PCAOB
PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD

Proposed Auditing Standard – Designing and Performing Substantive Analytical Procedures and Amendments to Other PCAOB Standards

PCAOB Release No. 2024-006
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PCAOB Rulemaking
Docket Matter No. 056

Summary: The Public Company Accounting Oversight Board ("PCAOB" or the "Board") is proposing to replace and retitle its auditing standard related to an auditor's use of substantive analytical procedures, AS 2305, *Substantive Analytical Procedures*, with a new standard, AS 2305, *Designing and Performing Substantive Analytical Procedures*, and to make amendments to other PCAOB standards. The proposed standard is designed to improve the quality of audits and enhance investor protection by strengthening and clarifying existing requirements to increase the likelihood that substantive analytical procedures will be appropriately designed and performed to provide relevant and reliable audit evidence when responding to assessed risks of material misstatement.

Public Comment: Interested persons may submit written comments to the Board. Comments should be sent by e-mail to comments@pcaobus.org or through the Board's website at pcaobus.org. Comments also may be sent to the Office of the Secretary, PCAOB, 1666 K Street, NW, Washington, DC 20006-2803. All comments should refer to PCAOB Rulemaking Docket Matter No. 056 in the subject or reference line and be received by the Board no later than August 12, 2024.

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I. EXECUTIVE SUMMARY

We are proposing to replace AS 2305, *Substantive Analytical Procedures* ("existing standard" or "existing AS 2305"), in its entirety, with a new standard, AS 2305, *Designing and Performing Substantive Analytical Procedures* ("proposed standard" or "proposed AS 2305"). The proposed standard is designed to improve audit quality and enhance investor protection by strengthening and clarifying requirements regarding designing and performing substantive analytical procedures in light of developments in audit practice and observations from PCAOB oversight activities.

Advancements in technology have led to greater availability of information in electronic form and greater use of technology-based tools by auditors to analyze such information ("technology-assisted analysis"). Although substantive analytical procedures can be performed without the use of technology-based tools, PCAOB staff has observed an increase in the use of substantive analytical procedures by some auditors, which we attribute in part to these advancements in technology. For example, we understand that more sophisticated data analysis tools have enabled some auditors to use more disaggregated data (e.g., at transaction or customer level) to identify previously unknown relationships and develop more precise expectations. We believe these trends are likely to continue and to increase in importance as technology continues to evolve.

Further, our oversight activities suggest that auditors do not always design and perform substantive analytical procedures appropriately. For example, we have observed instances where the expectation developed for a substantive analytical procedure was not precise enough to identify a difference between the auditor's expectation and the company's recorded amount, which may result in a potential material misstatement not being identified. When not designed and performed appropriately, a substantive analytical procedure may not constitute an appropriate auditor response to assessed risks of material misstatement or provide relevant and reliable audit evidence.

In addition, existing AS 2305 was originally developed by the American Institute of Certified Public Accountants ("AICPA"), adopted on an interim basis by the Board in 2003, and remains in effect substantially as adopted. It therefore predates the advancements in technology and greater availability of information that we understand are influencing current practice, as well as advancements in our own standards, such as requirements regarding risk assessment and audit evidence.

We believe that PCAOB standards could be improved to better address growing risks to audit quality associated with designing and performing substantive analytical procedures. These risks include risks specifically associated with the use of technology-assisted analysis in substantive analytical procedures, as well as more general risks that would arise if, as we expect, substantive analytical procedures become more prevalent because of the advancements in technology discussed above. We believe that clarifying and strengthening the requirements as proposed could improve the effectiveness of substantive analytical procedures and thereby enhance investor protection through improved audit quality.

Substantive Analytical Procedures

PCAOB standards require the auditor to design and perform substantive procedures—substantive analytical procedures or tests of details—that address the assessed risks of material misstatement for each relevant assertion of each significant account and disclosure. Appropriately designed and performed substantive analytical procedures can provide relevant and reliable audit evidence when responding to assessed risks of material misstatement.

When designing and performing substantive analytical procedures under existing PCAOB standards, the auditor identifies plausible and predictable relationships among both financial and nonfinancial data and develops expectations of the company's recorded amount, or ratio developed from recorded amounts, based on those relationships. For example, based on the relationship between the principal amount of the company's debt and applicable interest rates during a year, an auditor could develop an expectation of the amount of the company's interest expense for that year. The auditor then compares the expectation to the company's recorded amount of interest expense for that year and evaluates any significant unexpected difference to determine if there is a misstatement.

Key Proposed Changes

The proposed standard would strengthen and clarify the auditor's responsibilities when designing and performing substantive analytical procedures, increasing the likelihood that the auditor will obtain relevant and reliable audit evidence. Proposed AS 2305 is principles-based and could be applied to all substantive analytical procedures, including those that are designed and performed using technology-assisted analysis or other technology-based tools.

Key changes reflected in the proposed standard would:

- Strengthen and clarify the requirements for determining whether the relationship(s) to be used in the substantive analytical procedure is sufficiently plausible and predictable;
- Specify that the auditor may not develop their expectation using the company's amount or information that is based on the company's amount (so-called circular auditing);
- Strengthen and clarify existing requirements for determining when the difference between the auditor's expectation and the company's amount requires further evaluation;

- Strengthen and clarify existing requirements for evaluating the difference and determining if a misstatement exists, including specifying requirements in certain situations the auditor may encounter when evaluating a difference;

- Clarify the factors that affect the persuasiveness of audit evidence obtained from a substantive analytical procedure;

- Clarify the elements of a substantive analytical procedure, including the distinction between substantive analytical procedures and other types of analytical procedures; and

- Modernize the standard by reorganizing the requirements and more explicitly integrating the standard with other Board-issued standards.

In connection with proposed AS 2305, we are also proposing related amendments to AS 1105, *Audit Evidence*, and AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*. These amendments would:

- Specify the type of audit evidence necessary when applying substantive procedures to accounts or disclosures that depend on information received by the company from external sources; and

- Clarify the description of analytical procedures, including substantive analytical procedures as well as other types of analytical procedures in PCAOB standards.

The proposed standard and the other amendments we are proposing (collectively, "the proposal") would apply to all audits conducted under PCAOB standards.

This release provides background on the Board's standard-setting project, discusses the proposed standard and other amendments, and includes an economic analysis that further considers the need for standard setting and the anticipated economic impacts of our proposal. The release also includes three appendices: Appendix 1 sets forth the text of the proposed standard, Appendix 2 includes related amendments to AS 1105 and AS 2301, and Appendix 3 includes conforming amendments to other PCAOB standards.

Requesting Public Comment on Our Proposal

We are seeking public comment on all aspects of the proposal. Throughout the release, we have included detailed questions soliciting your feedback on specific aspects of our proposal. You are encouraged to comment on any or all topics, respond to any or all questions, provide feedback in areas not covered by specific questions, and provide any evidence, including empirical evidence or practical experiences, that informs your views.

Instructions on how to comment, including by e-mail or postal mail, can be found on the cover sheet of this release. Comments submitted can be found at the docket page of PCAOB Rulemaking Docket Matter No. 056.

II. BACKGROUND

This section of the release discusses existing requirements, current practice, observations from PCAOB oversight activities, and reasons to improve our auditing standards.

A. Overview of Existing Requirements

PCAOB standards require the auditor to design and perform substantive procedures that address the assessed risks of material misstatement for each relevant assertion of each significant account and disclosure.[1] Substantive procedures include substantive analytical procedures and tests of details (see Figure 1). Under PCAOB standards, auditors are permitted, but not required, to perform substantive analytical procedures as part of a financial statement audit.

Substantive analytical procedures differ from other types of analytical procedures in PCAOB standards (such as those performed as part of risk assessment or in the overall review of the financial statements)[2] in that they include a more precise auditor expectation and often are designed and performed on a more disaggregated basis. When designed and performed appropriately, substantive analytical procedures can provide relevant and reliable audit evidence when responding to certain assessed risks of material misstatement.

Our standards provide that for significant risks of material misstatement, including fraud risks, it is unlikely that audit evidence from substantive analytical procedures alone would be sufficient. Therefore, when addressing such risks, auditors are required to perform tests of details (i.e., apply audit procedures to items within an account or disclosure) that are specifically responsive to the assessed risks.[3]

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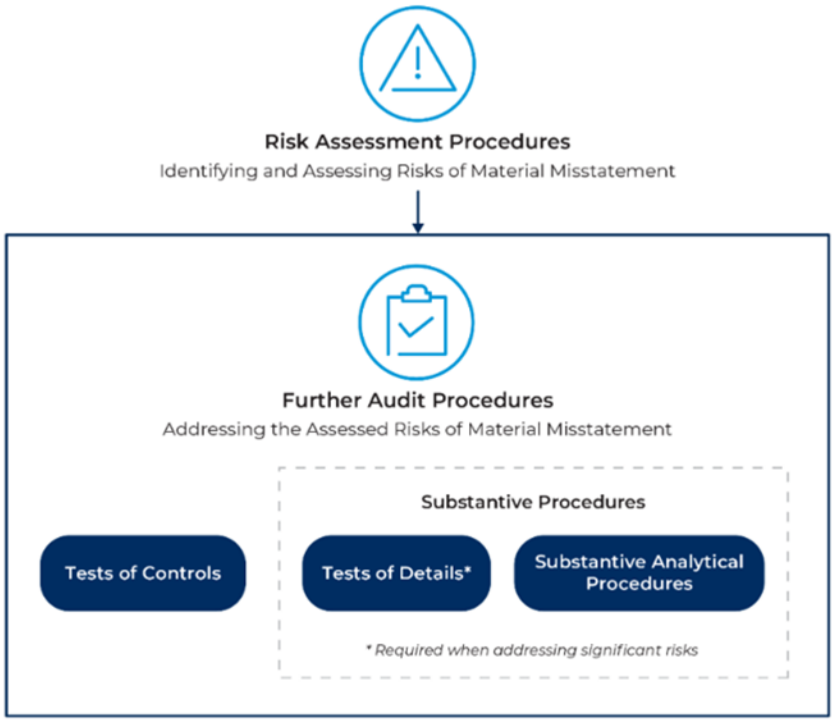
1 *See* AS 2301.08, .10, and .36.

2 AS 1105.21 describes analytical procedures addressed under PCAOB standards. *See* paragraphs .46-.48 of AS 2110, *Identifying and Assessing Risks of Material Misstatement*, which address analytical procedures as risk assessment procedures, paragraphs .05-.09 of AS 2810, *Evaluating Audit Results*, which address performing analytical procedures as part of the overall review of the financial statements, and paragraphs .16 and .17 of AS 4105, *Reviews of Interim Financial Information*, which address performing analytical procedures as part of conducting a review of interim financial information. As part of this rulemaking, we are proposing clarifying amendments to AS 1105.21. *See* Section III.D.1.

3 *See* AS 2305.09-.10 and AS 2301.11 and .13, specifying the auditor's responsibilities for responses to significant risks, including fraud risks.

Figure 1. Audit Procedures



Existing AS 2305 establishes requirements regarding the use of substantive analytical procedures in an audit. A substantive analytical procedure under existing PCAOB standards involves comparing an auditor's expectation of an amount recorded by the company, or a ratio developed from recorded amounts, with the company's recorded amount or ratio, and investigating significant unexpected differences.

The auditor's responsibilities under existing PCAOB standards include:

- *Using Plausible and Predictable Relationships*: A basic premise of substantive analytical procedures is that plausible relationships among data may reasonably be expected to exist and continue in the absence of known conditions to the contrary.[4] Auditors use their understanding of such relationships to develop expectations of amounts recorded by the company, or ratios developed from recorded amounts. Existing AS 2305 provides that it is important to understand the reasons that make the relationships plausible and that as greater evidence is

[4] *See* AS 2305.02.

desired from the procedure, more predictable relationships are required to develop the expectation.[5]

- *Developing an Expectation*: The expectation should be precise enough so that differences between the auditor's expectation and the company's recorded amounts or ratios that may be potential material misstatements, individually or when aggregated with other misstatements, would be identified for the auditor to investigate.[6]

- *Considering the Amount of Difference That Can Be Accepted*: Existing AS 2305 requires auditors to consider the amount of difference from the expectation that can be accepted without further investigation. This consideration is influenced primarily by materiality and should be consistent with the amount of audit evidence desired from the procedure.[7]

- *Evaluating Differences*: Auditors are required to evaluate significant unexpected differences between the company's recorded amounts or ratios and the auditor's expectation. If auditors are unable to obtain an explanation for a significant unexpected difference, they are required to perform additional audit procedures to obtain sufficient appropriate audit evidence to address the risk associated with the assertion.[8]

Other existing requirements relevant to this rulemaking include:

- *Using Relevant and Reliable Information when Designing and Performing Substantive Analytical Procedures*: AS 1105 explains what constitutes audit evidence and establishes requirements regarding designing and performing audit procedures to obtain sufficient appropriate audit evidence. Existing AS 2305 contains similar requirements in relation to the reliability of data used in substantive analytical procedures.[9]

- *Documenting the Procedure*: AS 1215, *Audit Documentation*, establishes general requirements for documentation the auditor should prepare and retain. Existing AS 2305 includes documentation requirements that effectively apply the

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5 *See* AS 2305.13-.14.

6 *See* AS 2305.17.

7 *See* AS 2305.20.

8 *See* AS 2305.21 and AS 2110.74.

9 *See* AS 2305.15-.16.

principles of AS 1215 in the context of performing substantive analytical procedures.[10]

- *Evidence Obtained from Substantive Procedures*: AS 2301 indicates that substantive procedures generally provide persuasive evidence when they are designed and performed to obtain evidence that is relevant and reliable.[11] As the assessed risk of material misstatement increases, the evidence from substantive procedures that the auditor should obtain also increases.[12]

B. Current Practice and Observations from PCAOB Oversight Activities

1. Current Practice

As noted above, auditors are permitted, but not required, to perform substantive analytical procedures as part of a financial statement audit. In 2023, the Board's Standards and Emerging Issues Advisory Group ("SEIAG") discussed current practice, noting that substantive analytical procedures are typically used for testing income statement accounts with a high volume of transactions, such as depreciation, amortization, interest expense, and payroll expense.[13]

The PCAOB staff reviewed the methodologies of global network firms ("GNFs")[14] that are based in the U.S. and certain non-affiliated firms ("NAFs")[15] that are also based in the U.S. to understand how firms address the use of substantive analytical procedures. The staff's analysis indicates that U.S. GNF methodologies generally reflect the requirements of existing AS 2305, and some methodologies already incorporate certain aspects of the requirements in the proposed standard, such as setting the amount for investigating differences at or below tolerable misstatement and establishing requirements around the type of information the

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[10] *See* AS 2305.22.

[11] *See* AS 2301.39.

[12] *See* AS 2301.37.

[13] *See* PCAOB Standards and Emerging Issues Advisory Group Meeting (Mar. 30, 2023), *available at* https://pcaobus.org/news-events/events/event-details/pcaob-standards-and-emerging-issues-advisory-group-meeting-2023-march.

