action will promote efficiency, competition, and capital formation.” The Amendments fall within this category. Having considered those statutory factors, we find that applying the Amendments to the audits of EGCs is necessary or appropriate in the public interest.

With respect to the Commission's determination of whether the Amendments will apply to audits of EGCs, the PCAOB provided information, including data and analysis of EGCs that sets forth its views as to why it believes the Amendments should apply to audits of EGCs.³⁷ In addition, the Board sought public input on the application of the Amendments to the audits of EGCs. Commenters who responded to the Board agreed the Amendments should apply to the audits of EGCs.³⁸

The Board indicated in its assessment that for all audits performed pursuant to PCAOB standards, including audits of EGCs, the Amendments may lead to higher audit quality, more efficient audits, lower audit fees, or some combination of the three.³⁹ These benefits may apply both to audit engagements where auditors currently incorporate technology-assisted analysis into their audit approach and engagements where auditors have been previously reluctant to use

³⁷ See Adopting Release, *supra* note 5 at 58-61.

³⁸ *Id.*

³⁹ *Id.* at 45.

technology-assisted analysis because of the risk of noncompliance.⁴⁰ As the Board noted in its assessment, the use of technology-assisted analysis appears to be less prevalent among U.S. non-affiliated firms (“NAFs”) than U.S. global network firms (“GNFs”).⁴¹ Therefore, since EGCs are more likely than non-EGCs to be audited by NAFs,⁴² and to the extent NAFs are not more likely than other firms to newly implement technology-assisted analysis in response to the Amendments, the impacts of the Amendments on EGC audits may be less than on non-EGC audits.⁴³ Nevertheless, the Board stated that it expects the Amendments to enhance the efficiency and quality of EGC audits that implement technology-assisted analysis and contribute to an increase in the credibility of financial reporting by those EGCs.⁴⁴ An improvement in EGCs’ financial reporting quality, may also improve the efficiency of capital allocation and enhance capital formation.⁴⁵

The Board noted that the Amendments could impact the ability of EGCs to compete if the costs of the Amendments to audited companies (as a result of any increase in costs to their auditors) disproportionately impact EGCs relative to their competitors.⁴⁶ However, as the direct costs associated with the Amendments are expected to be relatively modest, the Board concluded that the impact of the Amendments on competition, if any, is likewise expected to be limited.⁴⁷

We agree with the Board’s findings and further emphasize the benefits of the Amendments for EGCs. The Amendments may promote higher audit quality for EGC audits

⁴⁰ *Id.* at 46-47.

⁴¹ *See* Adopting Release, *supra* note 5 at 36. The U.S. GNFs are BDO USA P.C., Deloitte & Touche LLP, Ernst & Young LLP, Grant Thornton LLP, KPMG LLP, and PricewaterhouseCoopers LLP. The U.S. NAF firms include registered public accounting firms that are not members of global network firms.

⁴² *See* Adopting Release, *supra* note 5 at 60. PCAOB staff analysis indicates that, compared to exchange-listed non-EGCs, exchange-listed EGCs are approximately 2.6 times more likely to be audited by an NAF and approximately 1.3 times more likely to be audited by a triennially inspected firm.

⁴³ *See* Adopting Release, *supra* note 5 at 60.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.* at 54.

⁴⁷ *Id.* at 60.

employing technology-assisted analysis, and thus a higher reliability of financial reporting for the affected EGCs. An increased reliability of financial reporting may enhance investor protection and lead to an improved efficiency of capital allocation and enhanced capital formation with respect to EGCs. These benefits may be moderated relative to the effects on other issuers, because, for example, the auditors of EGCs are currently less likely to employ technology-assisted analysis. However, any potential costs passed down to EGCs may be similarly moderated.

We note that the Amendments could also impact competition for capital or in product markets in which EGCs compete. For example, if non-EGCs are more likely to be the subject of audits using technology-assisted analysis, these issuers may experience greater improvements in the reliability of their financial reporting and thereby attract more capital than EGCs. Alternatively, if any incremental costs or savings passed down to audited companies by auditors as a result of the Amendments are disproportionately directed to either EGCs or their competitors, competition may be affected. However, given that the direct benefits and costs of the rule (including effects on audit quality and audit fees) are expected to be relatively modest, any resulting impact on competition is likely to be relatively limited. While there may be additional effects if the Amendments result in a larger number of auditors newly incorporating or expanding the use of technology-assisted analysis in their audits, and it is difficult to predict which auditors and which engagements would most likely be the subject of such changes, it is not clear that such effects would disproportionately favor the competitors of EGCs. Further, many of the potential effects on competition are unlikely to be mitigated by applying the Amendments only to audits of non-EGCs.

Accordingly, after considering the protection of investors and whether the action will promote efficiency, competition, and capital formation, we believe there is a sufficient basis to determine that applying the Amendments to the audits of EGCs is necessary or appropriate in the public interest.

V. Conclusion

The Commission has reviewed and considered the Amendments, the information submitted therewith by the PCAOB, the comment letters received, and the recommendation of the Commission's staff. The Commission concludes that the determinations made by the PCAOB as described in the Adopting Release are reasonable. In particular, the Amendments address challenges with the rapidly evolving use of technology-based analytical tools that may not be sufficiently addressed under current professional audit standards. Addressing these challenges will advance the Board's investor protection mandate under SOX given that (1) the use of technology-based analytical tools is substantially increasing and is expected to continue to do so; (2) technology-based analytical tools have the potential to enhance the effectiveness of audit procedures by, for example, increasing the amount of data an auditor is able to analyze or otherwise validate, allowing the auditor to perform more robust analysis or analyze more complex relationships, or by allowing the auditor to focus their procedures on the transactions with the most risk; and (3) PCAOB research indicates that some auditors may be reluctant to implement new technologies due to perceived regulatory uncertainty, which can be addressed through the clarity provided in the Amendments.⁴⁸ Therefore, in connection with the PCAOB's filing and the Commission's review,

- A. The Commission finds that the Amendments are consistent with the requirements of Title I of SOX and the rules and regulations thereunder and are necessary or appropriate in the public interest or for the protection of investors; and
- B. Separately, the Commission finds that the application of the Amendments to the audits of EGCs is necessary or appropriate in the public interest, after considering the

⁴⁸ See Adopting Release, *supra* note 5 at 12. ("The [Data and Technology] research [project] further suggests that clarifications to PCAOB standards could more specifically address certain aspects of designing and performing audit procedures that involve technology-assisted analysis. The Board's Investor Advisory Group has also noted that auditors' use of technology-assisted analysis is an area of concern due to auditors' potential overreliance on company-produced information, and that addressing the use of such analysis in the standards could be beneficial.").

protection of investors and whether the action will promote efficiency, competition, and capital formation.

IT IS THEREFORE ORDERED, pursuant to section 107 of SOX and section 19(b)(2) of the Exchange Act, that the Amendments (File No. PCAOB-2024-03) be and hereby are approved.

By the Commission.

Vanessa A. Countryman,

Secretary.

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