[14] The U.S. GNFs are the U.S. member firms of the six global accounting firm networks (BDO International Ltd., Deloitte Touche Tohmatsu Ltd., Ernst & Young Global Ltd., Grant Thornton International Ltd., KPMG International Ltd., and PricewaterhouseCoopers International Ltd.). The U.S. GNFs are BDO USA P.C., Deloitte & Touche LLP, Ernst & Young LLP, Grant Thornton LLP, KPMG LLP, and PricewaterhouseCoopers LLP.

[15] NAFs are both U.S. and non-U.S. accounting firms registered with the Board that are not GNFs. Some of the NAFs belong to international networks.

auditor should not use when developing the expectation.[16] The methodologies of U.S. NAFs generally describe substantive analytical procedures on a basis consistent with the provisions of existing AS 2305.

In the last several years, the PCAOB staff has observed an increase in the use of technology-assisted analysis in audits by some auditors, including when auditors design and perform substantive analytical procedures. The staff has observed that technology-assisted analysis has enabled auditors to design and perform substantive analytical procedures on a more disaggregated basis. Some commenters on the Board's standard-setting project related to technology-assisted analysis ("Technology-Assisted Analysis Project") addressed aspects of performing substantive analytical procedures. Commenters highlighted that greater availability of disaggregated data and the use of technology-assisted analysis to analyze that data can enable the auditor to develop more precise expectations, including expectations for all individual items within an account or disclosure (e.g., individual lease contracts or individual loans).[17] During the staff's research, some auditors also indicated that technology-assisted analysis enables the auditor to identify additional plausible and predictable relationships, and therefore perform multiple substantive analytical procedures for the same account(s) and relevant assertion(s). For example, an auditor could perform multiple substantive analytical procedures over payroll expense using different plausible and predictable relationships, such as the relationship between headcount and payroll expense and the relationship between payroll deductions and gross pay.

In addition, PCAOB staff has observed that some U.S. GNF methodologies indicate where technology-based tools[18] may be used when designing and performing substantive analytical procedures. The staff also has observed that some of these methodologies indicate where aspects of designing and performing substantive analytical procedures may not lend themselves to the use of technology, such as when evaluating current events and conditions not reflected in historical information. While there has been an increase in the use of technology-assisted analysis, we have also observed that substantive analytical procedures continue to be performed by some auditors without the use of technology-assisted analysis or

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[16] *See* Section IV.A.1 for a more detailed discussion of the staff's analysis of firm methodologies.

[17] *See* comment letters received in response to *Proposed Amendments Related to Aspect of Designing and Performing Audit Procedures that Involve Technology-Assisted Analysis of Information in Electronic Form*, PCAOB Rel. No. 2023-004 (June 26, 2023) ("Technology-Assisted Analysis Release") in Board Docket No. 52, *available at* https://pcaobus.org/about/rules-rulemaking/rulemaking-dockets/docket-052/comment-letters.

[18] In this release, the term "tool" refers to specialized software that is used on audit engagements to examine, sort, filter, and analyze transactions and information used as audit evidence or which otherwise generates information that aids auditor judgment in the performance of audit procedures. Spreadsheet software itself is not inherently a tool, but a spreadsheet may be built to perform the functions of a tool (examining, sorting, filtering, etc.), in which case it is included within the scope of this term.

other technology-based tools. Some firms have developed templates to assist engagement teams with designing and performing substantive analytical procedures, and in some instances, the templates are tailored by using industry-specific plausible relationships relevant to particular financial statement accounts.

Advancements in technology have also expanded the volume of information that auditors can use as audit evidence, both from the companies they audit and from external sources. More companies use enterprise resource planning ("ERP") systems and other information systems that maintain large volumes of information in electronic form, including information generated internally by the company as well as information that the company receives from external sources. Significant volumes of this information are available to auditors for use in substantive procedures, including substantive analytical procedures.

Both the International Auditing and Assurance Standards Board ("IAASB") and the Auditing Standards Board ("ASB") of the AICPA have standards addressing substantive analytical procedures:

- IAASB Standard – International Standard on Auditing 520, *Analytical Procedures* ("ISA 520") (effective 2009); and

- ASB Standard – AU-C Section 520, *Analytical Procedures* ("AU-C 520") (effective 2012).

These standards are generally consistent with existing AS 2305 with respect to the core requirements of designing and performing a substantive analytical procedure, such as the requirement to base the procedure on a plausible predictable relationship and to use reliable information.[19]

Question:

1. Does the description of current audit practice accurately depict the state of practice? If not, what clarifications should be made? Are there other aspects of current audit practice that we should consider?

2. Observations from PCAOB Oversight Activities

PCAOB inspections have shown that some auditors did not fulfill their responsibilities under the existing standard when performing substantive analytical procedures. For example, some auditors did not:

- Sufficiently evaluate the plausibility and predictability of the relationship used;

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[19] *See* Section IV.A.5 for additional discussion of the activities of other standard setters.

- Develop expectations that were sufficiently precise;
- Determine an amount for which differences between the auditor's expectation and the company's recorded amount would require further investigation;
- Sufficiently investigate significant unexpected differences or obtain evidence beyond inquiry of management regarding such differences; or
- Sufficiently test the accuracy and completeness of information produced by the company used in the procedure.[20]

C. Reasons to Improve Auditing Standards

We believe that PCAOB standards could be improved to better address growing risks to audit quality associated with designing and performing substantive analytical procedures. These risks include risks specifically associated with the use of technology-assisted analysis in substantive analytical procedures, as well as more general risks that would arise if, as we expect, substantive analytical procedures become more prevalent because of greater availability of information in electronic form and use of technology-based tools. When designed and performed appropriately, substantive analytical procedures can provide relevant and reliable audit evidence to respond to assessed risks of material misstatement.

The appropriate use of technology-assisted analysis in well-designed substantive analytical procedures can improve the quality of audit evidence obtained through the procedures. For example, technology-assisted analysis tools enable auditors to perform substantive analytical procedures using more disaggregated data and multiple analytical techniques. Auditors can thus identify more complex relationships and anomalies in the data, identify more relevant and predictable relationships, and develop more precise expectations. In addition, technology-assisted analysis has enabled some auditors to expand the use of substantive analytical procedures to accounts and assertions where they had not traditionally been performed. For example, we understand that the use of technology-assisted analysis has enabled some auditors to perform substantive analytical procedures over balance sheet accounts, such as trade payables.

On the other hand, inappropriate use of technology-assisted analysis in substantive analytical procedures may reduce the quality of audit evidence obtained. This could occur if an auditor uses information in the analysis without obtaining a sufficient understanding of the source and relevance of the information. For example, an auditor could obtain information about sales commissions from the company's information system and use it erroneously in a technology-assisted analysis to estimate the amount of sales, not understanding that sales commissions in the company's information system are derived from sales. (In practice, such

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[20] *See* Section IV.A.3 for additional discussion of observations from PCAOB oversight activities.

errors are sometimes called circular auditing or circular testing.) In another example, an auditor might erroneously use technology-assisted analysis to develop the auditor's expectation of revenue by analyzing several years of historical data that is not reliable or is no longer relevant in the current environment (such as erroneously using information about pre-COVID sales trends to estimate sales during the COVID pandemic in a context where the COVID pandemic materially affected customer behavior).

Using information that is not reliable or relevant reduces the effectiveness of the substantive analytical procedure, thus reducing the likelihood of detecting misstatements through performing the procedure. Enhancing the requirements for the use of substantive analytical procedures could increase the likelihood that auditors who use substantive analytical procedures will obtain relevant and reliable audit evidence to address the assessed risks of material misstatement. For example, the proposed requirements would emphasize the importance of appropriately considering the relevant information available to the auditor for identifying sufficiently plausible and predictable relationships and developing auditor expectations.

There is stakeholder support for clarifying and strengthening the requirements around designing and performing substantive analytical procedures. For example, members of the SEIAG generally support the Board's efforts to modernize the standard on substantive analytical procedures.[21]

In addition, commenters on the Technology-Assisted Analysis Project also highlighted the importance of enhancing existing AS 2305 to improve the quality of audit evidence obtained from substantive analytical procedures. One commenter encouraged the Board to recognize the risks associated with circular auditing given the expectation of more widespread use of technology-assisted analysis, including when performing substantive analytical procedures.[22] Another commenter suggested that substantive analytical procedures remain a challenging area and that auditors would benefit from clearer requirements in this area. Other commenters on the Technology-Assisted Analysis Project highlighted the importance of the Board's consideration of the impact of technology-assisted analysis on the design and performance of substantive analytical procedures.

We have also heard from the Board's Investor Advisory Group ("IAG") that auditors' use of technology-assisted analysis is an area of concern due to auditors' potential overreliance on company-produced information. As a result, there could be a benefit in having the standards

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[21] *See* PCAOB Standards and Emerging Issues Advisory Group Meeting (Mar. 30, 2023), *available at* https://pcaobus.org/news-events/events/event-details/pcaob-standards-and-emerging-issues-advisory-group-meeting-2023-march.

[22] Comment letters on the Technology-Assisted Analysis Release discussing substantive analytical procedures are available in Board Docket No. 52.

address the need for the auditor to obtain evidence from a source outside of the company.[23] The proposed related amendments to AS 2301 would emphasize the importance of examining information from external sources when an account or disclosure depends on such information.[24]

The proposal would be an important step in our continuing effort to modernize our standards. In our 2022-2026 Strategic Plan, issued for public comment in August 2022, we expressed our re-energized focus on the PCAOB's investor protection mission and stated our intent "to modernize and streamline our existing standards and to issue new standards where necessary to meet today's needs."[25] Commenters on the draft of the strategic plan generally supported this initiative.[26] One commenter noted that investors have asked the PCAOB to develop more permanent standards (i.e., depending less on interim standards) to increase stability and predictability. The need to update the interim standards has been mentioned in other communications received by the PCAOB and the U.S. Securities and Exchange Commission ("SEC").[27] Existing AS 2305 is among the standards that have not been substantively amended since their adoption on an interim basis in 2003.

We believe that modernizing the existing standard by aligning its requirements more closely with the PCAOB risk assessment standards and more explicitly specifying auditors' responsibilities could increase the likelihood that auditors using substantive analytical procedures will obtain relevant and reliable audit evidence. Requirements that are better aligned with other PCAOB standards could improve the use of substantive analytical procedures in situations where auditors view them as an effective and efficient means of obtaining relevant and reliable audit evidence. In addition, we believe that more explicit direction to auditors in

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23 *See* PCAOB Investor Advisory Group Meeting (June 8, 2022), *available at* https://pcaobus.org/news-events/events/event-details/pcaob-investor-advisory-group-meeting-2022.

24 *See* Section III.D.2.

25 *See* PCAOB, Strategic Plan 2022-2026 (Nov. 18, 2022), at 10, *available at* https://assets.pcaobus.org/pcaob-dev/docs/default-source/about/administration/documents/strategic_plans/strategic-plan-2022-2026.pdf?sfvrsn=b2ec4b6a_4/.

26 *See Request for Public Comment – Draft 2022-2026 PCAOB Strategic Plan*, PCAOB Rel. No. 2022-003 (Aug. 16, 2022). Comments on the draft strategic plan are *available at* https://pcaobus.org/about/strategic-plan-budget/comments-on-pcaob-draft-strategic-plan-2022-2026.

27 *See* Letter from former members of PCAOB Investor Advisory Group (Apr. 19, 2021), *available at* https://consumerfed.org/wp-content/uploads/2021/04/PCAOB-IAG-Letter.pdf. *See also* Letter from Alliance of Concerned Investors (Feb. 14, 2022), *available at* https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/about/advisory/documents/comments/3_aoci.pdf?sfvrsn=f47eefbb_4 and Letter from Mary M. Bersot, et al. (Feb. 28, 2022), *available at* https://pcaob-assets.azureedge.net/pcaob-dev/docs/default-source/about/advisory/documents/comments/16_bersot.pdf?sfvrsn=83d93742_4.

areas identified through our oversight activities would benefit audit quality. Sections III and IV of this release include a detailed discussion of the proposal and reasons for improving the existing requirements.

Questions:

2. Are there other areas of concern relating to auditors' use of substantive analytical procedures that are not described above? If so, what are the areas of concern and what changes should be made to address them?

3. Does the proposal adequately describe the extent and frequency of auditors' use of substantive analytical procedures in audits? Please provide supporting information, such as the types of accounts generally tested using substantive analytical procedures and other relevant data.

4. Does the proposal adequately describe how advancements in technology changed the extent and frequency of auditors' use of substantive analytical procedures? Please provide details, including any information on the use of technology-based tools and the increase in the availability of data to perform substantive analytical procedures.

III. DISCUSSION OF THE PROPOSAL

A. Overview of Proposed Standard and Related Amendments

We propose replacing the existing standard on substantive analytical procedures, in its entirety, with a new standard, AS 2305, *Designing and Performing Substantive Analytical Procedures*. The full text of proposed AS 2305 appears in Appendix 1. The proposed standard presents requirements for the auditor when designing and performing a substantive analytical procedure (see Figure 2).

Figure 2. Proposed AS 2305

The proposed standard is designed to:

- *Clarify the elements of a substantive analytical procedure*. The proposed standard clarifies that a substantive analytical procedure involves comparing a recorded amount or an amount derived from recorded amounts (as applicable, the "company's amount") to an expectation of that amount developed by the auditor to determine whether there is a misstatement. The proposed standard also clarifies the distinction between substantive analytical procedures and other types of analytical procedures, in that substantive analytical procedures are designed and performed at a level of precision that is sufficient to respond to assessed risks of material misstatement, alone or in combination with other procedures.

- *Clarify the factors that affect the persuasiveness of audit evidence obtained from a substantive analytical procedure*. The proposed standard clarifies that more persuasive audit evidence is obtained when a substantive analytical procedure is more precise and uses more reliable information. The proposed standard also highlights certain aspects of a substantive analytical procedure that affect its level of precision.

- *Strengthen and clarify requirements related to the relationship on which a substantive analytical procedure is based*. Under the proposed standard, the auditor would be required to identify the relationship or relationships to be used in the substantive analytical procedure and determine whether each such relationship is sufficiently plausible and predictable to achieve the objective of the procedure. The proposed standard provides that relationships used in the substantive analytical procedure must be sufficiently plausible and predictable to achieve the objective of the procedure.

- *Specify information the auditor may not use when developing an expectation*. Under the proposed standard, when developing an expectation, the auditor may not use the company's amount or information that is based on the company's amount (as discussed above, a mistake known in practice as circular auditing). To provide relevant and reliable audit evidence, the auditor's expectation has to be developed from other sources of information, and not the company's amount to which it will be compared.

- *Strengthen and clarify existing requirements for determining a threshold above which differences have to be evaluated*. The proposed standard would require the threshold for evaluating the difference between the auditor's expectation and the company's amount to be set at or below tolerable misstatement. The proposed standard also describes considerations that should be taken into account in determining the threshold.

- *Strengthen and clarify existing requirements for evaluating the difference*. The proposed standard would require the auditor to evaluate the difference between the auditor's expectation and the company's amount when the difference exceeds the established threshold, and includes a more explicit requirement to perform procedures to determine whether there is a misstatement. The proposed standard specifies that these procedures would be required to extend beyond inquiry.

- *Specify auditor responsibilities in situations the auditor may encounter when evaluating a difference*. The proposed standard specifies auditor responsibilities in situations when: (i) the auditor determines there is a misstatement; (ii) the auditor is unable to determine whether there is a misstatement; and (iii) the auditor identifies relevant information of which the auditor was not aware when initially designing the substantive analytical procedure.

- *Reorganize the standard and more explicitly integrate the requirements with other Board-issued standards*. Unlike the existing standard, the proposed standard presents requirements in the order in which the auditor would apply them when designing and performing a substantive analytical procedure. It also more expressly refers to the risk assessment standards and eliminates provisions, such as audit documentation requirements, that are effectively set forth in other standards and do not have to be repeated in this standard.[28]

The proposed standard would retain certain aspects of existing AS 2305. For example, under the existing standard, when responding to a significant risk of material misstatement, it is unlikely that audit evidence obtained from substantive analytical procedures alone will be sufficient and the auditor is required to perform substantive procedures that include tests of details specifically responsive to the assessed risk.[29] As described in further detail in Section IV.D.3, we considered but are not proposing to change this requirement.

In addition, in connection with proposed AS 2305, we are proposing related amendments to AS 2301 and AS 1105 that are designed to:

- *Strengthen auditor responsibilities when applying substantive procedures to certain accounts or disclosures*. The proposed amendment to AS 2301 would specify that when applying substantive procedures (including substantive analytical procedures) to accounts or disclosures that depend on information the company received from external sources, the auditor is required to examine relevant information from the external sources.

- *Clarify the description of analytical procedures*. To better differentiate between analytical procedures performed to respond to assessed risks of material misstatement (substantive analytical procedures) and analytical procedures

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28 *See* AS 1215.

29 *See* AS 2305.09-.10, and AS 2301.11 and .13.

performed for other purposes under PCAOB standards, the proposed amendment to AS 1105 would clarify the description of analytical procedures.

B. Introduction and Objective

See paragraphs .01 through .03 of the proposed standard in Appendix 1.

Consistent with other Board-issued standards, the proposed standard includes an introduction and objective to describe the purpose of the standard and key aspects of its provisions.

Paragraph .01 of the proposed standard provides a general description of substantive analytical procedures. It refers to AS 2301, which requires the auditor to design and implement appropriate responses that address the assessed risks of material misstatement and provides that this may include using substantive analytical procedures to address the assessed risks of material misstatement for certain relevant assertions of significant accounts and disclosures. It also provides that substantive analytical procedures are appropriate only when designed and performed, alone or in combination with other audit procedures, at a level of precision sufficient to respond to an assessed risk of material misstatement. When designed and performed appropriately, substantive analytical procedures can provide relevant and reliable audit evidence.

Existing AS 2305 discusses when substantive analytical procedures may be effective and efficient tests for certain assertions and for achieving particular substantive testing objectives.[30] The proposed standard does not describe the nature of the assertions that could be tested using substantive analytical procedures. Instead, the proposed standard reaffirms that the auditor must design and implement audit procedures, which may include substantive analytical procedures, that address the assessed risks. As discussed in Section II.C, technology-assisted analysis has enabled some auditors to expand the use of substantive analytical procedures to accounts and assertions where they had not traditionally been performed (e.g., balance sheet accounts).

The proposed standard clarifies the distinction between substantive analytical procedures and other analytical procedures, in that substantive analytical procedures are designed and performed at a level of precision that is sufficient to respond to assessed risks of material misstatement, alone or in combination with other procedures. As noted in Section II.A, in certain situations, substantive analytical procedures alone do not provide sufficient appropriate audit evidence under PCAOB standards.

Paragraph .02 of the proposed standard describes the elements of a substantive analytical procedure. Under the proposed standard, a substantive analytical procedure involves

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[30] *See* AS 2305.04 and .09-.12.

comparing a recorded amount or an amount derived from recorded amounts (as applicable, the "company's amount") to an expectation of that amount developed by the auditor to determine whether there is a misstatement. The auditor's expectation when performing a substantive analytical procedure is based on one or more plausible and predictable relationships among financial or nonfinancial data. Existing AS 2305 also describes the elements of a substantive analytical procedure but uses different terminology.[31]

The proposed standard uses a new term, "company's amount," for the amount to which the auditor's expectation is compared. The "company's amount," defined as "a recorded amount or an amount derived from recorded amounts," is broader than the reference in existing AS 2305 to "recorded amounts or ratios developed from recorded amounts."[32] We believe the new term would more accurately reflect the broader range of comparisons used by auditors. Our research indicates that in addition to ratios, these comparisons could involve, for example, coefficients of correlation among several accounts (e.g., revenue, accounts receivable, and cash).

Paragraph .03 of the proposed standard states that the auditor's objective when designing and performing a substantive analytical procedure is to obtain relevant and reliable audit evidence about one or more relevant assertions of a significant account or disclosure. Existing AS 2305 includes similar introductory language[33] but does not include an express objective.

Question:

5. Are the introduction and objective sections of the proposed standard clear and appropriate? If not, how should they be clarified?

C. Designing and Performing a Substantive Analytical Procedure to Respond to a Risk of Material Misstatement

See paragraph .04 of the proposed standard in Appendix 1.

The proposed standard would better integrate the requirements for designing and performing substantive analytical procedures with the requirements of the PCAOB risk assessment standards. Paragraph .04 of the proposed standard states that under AS 2301, in designing and performing audit procedures, the higher the auditor's assessment of risk, the more persuasive audit evidence the auditor should obtain. More persuasive audit evidence is obtained from a substantive analytical procedure when the procedure is more precise and uses more reliable information. The precision of a substantive analytical procedure depends on

31 *See* AS 2305.02.

32 *See* AS 2305.05.

33 *See e.g.*, AS 2305.02-.05.

(i) the relevance of the information used in designing and performing the procedure, (ii) the plausibility and predictability of the relationship on which the procedure is based, and (iii) the amount of the threshold for evaluating differences between the auditor's expectation and the company's amount.

Proposed paragraph .04 also includes a note referencing relevant requirements of AS 1105. Specifically, the note provides that when designing and performing a substantive analytical procedure, the auditor should evaluate the relevance and reliability of information used in accordance with AS 1105. The proposed requirement further provides that when such information is produced by the company, this includes testing the accuracy and completeness of the information or testing the controls over the accuracy and completeness of that information. While existing AS 2305 includes similar provisions, it predates the risk assessment standards, and describes those provisions differently. For example, existing AS 2305 discusses designing the substantive analytical procedure using the term "level of assurance."[34]

As discussed in Section II.B, the PCAOB staff has observed instances where substantive analytical procedures were not designed with enough precision to meet the audit objective and information used in the procedure was not sufficiently tested. We believe that more expressly integrating the proposed requirements with existing PCAOB risk assessment standards could increase the likelihood that auditors will properly design and perform substantive analytical procedures.

Questions:

6. Are the factors that affect the persuasiveness of audit evidence provided by substantive analytical procedures, specifically the precision of the procedure and the reliability of the information used in it, clear and appropriate? If not, how should they be clarified? Are there other factors that affect the persuasiveness of audit evidence provided by substantive analytical procedures? If so, what are they?

7. Are the factors that affect precision clear and appropriate? If not, how should they be clarified? Are there other factors upon which a substantive analytical procedure's level of precision depends? If so, what are they?

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[34] *See e.g.*, AS 2305.19, which describes how the level of detail of information affects the precision of the auditor's expectation; AS 2305.13-.14, which describe how the plausibility and predictability of the relationship affect the "level of assurance"; and AS 2305.20, which provides that the consideration of the amount of the difference from the expectation that can be accepted without further investigation should be consistent with the "level of assurance." *See also* AS 2305.15-.16 which describe requirements for evaluating the reliability of information used in the substantive analytical procedure.

8. Are the requirements for evaluating the relevance and reliability of information used in a substantive analytical procedure in accordance with AS 1105 clear and appropriate? If not, how should they be clarified?

9. Are there specific considerations related to evaluating the relevance and reliability of information used in a substantive analytical procedure, beyond those in AS 1105, that should be included in the proposed standard? If so, what are those considerations and how should they be incorporated in the proposed standard?

1. Identifying a Sufficiently Plausible and Predictable Relationship

See paragraphs .05 through .06 of the proposed standard in Appendix 1.

As described above, under the proposed standard, the auditor's expectation when performing a substantive analytical procedure is based on one or more plausible and predictable relationships among financial or nonfinancial data. Under paragraph .05 of the proposed standard, the auditor would be required to identify the relationship or relationships to be used in the substantive analytical procedure and determine whether each such relationship is sufficiently plausible and predictable. The proposed standard specifies that making this determination should extend beyond inquiry.

Proposed paragraph .06 provides that relationships used in the substantive analytical procedure must be sufficiently plausible and predictable to achieve the objective of the procedure. Further, the proposed standard specifies that when determining whether a relationship is sufficiently plausible and predictable, the auditor would be required to take into account all relevant information of which the auditor is aware, including information obtained from: (a) the auditor's understanding of the company and its environment,[35] and (b) other procedures performed in the audit and in the reviews of interim financial information. The proposed standard also provides that events, conditions, and company activities that may affect the plausibility and predictability of a relationship, include specific unusual transactions or events, accounting changes, business changes, or external factors, such as general economic conditions and industry factors.

Existing AS 2305 requires the auditor to understand the reasons that make relationships plausible and provides that more predictable relationships should be used when more audit evidence is needed.[36] The proposed standard would strengthen and clarify these existing requirements. As discussed in Section II.B, the PCAOB staff has observed instances where auditors did not sufficiently evaluate the plausibility and predictability of the relationship used.

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[35] *See* AS 2110.07-.17, which describe the auditor's responsibilities for obtaining an understanding of the company and its environment.

[36] *See* AS 2305.13-.14.

We believe that a more explicit requirement, including a clarification that the auditor's determination should extend beyond inquiry, would drive auditors to more consistently identify relationships that are sufficiently plausible and predictable, increasing the likelihood that the auditor would obtain relevant and reliable audit evidence.

The proposed requirement focuses the auditor on how information about the company's business and operations, gleaned from risk assessment and other procedures, could affect relationships used in a substantive analytical procedure. For example, the information obtained may indicate that the company implemented a new sales strategy or made a change to key supplier and customer arrangements that affects a previously plausible and predictable relationship. In another example, global events, such as the COVID pandemic, might materially affect a company's operations, resulting in historical relationships no longer being sufficiently plausible and predictable. Proposed paragraph .06 provides examples of events, conditions, and company activities that may affect the plausibility and predictability of a relationship. Some of these examples are drawn from existing AS 2305,[37] and others, such as external factors including general economic conditions and industry factors, are described in other PCAOB standards.[38]

The proposed requirements and examples are designed, in part, to address the risk of inappropriate use of technology-assisted analysis identified by the PCAOB staff's research. Substantive analytical procedures involving technology-assisted analysis would not provide appropriate audit evidence if the auditor did not take into account all relevant information of which the auditor is aware when analyzing the underlying relationship. For example, due to the large volumes of data used in technology-assisted analysis, auditors may inappropriately design a procedure based on a spurious relationship that they erroneously believe to be plausible and predictable or omit key factors when interpreting the results of the analysis.

Other than specifying that procedures must extend beyond inquiry, the proposed standard would not prescribe the nature, timing, or extent of the auditor's procedures to determine that a relationship is sufficiently plausible and predictable. An auditor would design the procedures considering the nature of the relationship and the objective of the substantive analytical procedure, including the assessed risk of material misstatement it is intended to address. In addition, we understand some auditors use technology-assisted analysis when determining whether the relationship to be used is sufficiently plausible and predictable. The proposed standard is principles-based and allows auditors to use technology-assisted analysis in this way.

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[37] *See* AS 2305.02, which describes particular conditions that can cause variations in these relationships including, for example, specific unusual transactions or events, accounting changes, or business changes.

[38] *See*, *e.g.*, AS 2110.09, which describes obtaining an understanding of industry, regulatory, and other external factors.

Determining the plausibility and predictability of some relationships may require more extensive procedures than for others, especially where a relationship is affected by multiple factors whose effect on the relationship is difficult to predict. For example, determining the plausibility and predictability of the relationship between square footage and sales of retail stores could be complicated by the effects of competition or customer preferences on sales for a particular location or over time. In contrast, less extensive procedures may be required to determine the plausibility and predictability of relationships that are governed by more predictable factors. For example, the relationship between interest income and loans receivable is typically governed by interest rates and loan maturities that are specified in contractual arrangements with bank customers.

Questions:

10. Is the proposed requirement that the auditor identify the relationship or relationships to use in the substantive analytical procedure and determine whether each such relationship is sufficiently plausible and predictable clear and appropriate? If not, how should it be clarified?

11. Is the proposed requirement that the auditor take into account all relevant information of which the auditor is aware when determining whether a relationship is sufficiently plausible and predictable clear and appropriate? If not, how should it be clarified?

12. Are the examples of events, conditions, and company activities that are included in proposed paragraph .06 described clearly and appropriately? Are there additional events, conditions, or company activities that may affect the plausibility and predictability of a relationship that should be included in the proposed standard as examples? If so, what are they? If the examples of events and conditions are not clear, how should they be clarified?

2. Developing an Expectation

See paragraph .07 of the proposed standard in Appendix 1.

Under paragraph .07 of the proposed standard, the auditor would be required to develop an expectation of the company's amount based on the relationship(s) identified pursuant to paragraphs .05 and .06.

Proposed paragraph .07 would also specify that the auditor may not develop the expectation using the company's amount or information that is based on the company's amount. The proposed requirement is designed to explicitly address the risk of circular auditing. It also clarifies and expands on existing AS 2305, which provides that the auditor develops an expectation by identifying and using plausible relationships that are reasonably expected to exist and obtains assurance from substantive analytical procedures based on the consistency of the recorded amounts with expectations developed from data derived from other sources.[39]

The risk of circular auditing occurs when the auditor's expectation and the company's amount are derived from the same sources of information. The proposed standard addresses scenarios in which circular auditing can occur when the auditor bases the expectation on either the company's amount (i.e., the amount to which the expectation will be compared) or information that is based on the company's amount. For example, the auditor may inappropriately develop an expectation of revenue using commissions that are calculated as a percentage of revenue (i.e., information based on the company's amount). In another example, circular auditing could occur if the auditor develops an expectation of revenue using information obtained from a company's data warehouse and compares that amount to the revenue subledger, without realizing that the amount included in the data warehouse originated from the revenue subledger. If an auditor is insufficiently familiar with the flow of information across the company's information systems, the risk of circular auditing can arise.[40] This may become more common as the complexity of companies' information technology architecture increases.

Questions:

13. Is the proposed requirement for the auditor to develop an expectation clear and appropriate? If not, what changes should be made?

14. Is the proposed change specifying that the auditor may not develop the expectation using the company's amount or information that is based on the company's amount clear and appropriate? If not, what changes should be made?

15. Are there other factors that the auditor should consider when developing their expectation? If yes, what are they?

3. Determining a Threshold for Evaluating Differences

See paragraph .08 of the proposed standard in Appendix 1.

Paragraph .08 of the proposed standard would require the auditor to determine a threshold for evaluating the difference between the auditor's expectation and the company's amount. The amount of the threshold should be set at or below tolerable misstatement,[41]

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[39] *See* AS 2305.05, and .16-.17.

[40] *See* AS 1105.08, which provides that the reliability of evidence depends on the nature and source of the evidence and the circumstances under which it is obtained.

[41] Tolerable misstatement should be established at an amount (or amounts) to reduce to an appropriately low level the probability that the total of uncorrected and undetected misstatements

taking into account the nature of the account or disclosure or, where applicable, the component of the account or disclosure. When determining the threshold, the auditor should address the risk that the difference between the auditor's expectation and the company's amount represents a misstatement that would be material to the financial statements, individually or in combination with other misstatements within the account or disclosure, considering the possibility of undetected misstatements.

A difference between the auditor's expectation and the company's amount could indicate, for example, that the auditor did not consider pertinent facts when developing the expectation, or it could indicate a misstatement in the company's financial statements. The proposed standard would strengthen and clarify the existing requirements of AS 2305, which provide that the auditor should consider the amount of the difference from the expectation that can be accepted without further investigation and that this consideration is influenced primarily by materiality.[42]

First, the proposed standard describes the amount of the difference from the auditor's expectation that can be accepted without further investigation as a "threshold," and explicitly states the auditor's responsibility to determine a threshold that is at or below tolerable misstatement. As discussed in Section II.B, the PCAOB staff has observed instances where auditors did not appropriately determine an amount of difference between the auditor's expectation and the company's recorded amount that would require further investigation. We believe a more prescriptive requirement could increase the likelihood that auditors determine an appropriate threshold.

Second, the proposed requirement acknowledges that setting the threshold below tolerable misstatement may be necessary to achieve the auditor's objective. Taking into account the nature of the account or disclosure, or component of the account or disclosure, would help the auditor in making this determination. For example, the auditor may perform a substantive analytical procedure for a component of a significant account or disclosure (e.g., establishing an expectation and comparing it to the amount recorded by the company for a type of revenue, or a company subsidiary).[43] In this case, determining the amount of the threshold may involve consideration of, for example, the size of the component in relation to the size of the account.

Substantive analytical procedures performed with a lower threshold can result in identifying and evaluating more differences, thus providing more persuasive audit evidence

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would result in material misstatement of the financial statements. *See* paragraph .08 of AS 2105, *Consideration of Materiality in Planning and Performing an Audit*.

[42] *See* AS 2305.20.

[43] *See* AS 2110.63, which describes that components of a significant account or disclosure might be subject to significantly differing risks.

than substantive analytical procedures performed with a higher threshold. For example, if the auditor is performing a substantive analytical procedure over disaggregated amounts, a lower threshold may be necessary to achieve the objective of the procedure. The proposed requirement does not prescribe when a lower threshold should be used as the determination of the threshold is based on the facts and circumstances of the specific audit engagement, including the assessed risk of material misstatement and the objective of the substantive analytical procedure.

Question:

16. Is the proposed requirement that the auditor determine a threshold to evaluate the difference between the auditor's expectation and the company's amount clear and appropriate? If not, what changes should be made?

4. Differences Between the Auditor's Expectation and the Company's Amount

See paragraphs .09 through .12 of the proposed standard in Appendix 1.

Paragraph .09 of the proposed standard specifies that if the difference between the auditor's expectation and the company's amount exceeds the threshold described in paragraph .08, the auditor would be required to evaluate the difference, which includes performing audit procedures to determine whether there is a misstatement. These procedures would be required to extend beyond inquiry.

The proposed standard is intended to improve the existing standard by providing clearer and more specific requirements for evaluating the difference identified through a substantive analytical procedure between the auditor's expectation and the company's amount. As discussed in Section II.B, the PCAOB staff has observed instances where auditors did not appropriately evaluate the identified difference. We believe clearer and more specific requirements would increase the likelihood that auditors appropriately evaluate the difference.

The proposed standard would not prescribe the nature, timing, or extent of the auditor's procedures, as it would be impractical to anticipate every scenario that could occur in practice. The auditor's procedures to evaluate the difference should enable the auditor to obtain evidence that is sufficient to meet the objective of the substantive analytical procedure. An example of the type of procedure an auditor may perform in addition to inquiring of management is inspecting reliable documents that are relevant to the subject matter of the substantive analytical procedure. Existing AS 2305 provides that the auditor should evaluate significant unexpected differences. It further states that reconsidering the methods and factors used in developing the expectation and inquiry of management may assist the auditor in this regard, and that responses to inquiry should *ordinarily* be corroborated with other evidence.[44]

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[44] *See* AS 2305.21.

In contrast to the existing standard, the proposed standard would not use the term "corroborate," to reduce the possibility of auditor confirmation bias. Under PCAOB standards, the auditor is responsible for exercising professional skepticism and considering all audit evidence, including information that supports and corroborates management's assertions and information that contradicts such assertions.[45]

Having evaluated a difference, in some situations, an auditor may determine that there is a misstatement. In other situations, an auditor may not have sufficient information to make that determination. Further, the auditor's evaluation may provide information relevant to the substantive analytical procedure, of which the auditor was not aware when designing the procedure. The proposed standard provides the auditor with additional direction for evaluating the identified difference in these situations.

The Auditor Determines That There is a Misstatement

Paragraph .10 of the proposed standard specifies that when the auditor determines that there is a misstatement, the auditor would be required to evaluate the misstatement in accordance with AS 2810, *Evaluating Audit Results,* and, in an integrated audit, AS 2201, *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*. Existing AS 2305 requires the auditor to evaluate significant unexpected differences but does not specify the course of action when the auditor determines that a difference represents a misstatement.[46] The proposed standard would facilitate auditor compliance with requirements of other PCAOB standards for addressing misstatements by more clearly directing the auditor to the relevant requirements.

The Auditor is Unable to Determine Whether There is a Misstatement

In paragraph .11 we are proposing that if, after performing the procedures described under paragraph .09, the auditor is unable to determine whether there is a misstatement, the auditor would be required to determine the effect on the audit. This would include:

- Determining whether to revise the risk assessment in accordance with AS 2110.74; and

- Performing the audit procedures necessary to obtain sufficient appropriate audit evidence regarding the relevant assertion(s).

Under existing AS 2305, for unexplained differences, the auditor is required to perform other audit procedures to obtain sufficient audit evidence about the assertion and, in designing

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45 *See* AS 1105.02.

46 *See* AS 2305.21.

those procedures, consider that the unexplained difference may indicate an increased risk of material misstatement.[47]

The proposal would more directly integrate the standard's requirements with PCAOB risk assessment standards to increase the likelihood of appropriate identification and assessment of risks of material misstatement. If the auditor is unable to determine whether there is a misstatement, we believe it is important that the auditor determine whether to revise the auditor's risk assessment under AS 2110. The revision may result in, for example, a reassessment of already identified risks or identification of new risks. Further, the proposed standard emphasizes the auditor's responsibility for appropriately responding to risks by requiring that the auditor perform additional audit procedures necessary to obtain sufficient appropriate audit evidence regarding the relevant assertion.

The Auditor Identifies New Relevant Information

We are proposing in paragraph .12 to clarify the auditor's responsibilities that would apply if, as part of performing the procedures described in paragraph .09 to evaluate a difference, the auditor identifies relevant information of which the auditor was not aware when initially designing the substantive analytical procedure. When such information is identified, the auditor would be required to:

- Evaluate the reliability of the information in accordance with AS 1105;
- Determine whether to modify the design of the substantive analytical procedure in accordance with paragraphs .04-.08 of the proposed standard or perform other substantive procedures to address the assessed risk; and
- Determine whether to revise the risk assessment in accordance with AS 2110.74.

The auditor may identify relevant information of which the auditor was not aware when designing the procedure. For example, an auditor may identify transactions with unexpectedly large amounts that were the result of a contractual change with a customer that the auditor was not aware of when developing their expectation. Addressing this new information may require refining the auditor's expectation and re-performing the substantive analytical procedure.

Although existing AS 2305 states that reconsidering the methods and factors used in developing the expectation and inquiring of management may assist the auditor in evaluating differences, it does not specify auditor responsibilities regarding newly discovered information. The proposal would expressly require the auditor to evaluate the reliability of the new information identified, in accordance with AS 1105. We believe that requiring the auditor to

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[47] *Id*.

scrutinize the new information is appropriate considering the general increase in the amount of information of varying reliability (from internal company sources and external sources) since existing AS 2305 was written.

Because information discovered by the auditor may have implications for the substantive analytical procedure (e.g., regarding plausibility of underlying relationship) or for the audit in general (e.g., regarding risk of fraud or a previously unidentified risk of material misstatement), the proposed standard would require the auditor to determine whether to modify the design of the substantive analytical procedure or perform other substantive procedures to address the assessed risk, and whether to revise the auditor's risk assessment.

Questions:

17. Are the proposed requirements for evaluating the difference between the auditor's expectation and the company's amount clear and appropriate? If not, what changes should be made?

18. Are there other requirements that should be included within the proposed standard regarding evaluating differences or when the auditor encounters the scenarios described in the standard?

19. Are there other scenarios the auditor may encounter when evaluating differences that should be addressed by the proposed standard?

20. Are there other requirements related to designing and performing substantive analytical procedures that should be included in the proposed standard? If so, what are they? For example, existing AS 2305 includes provisions related to documentation of a substantive analytical procedure. Are there specific considerations related to the documentation of a substantive analytical procedure that are not included in AS 1215 but should be included in the proposed standard?

D. Related Amendments to Other PCAOB Standards

See paragraphs .21 of AS 1105 and .40A of AS 2301 of the proposed amendments in Appendix 2.

1. Analytical Procedures

We are proposing to amend paragraph .21 of AS 1105 to state that analytical procedures involve evaluations of financial information made by analyzing plausible relationships among financial and nonfinancial data that can be external or company-produced. Analytical procedures also encompass evaluating the results of the procedures according to the relevant requirements of PCAOB standards. Analytical procedures may identify relevant information of which the auditor was not aware when initially designing the procedure.

Analytical procedures under PCAOB standards are performed to achieve various objectives, as described in Section II.A. For example, analytical procedures are required to be performed as part of: (i) identifying and assessing risks of material misstatement (i.e., as risk assessment procedures); (ii) the auditor's overall review of the financial statements; and (iii) a review of interim financial information.[48]

Existing AS 1105.21 describes that analytical procedures consist of evaluations of financial information made by a study of plausible relationships among both financial and nonfinancial data, and that analytical procedures also encompass the investigation of significant differences from expected amounts. As part of our Technology-Assisted Analysis Project, we previously proposed amendments to the description of analytical procedures in AS 1105.21.[49] Some commenters on the project interpreted the proposed amended AS 1105.21 as referring only to substantive analytical procedures. Other commenters suggested evaluating the amendments together with the Board's standard-setting project to address substantive analytical procedures.[50]

In addition, commenters asserted that development of an auditor's expectation is what differentiates analytical procedures from other procedures (e.g., tests of details). One commenter highlighted that analytical procedures performed using technology-assisted analysis may be exploratory in nature and the auditor may identify relationships by performing the analytical procedure.

In consideration of the comments received, and because of the overlap between the description of analytical procedures and substantive analytical procedures, we are proposing amendments to the description of analytical procedures together with proposed AS 2305. The proposed amendments to AS 1105.21 do not change the purpose of the paragraph, which is to describe analytical procedures broadly, encompassing all types of analytical procedures performed under PCAOB standards.

The proposed amendment reminds the auditor that analytical procedures are to be performed in accordance with the requirements of the relevant standard. In addition,

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48 *See* AS 2110.46-.48, which establish requirements regarding performing analytical procedures that are part of the auditor's identification and assessment of risks of material misstatement. *See* AS 2810.05-.09, which establish requirements regarding performing analytical procedures as part of the overall review stage of the audit. *See* AS 4105.16-.17, which establish requirements regarding performing analytical procedures as part of a review of interim financial information.

49 *See* Section III.A of PCAOB Rel. No. 2023-004.

50 Comment letters on the Technology-Assisted Analysis Release discussing substantive analytical procedures are available in Board Docket No. 52.

consistent with proposals made as part of the Board's Technology-Assisted Analysis Project, the proposed amendments would clarify that auditors may analyze both external and company-produced data as part of performing analytical procedures. In addition, in consideration of the comments received related to analytical procedures that are exploratory in nature, the proposed amendment would clarify that analytical procedures may identify relevant information of which the auditor was not aware when initially designing the procedure.

2. Auditor Responsibilities to Examine Information from External Sources When Applying Substantive Procedures

As noted above, advancements in technology are contributing to the increase in the volume of and sources of information that is used as audit evidence. This information includes both company-produced information (such as invoices issued to customers or payments to suppliers) and external information (such as customer payments received by the company or market interest rates obtained from third-party sources). The auditor may obtain external information indirectly (e.g., if the company provides information that it received) or directly from the external source(s). Information provided by the company is increasingly used by auditors in technology-assisted analysis to obtain audit evidence.

As discussed above, we have heard from the IAG that auditors' use of technology-assisted analysis is an area of concern due to potential overreliance by auditors on company-produced information.[51] There is a risk that overreliance on information produced by the company may decrease the overall quality of audit evidence obtained because, under PCAOB standards, company-produced information generally provides less reliable evidence than information from a knowledgeable external source. In other words, when more audit evidence is based on company-produced information, the overall quality of audit evidence in an audit is lower than in an audit where audit evidence is based on reliable external information.

To mitigate this risk, we are proposing to add a new paragraph to AS 2301 (paragraph .40A), which states that when the auditor's substantive procedures are applied to accounts or disclosures that depend on information the company received from one or more external sources, such procedures would be required to involve examining relevant information that the company received, or that the auditor obtained directly, from the external source(s). As proposed, the requirement would apply when the auditor performs substantive procedures in response to an assessed risk of material misstatement (i.e., substantive analytical procedures or tests of details). Consistent with existing PCAOB standards, applying substantive procedures (with or without technology-assisted analysis) only to company-produced information for accounts or disclosures that depend on information the company received from one or more external sources would not provide sufficient appropriate audit evidence.

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[51] *See* Section II.C.

Accounts or disclosures that depend on information the company received from one or more external sources may include, for example:

- accounts that involve transactions with third parties or assets held by third parties (such as revenue, cash, or financial instruments); or
- accounts or disclosures where amounts recorded or information disclosed by the company were determined using information from an external source (such as financial instruments valued on the basis of market information).

The auditor's understanding of the company's business processes and procedures provides information about whether an account or disclosure depends on information the company received from external sources.[52] For example, a company's determination of depreciation expense in the year an asset is acquired may depend on external information (e.g., an invoice from a vendor for the asset purchased), while in the second year, depreciation expense may depend only on internal records and the company's depreciation policy.

The proposal does not prescribe the nature, timing or extent of substantive procedures that would be necessary to obtain the external information. Doing so would be impractical, considering the multitude of scenarios that auditors encounter in practice. An auditor would determine the appropriate course of action based on the requirements of PCAOB standards and the facts and circumstances of the audit.

Generally, as a risk of material misstatement increases, the amount of evidence that the auditor should obtain also increases. For example, PCAOB standards require that responding to significant risks of material misstatement involves performing tests of details. Further, in some situations, the auditor is required by PCAOB standards to obtain information directly from the external source(s), e.g., by confirming cash and accounts receivable with third parties.[53] In other situations, an auditor may determine it appropriate to obtain the information indirectly, e.g., by requesting from the company information, such as supplier invoices or customer payments, that the company received from external sources. In addition, the proposed new paragraph would not change the auditor's existing obligation to evaluate the relevance and reliability of information used as audit evidence in accordance with AS 1105.

For tests of details, the auditor would need to examine external information relevant to items within the account or disclosure that depend on external information. When performing substantive analytical procedures, examining external information would be necessary when

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[52] *See generally* AS 2110 and AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements*.

[53] *See e.g.*, AS 2310, *The Auditor's Use of Confirmation* as adopted by PCAOB and approved by the SEC, *see* SEC Rel. No. 34-99060 (Dec. 1, 2023) (effective for audits of financial statements for fiscal years ending on or after June 15, 2025).

evaluating the plausibility and predictability of the relationship on which the procedure is based, developing the auditor's expectation, or evaluating the difference between the auditor's expectation and company records.

Questions:

21. Is the proposed amendment to clarify the description of analytical procedures clear and appropriate? If not, what changes should be made?

22. The proposed amendment specifies that when substantive procedures are applied to accounts or disclosures that depend on information received by the company from external sources, such procedures should involve examining relevant information from the external sources. Is this proposed amendment clear and appropriate? If not, what changes should be made?

23. Are there examples where substantive procedures applied to accounts or disclosures that depend on information received by the company from external sources could be effective in addressing assessed risks of material misstatement by examining only information produced by the company? When providing examples, please provide as much detail as possible, including a brief description of the account, relevant assertion, design of the substantive procedure, and discussion of how the procedure addresses the specific likely source of potential misstatement.

IV. ECONOMIC ANALYSIS

The Board is mindful of the economic impacts of its standard setting. This section describes the economic baseline, economic need, and expected economic impacts of the proposed standard and related amendments, as well as alternative approaches considered. Due to data limitations, this analysis is generally qualitative in nature. Where feasible, however, the analysis incorporates quantitative information, including analysis of internal PCAOB inspection data and academic literature.

A. Baseline

Section II above describes important components of the baseline against which the economic impacts of the proposal can be considered, including existing AS 2305, firms' current practices when performing substantive analytical procedures, and observations from the Board's oversight activities. In this section we discuss five additional components that inform our understanding of the economic baseline: (i) the PCAOB staff's analysis of audit firm methodologies; (ii) firms' use of technology-based tools when designing and performing substantive analytical procedures; (iii) additional observations from PCAOB oversight activities;

(iv) academic literature discussing substantive analytical procedures; and (v) activities of other standard setters.

1. Staff Analysis of Audit Firm Methodologies

The PCAOB staff reviewed the methodologies of selected registered firms to determine how those methodologies currently address auditors' use of substantive analytical procedures to obtain audit evidence, as well as how those methodologies might need to be modified to implement the proposal, if adopted as proposed. Specifically, the staff compared methodologies of all six U.S. GNFs and some methodologies commonly used by U.S. NAFs to existing AS 2305, as well as to proposed AS 2305.[54] The staff's review focused on how the methodologies would be affected by the following aspects of proposed AS 2305:

- Auditor's requirements related to identifying the relationship to be used in the substantive analytical procedure and determining whether the relationship is sufficiently plausible and predictable (proposed paragraphs .05 through .06);
- Specifying certain information the auditor may not use when developing their expectation (proposed paragraph .07);
- Requirements for determining a threshold for evaluating the difference (proposed paragraph .08);
- Requirements for evaluating the difference between the auditor's expectation and the company's amount to determine whether there is a misstatement (proposed paragraphs .09 through .12);
- Aspects of the procedure that affect the persuasiveness of audit evidence obtained (proposed paragraph .04); and
- Duplication of the requirements for the auditor's evaluation of relevance and reliability of information used in the procedure with the requirements of AS 1105 (proposed paragraph .04).

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[54] We reviewed the methodologies of all six U.S. GNFs and certain annually inspected U.S. NAFs, as well as certain third-party methodologies that are licensed by other NAFs. The PCAOB staff's review focused on these methodologies given the significant number of companies and related market capitalization of those companies that are audited by the respective firms. Further, from our research, we understand that audit methodologies of non-U.S. GNFs for audits conducted under PCAOB standards are generally based on the methodologies of U.S. GNFs and that non-U.S. NAF methodologies are generally consistent with U.S. NAF methodologies.

The PCAOB staff observed that the U.S. GNF methodologies reviewed generally align with, and in some respects go beyond, the requirements of existing AS 2305. Some firms' methodologies already incorporate certain aspects of proposed AS 2305, although some modifications would be required to conform the methodologies to the language of proposed AS 2305 if it is adopted. Specifically, some U.S. GNF methodologies include guidance regarding: (i) the precision of the procedure affecting the persuasiveness of audit evidence obtained from a substantive analytical procedure; (ii) using a threshold for evaluating a difference not to exceed tolerable misstatement; (iii) evaluating the relevance and reliability of information used to perform the substantive analytical procedures in accordance with AS 1105; and (iv) not developing an expectation using information derived from the same source as information that will be compared to the expectation.

Some U.S. GNF methodologies acknowledge that the use of more plausible and predictable relationships in substantive analytical procedures increases the effectiveness of the procedure and the persuasiveness of audit evidence obtained from it. Some methodologies also address scenarios where the auditor, when evaluating the difference, identifies information relevant to the audit of which the auditor was unaware when designing the procedure.

Beyond the above observations, U.S. GNF methodologies related to existing AS 2305 generally would need to be revised to incorporate the proposed requirements relating to determining whether a relationship is sufficiently plausible and predictable. In another example, while we observed that some U.S. GNF methodologies address scenarios when the auditor identifies information of which they were unaware of when designing the procedure, firms would need to revise their methodologies to require the auditor to: (i) perform audit procedures beyond inquiry to evaluate the reliability of the information; (ii) determine whether it is necessary to modify the design of the substantive analytical procedure; and (iii) determine whether to revise the auditor's risk assessment.

U.S. GNF methodologies also generally differ from the proposed standard in their requirements related to establishing a threshold for evaluating the difference. For example, some U.S. GNF methodologies specify that the threshold used should not exceed tolerable misstatement, but do not provide further direction when performing a substantive analytical procedure over a component of an account or disclosure.

For the U.S. NAF methodologies reviewed, the PCAOB staff observed that the methodologies are consistent with the requirements of existing AS 2305 (and therefore differ from the proposed standard). Some U.S. NAF methodologies suggest that an auditor consider factors that affect the effectiveness of a substantive analytical procedure, including testing the reliability of underlying financial information used in the procedure.

Further, the referenced methodologies were reviewed in connection with the related proposed amendments to AS 1105 and AS 2301. Some firm methodologies already require auditors to obtain information that originated from sources external to the company when using technology-assisted analysis as part of performing substantive procedures. However, U.S. GNF methodologies generally do not incorporate requirements related to more explicitly obtaining externally sourced information. The U.S. NAF methodologies reviewed align with existing AS 1105 and AS 2301.

In general, our research indicates that each of the firm methodologies reviewed differs to some extent from the proposal and there is more variability within NAF methodologies.

2. Firms' Use of Technology-Based Tools When Designing and Performing Substantive Analytical Procedures

Since existing AS 2305 was adopted, there has been a significant increase in both the availability of information in electronic form and the use of technology-based tools to access and analyze such information. Specifically, two key technological developments have occurred. First, ERP systems that structure and house large volumes of information in electronic form have become more prevalent among companies. For example, one study reports that the global ERP market size increased by 60% between 2006 and 2012.[55] As a result, auditors have greater access to large volumes of company-produced and third-party information in electronic form that may potentially be used when performing substantive analytical procedures.

Second, we observed that the use of more sophisticated data analysis tools has become more prevalent, at least among larger firms,[56] including tools used to design and perform substantive analytical procedures.[57] As discussed in Section II.B above, some auditors are using technology-based tools to perform substantive analytical procedures in connection with auditing certain assertions. We observed that some U.S. GNF methodologies highlight where

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55 *See* Adelin Trusculescu, Anca Draghici, and Claudiu Tiberiu Albulescu, *Key Metrics and Key Drivers in the Valuation of Public Enterprise Resource Planning Companies*, 64 Procedia Computer Science 917 (2015).

56 This may be caused in part by a decrease in the quality-adjusted cost of software (i.e., the cost of software holding the level of quality fixed). For example, *see* U.S. Bureau of Economic Analysis, "Table 5.6.4. Price Indexes for Private Fixed Investment in Intellectual Property Products by Type," *available at* https://apps.bea.gov/iTable/?reqid=19&step=3&isuri=1&nipa_table_list=330&categories=survey&_gl=1*1b8sulm*_ga*MTMyMjk5NTAzMS4xNzA5ODQ0OTEx*_ga_J4698JNNFT*MTcxMjI0NDAwOC4yLjAuMTcxMjI0NDAwOC42MC4wLjA (accessed June 3, 2024) (indicating that the price index for capital formation in software by the business sector has decreased by approximately 13% between 2015 and 2022). In preparing its price indices, the U.S. Bureau of Economic Analysis attempts to control for changes in product quality over time. Improvements to product quality may have contributed in part to some increase in the cost of software, including some of the software that can process large volumes of data.

57 PCAOB staff performed an analysis to obtain an understanding of the technology-based tools used by firms in practice. The analysis was limited to tools classified or described by the firms as data analytic tools and/or tools used to design and perform substantive analytical procedures. Such tools may be either purchased by a firm or developed by a firm.

technology-based tools may be used when designing and performing substantive analytical procedures and where they should not be used. In some instances, the PCAOB staff has observed that the use of technology-based tools can enable auditors to disaggregate data to a level where the most plausible and predictable relationships are more readily identified, which in turn can improve the precision of the substantive analytical procedure (e.g., by improving the precision of the auditor's expectation).[58]

Firm methodologies also include specific examples of using technology-based tools to perform substantive analytical procedures. For example, one firm's methodology includes an example of using a technology-based tool to analyze the relationship between retail store revenue in previous years and square footage per store, which is then used to perform a substantive analytical procedure over current retail store revenue. We also observed that firms are developing technology-based tools that are designed to assist auditors when performing substantive analytical procedures over certain accounts and relevant assertions or for certain industries. As an example, one firm developed a technology-based tool specifically to develop an expectation of interest expense for use in substantive analytical procedures.

The PCAOB staff reviewed data provided by firms regarding the tools used by their engagement teams to obtain an understanding of the use of technology-based tools that analyze large volumes of data.[59] We found that the average number of tools used by engagement teams of U.S. GNFs increased by approximately 38%, from approximately 13 to approximately 18 per firm from 2018 to 2023. In the 2023 inspection year, U.S. GNFs reported that 90% of their tools were used for functions that could be associated with the performance of substantive analytical procedures (i.e., data visualization, summarization, tabulation, and modeling). Although our data does not always describe the type of audit procedures such tools are used for (e.g., tests of details, substantive analytical procedures, or both), we believe that the overall trend of the increasing use of technology-assisted analysis in audits includes using such analysis in substantive analytical procedures.

3. Observations from PCAOB Oversight Activities

In this section, we examine data from inspection reports to better understand current practices related to substantive analytical procedures. Because PCAOB standards permit, but do not require, auditors to perform substantive analytical procedures, we establish a baseline of how they are performed and how often they are performed. PCAOB oversight activities indicate that: (i) in the early to mid-2010s, when firms performed substantive analytical procedures, those procedures were frequently not appropriately designed and performed; and (ii) the use

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58 *See, e.g.*, PCAOB, *Spotlight: Data and Technology Research Project Update* (May 2021), at 6, *available at* https://pcaobus.org/resources/staff-publications.

59 *See* Section IV.A of *Amendments Related to Aspects of Designing and Performing Procedures that Involve Technology-Assisted Analysis of Information in Electronic Form*, PCAOB Rel. No. 2024-007 (June 12, 2024).

of substantive analytical procedures by some firms declined in the 2010s, but in more recent years some firms have begun to increase their use of substantive analytical procedures due to advancements in technology.

Throughout the early to mid-2010s, many audit firms that performed substantive analytical procedures frequently failed to comply with the applicable requirements at both the individual engagement level and on a firm-wide basis. Section II.B discusses specific deficiencies in audits which were commonly cited in inspection findings within individual engagements. Looking back to early inspection reports (2010-2014) for the firms (both GNF and NAF) that issued over 100 audit reports and were subject to annual inspection, many inspection reports included a quality control concern related to the performance of substantive analytical procedures in Part II of the inspection reports.[60] Following the reporting of such deficiencies in PCAOB inspection reports in the 2010s, certain firms changed their policies to prohibit their staff from using substantive analytical procedures on certain accounts or to require consultation with individuals outside of the engagement team prior to their use. For some of the firms still performing substantive analytical procedures in the 2010s, inspection staff subsequently noticed in inspected audits a decline in the number of substantive analytical procedures performed.

Across all of our inspection programs, recent inspections indicate that substantive analytical procedures remain a challenge for some audit firms. For example, we have continued to observe deficiencies in audits where some auditors did not: (i) determine whether the relationship used in the substantive analytical procedure was sufficiently plausible and predictable; (ii) develop expectations that were sufficiently precise to identify differences that may be misstatements, individually or when aggregated with other misstatements, because the data used to develop the auditors expectation was not sufficiently detailed; (iii) determine an amount to investigate differences at a level that would address the possibility that a combination of misstatements could aggregate to a material misstatement; or (iv) test the accuracy and completeness of information used in the substantive analytical procedure.

4. Literature Related to Substantive Analytical Procedures

The academic literature related to auditors’ use of substantive analytical procedures largely mirrors the PCAOB staff’s observations from the PCAOB oversight activities described above. Research suggests that in the 2010s, auditors tended to move away from performing substantive analytical procedures due to a perception that tests of details were less likely than substantive analytical procedures to result in noncompliance findings during inspections.[61] In

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[60] In most cases, the quality control concerns were sufficiently remediated such that the corresponding sections of reports were not made public.

[61] *See* Steven M. Glover, Douglas F. Prawitt, and Michael S. Drake, *Between a Rock and a Hard Place: A Path Forward for Using Substantive Analytical Procedures in Auditing Large P&L Accounts:*

more recent years, some firms have begun to increase their use of substantive analytical procedures due to advancements in technology, including technology used to perform data analytics.[62] Technological advancements have led to changes in how auditors design and perform substantive analytical procedures, including not only the frequency of performing substantive analytical procedures but also the models and techniques used to perform the procedures.[63] Specifically, auditors are using larger data sets, more sophisticated models, and are more likely to perform analytical procedures, including substantive analytical procedures, on a disaggregated basis.[64]

Some academic research on substantive analytical procedures has focused on the appropriate threshold for investigation of the difference between the auditor's expectation and amounts recorded by the company. Academic studies suggest that, particularly for large income statement accounts, the currently available statistical models used in analytical procedures generally have margins of error that are larger than the auditor's threshold for addressing significant differences.[65] Research shows that the use of advanced statistical models and more granular disaggregated data likely increases the effectiveness of substantive analytical procedures.[66] However, even advanced predictive models often have margins of error that are larger than the threshold for "performance materiality."[67] One study examined substantive analytical procedures that are performed with thresholds larger than performance materiality for evaluating differences between the auditor's expectation and information in the company's accounting records.[68] The study found that these procedures should still be utilized even though they would provide audit evidence at a moderate or low level of assurance. The

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Commentary and Analysis, 34 Auditing: A Journal of Practice & Theory 161, 164 (2015). *See also* Greg Trompeter and Arnold Wright, *The World Has Changed—Have Analytical Procedure Practices?* 27 Contemporary Accounting Research 669 (2010).

62 *See* Brian Ballou, Jonathan H. Grenier, and Andrew Reffett, *Stakeholder Perceptions of Data and Analytics Based Auditing Techniques*, 35 Accounting Horizons 47, 50 (2021). *See also* Trompeter and Wright, *The World Has Changed* 680.

63 *See* Ballou, et al., *Stakeholder Perceptions* 50. *See also* Trompeter and Wright, *The World Has Changed* 680.

64 *See* Trompeter and Wright, *The World Has Changed* 678, 693.

65 *See* Glover, et al., *Between a Rock and a Hard Place:* 164. *See also* Kyunghee Yoon and Timothy Pearce, *Can Substantive Analytical Procedures with Data and Data Analytics Replace Sampling as Tests of Details?,* 18 Journal of Emerging Technologies in Accounting, 185, 192 (2021).

66 *See* Yoon and Pearce, *Can Substantive Analytical Procedures with Data and Data Analytics Replace Sampling as Tests of Details?* 192.

67 *See id*. The term "performance materiality" is not used in PCAOB standards; it is used, e.g., in IAASB and ASB standards. *See* IAASB Standard - ISA 320, *Materiality in Planning and Performing an Audit*, and ASB Standard - AU-C Section 320, *Materiality in Planning and Performing an Audit*.

68 *See* Glover, et al., *Between a Rock and a Hard Place* 161.

moderate or low level of assurance could be combined with assurance provided by other audit procedures to produce a higher level of overall assurance. The study asserts, therefore, that avoiding the use of rigorous substantive analytical procedures has the potential to lower audit quality.[69]

As discussed above, substantive analytical procedures may be performed using data analytics.[70] Academic research explores several issues related to the use of data analytics in auditing. Several researchers note that effective use of data analytics in the auditing process requires that auditors maintain familiarity with the latest data analytics techniques.[71]

Overall, the research suggests that some auditors perceive regulatory risks when using substantive analytical procedures to obtain audit evidence. The research also suggests that the auditor's use of technology-assisted analysis or data analytics in designing and performing audit procedures, including substantive analytical procedures, is becoming increasingly prevalent.

5. Activities of Other Standard Setters

Since existing AS 2305 was adopted by the Board in April 2003, both the IAASB and the ASB have updated their analogous standards, ISA 520 and AU-C 520, respectively. These revisions were part of clarity projects that were designed to make the standards easier to read, understand, and apply.[72] They were updated to align the terminology used throughout the standards for consistency and to enhance and update explanatory materials. A comparison of proposed AS 2305 to the analogous standards of other standard setters is available on the Board's website in Docket 056.

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[69] *See id.*

[70] As noted above in Section II.B, this proposal uses the term "technology-assisted analysis" in reference to the analysis of information in electronic form that is performed with the assistance of technology-based tools. Others, including firms and academics, may refer to such analysis as "data analysis" or "data analytics." As discussed above, the use of "data analysis" or "data analytics" in Section IV of the release is intended to align with terminology used by the source cited.

[71] *See* Deniz Appelbaum, Alexander Kogan, and Miklos A. Vasarhelyi, *Big Data and Analytics in the Modern Audit Engagement: Research Needs*, 36 Auditing: A Journal of Practice & Theory 1, 15 (2017) and Christine E. Earley, *Data Analytics in Auditing: Opportunities and Challenges*, 58 Business Horizons 493, 497 (2015).

[72] Descriptions of the clarity projects of the IAASB and ASB are available, respectively, at https://www.iaasb.org/projects/clarity-iaasb-standards and https://us.aicpa.org/interestareas/frc/auditattest/improvingclarityasbstandards.

Questions:

24. We request comment generally on the baseline for evaluating the economic impacts of the proposal. Is there any additional information regarding auditors' use of substantive analytical procedures or are there additional academic studies that we should consider?

25. We request comment generally on the prevalence of substantive analytical procedures in audits conducted under PCAOB standards. Please provide as much detail as possible, including data on the use of substantive analytical procedures and the types of accounts on which such procedures are generally performed.

B. Need and How the Proposed Changes Would Address the Need

1. Risk that Substantive Analytical Procedures Are Not Designed and Performed to Obtain Relevant and Reliable Audit Evidence

Low-quality audits can occur for a number of reasons, including the following two reasons. First, investors and audit committees cannot easily observe the procedures performed by the auditor, and thus the quality of the audit.[73] Second, while the appointment, compensation, and oversight of the auditor is entrusted to the issuer's audit committee under the Sarbanes-Oxley Act of 2002, as amended ("Sarbanes-Oxley"),[74] there is a risk that the auditor may seek to satisfy the interests of company management rather than the interests of investors and other financial statement users.[75] This risk can arise out of the audit committee's identification with the company or its management (e.g., for compensation) or through management's exercise of influence over the audit committee's supervision of the auditor.[76]

PCAOB oversight activities help address these risks associated with lack of transparency. The inspection process creates an incentive for auditors to perform audits that comply with

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[73] *See, e.g.*, Monika Causholli and W. Robert Knechel, *An Examination of the Credence Attributes of an Audit*, 26 Accounting Horizons 631, 632 (2012).

[74] *See* Section 301 of Sarbanes-Oxley, 15 U.S.C § 78j-1(m)(2). As an additional safeguard, the auditor is also required to be independent of the audit client. *See* Regulation S-X Rule 2-01, 17 C.F.R. § 210.2-01. *See also* PCAOB Rule 3520, *Auditor Independence*.

[75] *See*, *e.g.*, Joshua Ronen, *Corporate Audits and How to Fix Them*, 24 Journal of Economic Perspectives 189 (2010).

[76] *See id.*; *see also*, *e.g.*, Liesbeth Bruynseels and Eddy Cardinaels, *The Audit Committee: Management Watchdog or Personal Friend of the CEO?*, 89 The Accounting Review 113 (2014); Cory A. Cassell, Linda A. Myers, Roy Schmardebeck, and Jian Zhou, *The Monitoring Effectiveness of Co-Opted Audit Committees,* 35 Contemporary Accounting Research 1732 (2018); and Nathan R. Berglund, Michelle Draeger, and Mikhail Sterin, *Management's Undue Influence over Audit Committee Members:*

applicable professional and legal requirements due to the probability of deficiencies in audits being identified and reported by the PCAOB staff and, where appropriate, addressed through PCAOB or SEC enforcement actions. For the inspection and enforcement process to be effective, PCAOB standards must effectively describe the processes and procedures involved in high-quality audits. In addition, to be more effective, the standards need to be adaptable to evolving technology.

As discussed in Sections II.B.2 and IV.A.3, the PCAOB staff has observed situations where auditors did not appropriately perform substantive analytical procedures. The staff believes that these situations may reflect a lack of understanding of auditor responsibilities under existing PCAOB standards. Similar deficiencies in audits continued to be found in the most recent PCAOB inspections cycle.

As noted in Sections IV.A.2 and .3, use of substantive analytical procedures is becoming more prevalent, increasing the risk that relevant and reliable audit evidence will not be obtained if such procedures are not designed and performed appropriately. The PCAOB staff's research has indicated that, as the volume of information in electronic form increases, there is a greater risk that auditors may erroneously rely on information that is not relevant to the audit objective. For instance, if auditor expectations in a substantive analytical procedure are based on spurious or outdated relationships, it is unlikely that the procedure will provide relevant and reliable audit evidence. Further, company-produced information is generally more readily available than information from external sources. Therefore, there is a risk of overreliance on information produced by the company when substantive procedures are performed using technology-assisted analysis on accounts or disclosures that depend on information the company received from external sources. This overreliance on company-produced information may decrease the overall quality of audit evidence obtained; as PCAOB standards acknowledge, company-produced information generally provides less reliable audit evidence than information from a knowledgeable external source.

Proposed AS 2305 and related amendments include several revisions that are intended to reduce the risk of not obtaining relevant and reliable audit evidence.[77] By clarifying and strengthening requirements for performing substantive analytical procedures and certain requirements when performing substantive procedures, the proposal is likely to reduce the risk that auditors will perform low-quality audits by not obtaining relevant and reliable audit evidence.

Evidence from Auditor Reporting and Opinion Shopping, 41 Auditing: A Journal of Practice & Theory 49 (2022).

[77] *See e.g.*, detailed discussion in Sections III.C.1, .2, and .4.

2. Risk of Substantive Analytical Procedures Not Being Performed Even if Such Procedures Could Be More Effective

There is a risk that auditors may choose not to perform substantive analytical procedures even if performing them, alone or in combination with other procedures, could be a more effective way of obtaining audit evidence. As discussed in Section IV.A.3 above, some auditors have reduced their use of substantive analytical procedures based on their perceived risk of regulatory noncompliance, and the academic literature discussed in Section IV.A.4 also provides evidence that auditors perceive regulatory risks related to the use of substantive analytical procedures.

Some auditors may choose not to perform a substantive analytical procedure because they are unsure how to apply existing standards. For example, some auditors may be unsure whether a relationship would be sufficiently plausible or predictable to address the audit objective, or whether a threshold they established would be appropriate under the existing standards.[78] Further, some auditors may perceive uncertainty with the existing standards when performing substantive analytical procedures that involve technology-based tools. For example, some auditors may be uncertain about addressing information identified through a technology-assisted analysis that is relevant to the substantive analytical procedure but of which the auditor was not aware when designing the procedure. Although existing AS 2305 can be applied in situations that involve technology-based tools, PCAOB standards currently do not specify how existing AS 2305 applies in certain situations that may arise when using technology-based tools to perform substantive analytical procedures, which may contribute to perceived regulatory uncertainty.

Proposed AS 2305 includes several provisions that are designed to address the risk that auditors may choose not to perform substantive analytical procedures due to perceived regulatory uncertainty.[79] The proposed standard is designed to improve both auditors' understanding of their responsibilities and compliance with relevant requirements of PCAOB standards when performing substantive analytical procedures so that when auditors choose to perform these procedures, they would do so more effectively.

3. Integration with Board-Issued Standards and Rules

Some aspects of existing AS 2305 may not support the most efficient use of the standard. Although the principles in the existing standard remain sound, there is an opportunity to further integrate AS 2305 with other Board-issued standards and rules. Existing AS 2305 remains in effect substantially as adopted in 2003 and does not reflect developments that have

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78 One academic article suggests that auditors perceive uncertainty with the existing standard regarding setting an appropriate threshold for investigation. *See* Glover, et al., *Between a Rock and a Hard Place* 164.

79 *See e.g.*, detailed discussion in Section III.C, .C.3-.4.

occurred in the auditing environment since then, including the PCAOB's adoption of the risk assessment, audit evidence, materiality, and audit documentation standards. This lack of explicit alignment may make it unnecessarily burdensome for auditors to read, understand, and apply the existing standard. Further, certain requirements within existing AS 2305 are duplicative of other Board-issued standards (e.g., the requirements related to documentation), which may cause confusion related to the application of certain requirements and unnecessary costs to implement if they appear in multiple standards.

The current standard uses language from the AICPA's former standards that could be better aligned with other Board-issued standards and rules. For example, the auditor's responsibilities could be clarified by expressing the requirements using the terms of PCAOB Rule 3101, *Certain Terms Used in Auditing and Related Professional Practice Standards* (e.g., using "must" and "should" to describe the degree of responsibility that the standards impose on auditors) rather than the descriptive language currently used in existing AS 2305. Finally, the existing standard does not conform to the structure of Board-issued standards, which may hinder auditors' navigation of the standard and its requirements. Overall, these features of the current standard may limit its efficient use by requiring more time and attention than necessary to read, understand, and apply the standard, and may lead to inconsistent application, potential misinterpretation, and regulatory uncertainty.

Proposed AS 2305 would be integrated with other Board-issued standards and rules to enhance its usability by: (i) reorganizing the standard to align with and reflect the auditor's process when designing and performing substantive analytical procedures,[80] and (ii) aligning with the structure and language of other Board-issued standards.

Question:

26. The Board requests comment generally on the need for rulemaking. Should we consider any additional arguments, academic studies, or data related to the need for rulemaking?

C. Economic Impacts

This section discusses the expected benefits and costs of the proposal and potential unintended consequences.

The magnitude of any benefits and costs is affected by the extent that firms: (i) already incorporate aspects of the proposal into their methodologies and current practices; (ii) currently use substantive analytical procedures; and (iii) choose to modify the frequency of their use of substantive analytical procedures in response to the proposal.

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80 *See* detailed discussion in Section III.C.

Section IV.A.1 of this release discusses the aspects of the proposal that are already incorporated into some firms' methodologies. The data we collect through our oversight activities is not based on a representative sample of engagements and does not provide a basis for estimating the prevalence of auditors' use of substantive analytical procedures in audits conducted under PCAOB standards. Therefore, we are soliciting comment in this area. We cannot predict how firms will modify their use of substantive analytical procedures in the future. The choice to use substantive analytical procedures depends on the facts and circumstances of each engagement, including whether the nature of the accounts being audited lend themselves to substantive analytical procedures (i.e., whether there is a plausible and predictable relationship that the auditor can identify), the availability of data, technological capabilities, and firm methodology.

The economic impacts to a firm that result from the proposal may also be affected by factors such as:

- Whether the additional clarity provided by the proposed standard leads auditors to choose to use substantive analytical procedures if they have previously chosen not to due to perceived regulatory uncertainty;
- Whether the strengthened requirements for performing substantive analytical procedures lead auditors to choose not to use substantive analytical procedures if they determine the cost to implement the proposed standard exceeds the benefits compared to other audit procedures; and
- Whether continued advancements in technology may reduce auditors' costs to implement the proposed standard, which could lead auditors to choose to use substantive analytical procedures instead of other audit procedures.

1. Benefits

The proposal may lead auditors to perform audit procedures more effectively and efficiently. Specifically, the proposal may lead auditors to: (i) better determine when the use of a substantive analytical procedure would be an effective procedure to address an assessed risk; and (ii) design and perform substantive analytical procedures more effectively. The proposal would achieve these results by clarifying and strengthening auditors' requirements when designing and performing substantive analytical procedures. The proposal would also enhance the usability of AS 2305 by integrating the standard with other PCAOB standards and rules.

More effective audit procedures may lead to higher audit quality, more efficient audits, lower audit fees, or some combination of the three. To the extent the proposal would lead to higher audit quality, it would benefit investors and other financial statement users by reducing the likelihood that the financial statements are materially misstated.

From a capital markets perspective, improvements in audit quality could enhance investors' confidence in the information provided in companies' financial statements. This, in turn, can increase the efficiency of investors' capital allocation decisions. As perceived risk in capital markets decreases due to enhanced audit quality, the supply of capital may increase.[81] This could lead to both an increase in capital formation and a reduction in the cost of capital to companies, benefiting investors. We are unable to quantify in precise terms this potential benefit, which would depend both on how audit firms respond to the standard and on how their response affects audit quality, factors that are likely to vary across audit firms and across engagements.

Auditors also are expected to benefit from the proposal because the additional clarity provided by the proposal should reduce regulatory uncertainty and the associated compliance costs. Specifically, the proposal is designed to provide auditors with a clearer understanding of their responsibilities, which in turn should increase the likelihood that auditors who use substantive analytical procedures will obtain relevant and reliable audit evidence when responding to certain assessed risks of material misstatement.

The following discussion describes the benefits of key aspects of the proposal that are expected to impact auditor behavior. As discussed in Section IV.B above, the proposed changes are intended to strengthen and clarify auditors' responsibilities when using substantive analytical procedures. To the extent that a firm has already incorporated aspects of the proposed amendments into its methodology, some of the benefits described below would already have been realized.[82]

i. Risk that Substantive Analytical Procedures are Not Designed and Performed to Obtain Relevant and Reliable Audit Evidence

The proposal is designed to enhance audit quality by reducing the likelihood that an auditor will design and perform a substantive analytical procedure that does not obtain relevant and reliable audit evidence, resulting in the issuance of an opinion without obtaining sufficient appropriate audit evidence. For example, proposed AS 2305 includes additional requirements for the auditor when determining whether the relationship used in the substantive analytical procedure is sufficiently plausible and predictable. In another example, proposed AS 2305 strengthens and clarifies the auditor's requirements for evaluating the difference between the auditor's expectation and the company's amount and requires the

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[81] *See*, *e.g.*, Hanwen Chen, Jeff Zeyun Chen, Gerald J. Lobo, and Yanyan Wang, *Effects of Audit Quality on Earnings Management and Cost of Equity Capital: Evidence from China*, 28 Contemporary Accounting Research 892, 921 (2011); Richard Lambert, Christian Leuz, and Robert E. Verrecchia, *Accounting Information, Disclosure, and the Cost of Capital*, 45 Journal of Accounting Research 385, 387 (2007); and William Robert Scott and Patricia C. O'Brien, *Financial Accounting Theory* 412 (Prentice Hall 3d ed. 2003).

[82] *See* discussion in Section IV.A.1.

auditor to determine if there is a misstatement. Further, the proposed amendment to AS 2301 would more explicitly require the auditor to obtain external information when the company's accounts or disclosures depend on information the company received from one or more external sources.

For audit engagements where auditors currently choose to use substantive analytical procedures, we anticipate that there would be an increase in audit quality if auditors continue to perform substantive analytical procedures because these procedures would be of higher quality where auditors comply with proposed AS 2305.

ii. Risk of Substantive Analytical Procedures Not Being Performed Even if Such Procedures Could Be More Effective

Proposed AS 2305 may result in increased use of substantive analytical procedures by auditors because clearer requirements may assist auditors in determining whether substantive analytical procedures would be more effective than other substantive procedures (i.e., tests of details). The proposal could enhance performance when substantive analytical procedures are used, which should result in more effective audits, and may also lead to more efficient audits. Clarifying the requirements with respect to substantive analytical procedures could minimize any market distortions caused by any actual or perceived lack of clarity in what the standard requires, allowing auditors to choose the audit procedure they deem most appropriate based on the characteristics of the audit and their assessed risk of noncompliance.

In some cases, auditors may determine, based on proposed AS 2305, that it is more effective and efficient to perform a substantive analytical procedure in a situation where they previously would have used a test of details. To the extent that auditors previously chose not to perform substantive analytical procedures due to perceived regulatory uncertainty, amending AS 2305 may lead to increased use of substantive analytical procedures because auditors may perceive a reduction in noncompliance risk resulting from the proposed standard's greater specificity. For example, if an auditor chose not to perform substantive analytical procedures because they were uncertain how to determine the threshold for evaluating the difference between the auditor's expectation and the company's amount, the clarifications in proposed AS 2305 may reduce that uncertainty. In situations where substantive analytical procedures would be the more effective and efficient audit procedure, any resulting substitution of substantive analytical procedures in place of other audit procedures could improve audit quality, audit efficiency, or both.

iii. Integration with Board-Issued Standards and Rules

To the extent that features of the existing standard reduce its efficient use, the proposed changes would help enhance usability by making AS 2305 easier to read, understand, and apply in practice. For users trying to navigate and understand the standard, efficiency gains would be associated with each of the proposed changes as follows:

- The proposed changes to eliminate language that is no longer relevant would reduce the time and attention required to read, understand, and apply the standard by facilitating a focus on the standard's core requirements.
- The proposed changes to establish conformity with the structure of other Board-issued standards and rules would provide more uniformity among the PCAOB standards, which would help expedite navigation of the requirements and ensure relevant requirements are met.
- The proposed changes to integrate with PCAOB standards and rules established since adoption of the interim standards in 2003 would reduce the time and attention required to read, understand, and apply the standard by drawing attention to the underlying requirements and enhancing clarity of the Board's expectations about auditor responsibilities.

Auditors that choose to design and perform substantive analytical procedures for the first time may do so more quickly and easily under the proposed standard, thereby reducing the cost of training and potentially lowering entry costs for auditors who are required to register with the PCAOB.

Questions:

27. Are there additional potential benefits that should be considered? If so, what are they? Are the benefits quantifiable?

28. Are there additional academic studies or data related to the potential benefits of the proposal that we should consider? If so, please provide citations or other reference information for such studies and data.

2. Costs

We anticipate that most firms would modify their existing audit approaches as a result of the proposal, which would generate certain fixed costs (i.e., costs that are generally independent of the number of audits performed), including costs to: (i) update audit methodologies, templates, and tools; (ii) prepare training materials and train staff; and (iii) update, develop, or purchase software to perform substantive analytical procedure-related functions. GNFs and some NAFs are likely to update their methodologies using internal resources, whereas other NAFs are likely to purchase updated methodologies from external vendors. While there is greater variability across current NAF methodologies, as a group they contain relatively few updated or expanded provisions, so we expect that these firms may need to make more changes to their current practices to align with the proposal. The cost of implementing the proposal would be higher for those firms.

In addition, firms may incur certain engagement-level variable costs. The enhanced requirements may lead to additional audit hours and effort on audit engagements that involve substantive analytical procedures. To the extent that auditors incur higher costs to implement the proposal and can pass on at least part of the increased costs through an increase in audit fees, audited companies may also incur an indirect cost.

As described earlier, PCAOB standards permit but do not require auditors to perform substantive analytical procedures. If firms perceive the costs associated with the use of substantive analytical procedures to be high relative to the benefits, they have the option to perform other substantive procedures (i.e., tests of details). This could lead to increased costs if firms that currently use substantive analytical procedures choose to use tests of details in the future on the basis that, although more costly than substantive analytical procedures under current standards, tests of details would be less costly than substantive analytical procedures under the proposal.

Some aspects of the proposal may result in more or different costs than others. The following discussion describes the potential costs associated with specific aspects of the proposal.

i. Risk that Substantive Analytical Procedures Are Not Designed and Performed to Obtain Relevant and Reliable Audit Evidence

Firms may incur variable costs if they determine that additional time and effort on an individual audit engagement would be necessary to design and perform procedures that comply with PCAOB standards as enhanced by the proposal. An upper bound exists for engagement-level costs based on the extent to which auditors choose to perform substantive analytical procedures. If the perceived cost of performing compliant substantive analytical procedures is too high, auditors would choose to use tests of details instead. Therefore, any increase in cost (such as additional audit hours) associated with compliance with proposed AS 2305 would be the lesser of the increase in cost required to perform a substantive analytical procedure that complies with the new standard or the increase in cost required to perform a test of details in lieu of a substantive analytical procedure. We also note that the proposal is principles-based, which would enable the auditor to scale and tailor their work based on the facts and circumstances of the audit, including the assessed level of risk of material misstatement.

For example, the proposed requirements to perform procedures to determine whether a relationship used in substantive analytical procedures is sufficiently plausible and predictable could require additional time and effort by engagement teams. These incremental procedures may apply to audit engagements where auditors currently perform substantive analytical procedures as part of their audit approach, as well as to audit engagements where auditors have not previously performed substantive analytical procedures but choose to do so in the future (for example, because advancements in technology increase the effectiveness of such procedures, or because the previously perceived risk of noncompliance has been alleviated).

ii. Risk of Substantive Analytical Procedures Not Being Performed Even if Such Procedures Could be More Effective

As noted above, proposed AS 2305 includes several provisions that are designed to address the risk that auditors may choose not to perform substantive analytical procedures due to perceived regulatory uncertainty.[83] Changes in the standard that fall into this category strengthen and formalize requirements of the existing standard. Some U.S. GNF methodologies already incorporate the aspects of proposed AS 2305 as discussed in Section IV.A.1. U.S. NAF methodologies generally do not incorporate aspects of proposed AS 2305 that are not present in existing AS 2305. We anticipate that costs would include updating methodologies, training staff, and implementing new processes.

iii. Integration with Board-Issued Standards and Rules

The primary costs of the efforts to further integrate proposed AS 2305 with other Board-issued standards and rules would be one-time costs to firms for updating references within firm methodologies and related guidance to reflect the proposed requirements. The implementation costs of the proposed requirements may be offset over time because a more logical standard that is easier to read and navigate could enable auditors to save time understanding the standard, if adopted.

Questions:

29. Are there additional potential costs that should be considered? If so, what are they? Are the costs quantifiable?

30. Are there additional academic studies or data related to the potential costs of the proposal that we should consider? If so, please provide citations or other reference information for such studies and data.

3. Potential Unintended Consequences

In addition to the benefits and costs discussed above, the proposal could have unintended economic consequences. The following discussion describes potential unintended consequences that we have identified and, where applicable, any mitigating or countervailing

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83 *See e.g.,* provisions discussed in Sections III.C.3 - .4.

factors. We are soliciting comment on whether there are other potential unintended consequences we should consider.

i. Reduction in the Use of Substantive Analytical Procedures

As a result of strengthening the auditor's responsibilities in proposed AS 2305, it is possible that some auditors who are currently using substantive analytical procedures could perform fewer such procedures and choose to perform tests of details instead. Avoidance of the use of substantive analytical procedures could result in inefficiencies in situations where such procedures may provide more persuasive audit evidence than other substantive audit procedures.

In particular, a reduction in the use of substantive analytical procedures could occur if firms conclude that the benefits of using a substantive analytical procedure to address assessed risks of material misstatement would not justify the costs. For example, proposed AS 2305 would specify auditor responsibilities to determine that the relationship used is sufficiently plausible and predictable. As discussed in Section IV.C.2 above, such additional responsibilities could lead to fixed costs at the firm level and variable costs at the engagement level. As a result, some auditors may choose not to use substantive analytical procedures, even if alone or in combination with other procedures, they would provide more persuasive audit evidence, and instead perform tests of details to address assessed risks. In the scenarios where substantive analytical procedures alone or in combination with other procedures may have provided more persuasive audit evidence, this could detract from audit quality and may also affect the efficiency of the audit.

However, several factors would likely mitigate any negative effects associated with this potential unintended consequence. First, we believe that any decrease in the use of substantive analytical procedures would likely arise from a reduction in the performance of such procedures in favor of performing tests of details to obtain sufficient appropriate audit evidence. This development would therefore probably benefit, rather than detract from, audit quality when the auditor is unable to perform substantive analytical procedures appropriately.

For example, currently some auditors might not appropriately evaluate the difference between the auditor's expectation and the company's amount that exceeds the threshold for investigation, and therefore fail to determine whether there is a misstatement. Proposed AS 2305 would more clearly specify the auditor's responsibilities to evaluate this difference and describe further responsibilities for the auditor when they are unable to appropriately determine whether there is a misstatement. If auditors view the proposed additional requirements as too costly to implement, they may instead choose to perform tests of details to address an assessed risk. Where such tests of details provide sufficient appropriate audit evidence, performing them would benefit audit quality in situations where the substantive analytical procedures may not have appropriately addressed the identified differences.

Another mitigating factor is that the proposal is principles-based. Setting forth clear principles in the proposal when describing auditor responsibilities is designed to enable auditors to scale and tailor their work based on the facts and circumstances of the audit, including the assessed level of risk of material misstatement. We believe that the principles-based format of proposed AS 2305 would decrease the probability that auditors would avoid the use of substantive analytical procedures. For example, proposed AS 2305 would require the auditor to determine whether the relationship used is sufficiently plausible and predictable but does not prescribe procedures for making that determination. Therefore, auditors would be able to structure their procedures based on, among other things, the nature of the relationship and the assessed risk of material misstatement.[84]

ii. Inappropriately Modifying the Design of the Substantive Analytical Procedure

Proposed AS 2305 requires that the auditor, in certain situations, determine whether to modify the design of the substantive analytical procedure as part of evaluating differences. Some auditors may potentially misinterpret this requirement as allowing the auditor to redesign and reperform a substantive analytical procedure in any situation without appropriately evaluating the difference identified by the procedure. This misinterpretation could result in an auditor not identifying a misstatement. Alternatively, an auditor could inappropriately modify the design of a substantive analytical procedure so that no differences are identified above the established threshold.

In proposed AS 2305, this potential unintended consequence is mitigated by specifying the type of situations in which the auditor would determine whether to modify the design of the substantive analytical procedure namely, when the auditor identifies information that is relevant to the audit of which the auditor was unaware when initially designing the procedure. For example, an auditor could identify certain important contract terms that significantly affect the relationship on which the substantive analytical procedure is based and that should have been considered when determining the relationship's plausibility and predictability. Proposed AS 2305 would require that the auditor evaluate the reliability of the new information in accordance with AS 1105, further reducing the risk that an auditor would inappropriately modify the design of a substantive analytical procedure without appropriately addressing the identified differences.

Questions:

31. The Board requests comment generally on the potential unintended consequences of the proposal. Are the responses to the potential unintended consequences discussed in the release adequate? Are there additional potential

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[84] *See* discussion in Section III.C.1.

unintended consequences that the Board should consider? If so, what responses should be considered?

32. Are there any other economic impacts we did not describe above that are relevant to the Board's consideration?

33. Are there additional academic studies or data related to the potential unintended consequences of the proposal that we should consider? If so, please provide citations or other reference information for such studies and data.

D. Alternatives Considered

The development of the proposal involved considering several alternative approaches to addressing the problems described above. This section explains: (i) why standard setting is preferable to other policy-making approaches, such as providing interpretive guidance or enhancing inspection or enforcement efforts; (ii) other standard-setting approaches that were considered; and (iii) key policy choices made by the Board in determining the details of the proposal.

1. Why Standard Setting is Preferable to Other Policy-Making Approaches

The Board's policy tools include alternatives to standard setting, such as issuing interpretive guidance or enhancing inspections or enforcement of existing standards. The Board considered whether providing interpretative guidance or enhancing inspection or enforcement efforts would be effective mechanisms to address the auditor's responsibilities when using substantive analytical procedures to obtain audit evidence.

Interpretive guidance provides additional information about existing standards. Inspection and enforcement actions take place after insufficient audit performance (and potential investor harm) has occurred. We considered issuing PCAOB staff interpretive guidance to emphasize the auditor's responsibilities in areas where the staff has observed noncompliance with existing AS 2305, as discussed above in Sections II.B.2 and IV.A.3.

However, we believe that the issuance of interpretive guidance, or enhancing inspections or enforcement would not be adequate. Devoting additional resources to interpretive guidance, inspections, or enforcement activities, without improving the relevant performance requirements for auditors, would at best focus auditors' performance on the existing standard and not provide the benefits discussed above associated with enhancing the standard.

2. Other Standard-Setting Approaches Considered

Alternative standard-setting approaches were also considered, including: (i) making limited amendments to the existing standard; and (ii) adopting an approach based on ISA 520 and AU-C 520 with certain modifications to reflect the PCAOB's statutory responsibilities with respect to audits of public companies and registered broker-dealers.

i. Limited Amendments to Existing Standard

We considered, but are not proposing, limiting the amendments to only modify existing AS 2305's terminology and removing descriptive language and illustrative examples. Although this approach could result in fewer changes to firm methodologies, and therefore likely lower implementation costs, we believe there are other areas beyond these changes that are discussed throughout this release where the existing standard could be enhanced. Further, as discussed in Section II.C, existing AS 2305 is an interim standard and was written and adopted before the advancements in technology that have affected the auditor's use of substantive analytical procedures. We believe more extensive revisions, as outlined above, are warranted, and their results would exceed what could be accomplished through minor amendments to existing AS 2305 alone.

ii. Standard Based on ISA 520 and AU-C 520

We also considered whether to revise AS 2305 based on ISA 520 and AU-C 520. We have taken the requirements and application material of ISA 520 and AU-C 520 into account when developing proposed AS 2305 (e.g., the ISA 520 and AC-520 application material relating to the determination of the amount of the threshold for when the difference requires further evaluation).[85]

We concluded, however, that proposed AS 2305 should also establish certain requirements that are not included in ISA 520 and AU-C 520 (e.g., a requirement to determine that the relationship used is sufficiently plausible and predictable) and should not include certain provisions that are described in ISA 520 or AU-C 520 but already are addressed in other existing PCAOB standards (e.g., documentation requirements, which are addressed in AS 1215,[86] or analytical procedures performed as part of the auditor's overall evaluation of the financial statements, which are addressed in AS 2810).[87] In addition, audit practices have continued to evolve since ISA 520 and AU-C 520 became effective in 2009 and 2012, respectively, and we believe that proposed AS 2305 should reflect these developments. For example, because using technology-assisted analysis enables auditors to develop expectations at a more disaggregated level, proposed AS 2305 explicitly addresses performing substantive analytical procedures over a component of an account or disclosure by requiring the auditor to take into account the nature of the component of the account or disclosure when determining the threshold to evaluate differences.

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85 *See* ISA 520.A16 and AU-C 520.A24.

86 *See* AU-C 520.08.

87 *See* ISA 520.6 and AU-C 520.06.

3. Key Policy Choices

i. Audit Responses to Significant Risks

For significant risks of material misstatement,[88] including fraud risks, AS 2301 requires the auditor to perform substantive procedures, including tests of details, that are specifically responsive to the assessed risk.[89] Several commenters on the Technology-Assisted Analysis Project, principally firms, suggested removing this provision in AS 2301 and updating AS 2305.09, which provides that for significant risks, it is unlikely that audit evidence obtained from substantive analytical procedures alone will be sufficient. The commenters believe it is possible, given the advances in technology-assisted analysis, which enables auditors to develop very precise expectations (e.g., for individual items, such as lease contracts), that substantive analytical procedures on their own could be sufficient to address a significant risk if performed at an appropriately disaggregated level and appropriately designed so that the procedure provides sufficient appropriate audit evidence at the assertion level.[90]

We have considered, but are not proposing, eliminating the requirement to perform tests of details that are specifically responsive to assessed significant risks. A significant risk requires special audit consideration because of the nature of the risk, or the likelihood and potential magnitude of misstatement related to the risk.[91] Areas where auditors identify significant risks of material misstatement generally involve transactions with more complexity and judgment. The PCAOB staff's research has not identified examples of substantive analytical procedures that, by themselves, could provide sufficient appropriate audit evidence to respond to a significant risk and commenters on the Technology-Assisted Analysis Project did not provide any. Likewise, members of the SEIAG cautioned against using a substantive analytical procedure as the sole substantive procedure to address a significant risk.[92]

As discussed below, we are soliciting comment on specific examples of circumstances where substantive analytical procedures by themselves would provide sufficient appropriate audit evidence to address a significant risk of material misstatement.

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88 AS 2110 describes factors that should be evaluated when determining which risks are significant risks including, among others, the complexity of transactions and degree of complexity or judgment in the recognition or measurement of financial information related to the risk. *See* AS 2110.71.

89 *See* AS 2301.11 and .13.

90 Comment letters on the Technology-Assisted Analysis Release discussing substantive analytical procedures are available in Board Docket No. 52.

91 *See* AS 2110.70.

92 *See* PCAOB Standards and Emerging Issues Advisory Group Meeting (Mar. 30, 2023), *available at* https://pcaobus.org/news-events/events/event-details/pcaob-standards-and-emerging-issues-advisory-group-meeting-2023-march.

ii. Auditor Responsibilities When Using Technology

As discussed above, advancements in technology have influenced the design and performance of substantive analytical procedures. We have considered, but are not proposing, to specify auditor responsibilities when using particular types of technology-assisted analysis or technology-based tools. Doing so could result in the standard becoming outdated quickly, considering the rapid pace of technological development, as auditors would replace the specified technology with better alternatives when they become available. Instead, the proposal takes the approach of describing certain principles that are adaptable to future changes in technology.

iii. Relevance and Reliability of Information Used

Existing AS 2305 includes a separate section describing certain auditor responsibilities regarding the reliability of data used in the substantive analytical procedures. We have considered, but are not proposing, including a similar section in proposed AS 2305 because the requirements could be mistakenly viewed as incremental to AS 1105. Instead, proposed AS 2305 would refer to the relevant requirements in AS 1105. The auditor's responsibility to evaluate the relevance and reliability of information under AS 1105 applies to all information used as audit evidence, including information used in substantive analytical procedures.

Questions:

34. Are any of the alternative approaches discussed, or any other approaches, preferable to the approaches that are being proposed to address auditors' use of substantive analytical procedures to obtain audit evidence? If so, what are they and what reasons support one or more alternative approaches over the proposed approaches?

35. Proposed AS 2305 does not change the existing requirements of AS 2301, that to address significant risks, including fraud risks, the auditor should perform tests of details specifically responsive to the assessed risk. Should changes be made to this existing requirement? If yes, what changes should be made and are there examples where a substantive analytical procedure would be just as or more effective than a test of details in addressing significant risks? When providing examples, please provide as much detail as possible, including a brief description of the account, relevant assertion, design of the substantive analytical procedure, and discuss how the procedure addresses the specific likely source of potential misstatement.

36. Should proposed AS 2305 explicitly address aspects of the use of technology when designing and performing substantive analytical procedures, including situations where the use of technology might improve the quality of audit evidence obtained from such procedures? If so, how?

V. SPECIAL CONSIDERATIONS FOR AUDITS OF EMERGING GROWTH COMPANIES

Pursuant to Section 104 of the Jumpstart Our Business Startups ("JOBS") Act, rules adopted by the Board subsequent to April 5, 2012, generally do not apply to the audits of emerging growth companies ("EGCs"), as defined in Section 3(a)(80) of the Securities Exchange Act of 1934 ("Exchange Act"), unless the SEC "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."[93] As a result of the JOBS Act, the rules and related amendments to PCAOB standards that the Board adopts are generally subject to a separate determination by the SEC regarding their applicability to audits of EGCs.

To inform the consideration of the application of auditing standards to audits of EGCs, the PCAOB staff prepares a white paper annually that provides general information about the characteristics of EGCs.[94] As of November 15, 2022, the measurement date in the February 2024 white paper, PCAOB staff identified 3,031 companies that self-identified with the SEC as EGCs and filed with the SEC audited financial statements in the 18 months preceding the measurement date.[95]

As discussed in Section II, there is an opportunity to further integrate AS 2305 with Board-issued standards and rules, thereby strengthening and clarifying AS 2305 to respond to developments related to advances in technology. Proposed AS 2305 is principles-based and is

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93 *See* Pub. L. No. 112-106 (Apr. 5, 2012). *See* Section 103(a)(3)(C) of Sarbanes-Oxley, as added by Section 104 of the JOBS Act, which also provides that any rules of the Board requiring: (1) mandatory audit firm rotation; or (2) 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 proposed standard and related and conforming amendments do not fall within either of these two categories.

94 For the most recent EGC white paper, *see Characteristics of Emerging Growth Companies and Their Audit Firms at November 15, 2022* (Feb. 20, 2024) ("EGC White Paper"), *available at* https://pcaobus.org/resources/other-research-projects.

95 The EGC White Paper uses a lagging 18-month window to identify companies as EGCs. Please refer to the "Current Methodology" section in the white paper for details. Using an 18-month window enables staff to analyze the characteristics of a fuller population in the EGC White Paper but may tend to result in a larger number of EGCs being included for purposes of the present EGC analysis than would alternative methodologies. For example, an estimate using a lagging 12-month window would exclude some EGCs that are delinquent in making periodic filings. An estimate as of the measurement date would exclude EGCs that have terminated their registration, or that have exceeded the eligibility or time limits. *See id*.

intended to be applied in all audits performed pursuant to PCAOB standards where the auditor chooses to perform substantive analytical procedures, including audits of EGCs.

Further, there is an opportunity to address the risk that the auditor may over rely on information produced by the company by more explicitly requiring the auditor to obtain external information when the company's accounts or disclosures depend on information the company received from one or more external sources by amending AS 2301. Similar to proposed AS 2305, the proposed related amendments are principles-based and are intended to be applied in all audits performed pursuant to PCAOB standards.

The discussion of benefits, costs, and unintended consequences of the proposal in Section IV is generally applicable to all audits performed pursuant to PCAOB standards, including audits of EGCs. The economic impacts of the proposal on an individual EGC audit would depend on factors such as the auditor's ability to distribute implementation costs across its audit engagements, whether the auditor is currently using substantive analytical procedures as part of their audit response to assessed risks, the auditor's assessment of the effectiveness and efficiency of performing a substantive analytical procedure rather than a test of details, and the auditor's assessed risk of noncompliance when using substantive analytical procedures to address an assessed risk. EGCs are more likely to be newer public companies, which are typically smaller in size and receive lower analyst coverage. These factors may increase the importance to investors of the higher audit quality resulting from the proposal, as high-quality audits generally enhance the credibility of management disclosures.[96]

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[96] Researchers have developed a number of proxies that are thought to be correlated with information asymmetry, including small company size, lower analyst coverage, larger insider holdings, and higher research and development costs. To the extent that EGCs exhibit one or more of these properties, there may be a greater degree of information asymmetry for EGCs than for the broader population of companies, which increases the importance to investors of the external audit to enhance the credibility of management disclosures. *See*, *e.g.*, Mary E. Barth, Wayne R. Landsman, and Daniel J. Taylor*, The JOBS Act and Information Uncertainty in IPO Firms,* 92 The Accounting Review 25, 25 (2017); Steven A. Dennis and Ian G. Sharpe, *Firm Size Dependence in the Determinants of Bank Term Loan Maturity,* 32 Journal of Business Finance & Accounting 31, 59 (2005); Michael J. Brennan and Avanidhar Subrahmanyam, *Investment Analysis and Price Formation in Securities Markets*, 38 Journal of Financial Economics 361, 363 (1995); David Aboody and Baruch Lev, *Information Asymmetry, R&D, and Insider Gains*, 55 The Journal of Finance 2747, 2755 (2000); Raymond Chiang and P. C. Venkatesh, *Insider Holdings and Perceptions of Information Asymmetry: A Note*, 43 The Journal of Finance 1041, 1047 (1988); Molly Mercer, *How Do Investors Assess the Credibility of Management Disclosures?*, 18 Accounting Horizons 185, 194 (2004). Furthermore, research has shown that reduced disclosure requirements for EGCs are associated with lower audit effort. The academic literature has also documented evidence of lower audit quality for EGCs. To the extent that the new standard will increase auditor effort, EGCs are expected to benefit from higher audit quality. *See, e.g.,* Tiffany J. Westfall and Thomas C. Omer, *The Emerging Growth Company Status on IPO: Auditor Effort, Valuation, and Underpricing,* 37 Journal of Accounting and Public Policy 315, 316 (2018); Essam Elshafie, *The Impact of*

Further, compared to non-EGCs, EGCs are more likely to be audited by NAFs.[97] As discussed above in Section IV.A.1, NAFs are expected to need to make more changes than GNFs to their current methodologies and practices to comply with the proposal. Therefore, all else being equal, the benefits of the higher audit quality resulting from the proposal may be greater for EGCs than for non-EGCs, including improved efficiency of capital allocation, lower cost of capital, and enhanced capital formation.[98] In particular, because investors who face uncertainty about the reliability of a company's financial statements may require a larger risk premium that increases the cost of capital to companies, the improved audit quality resulting from applying proposed AS 2305 to EGC audits could reduce the cost of capital to those EGCs.[99] The associated costs may also be higher for EGC audits than for non-EGC audits, although the potential higher costs may be mitigated due to the scalability of assessed risk and the principles-based requirements of the proposal. The costs are also mitigated because the auditor is not required to perform substantive analytical procedures under PCAOB standards and will presumably only choose to perform the procedures when they are effective and efficient.

The proposal could impact competition in an EGC's product market if the costs of the proposal to audited companies disproportionately impact the EGCs relative to their competitors. EGCs may be forced to raise prices and thereby divert market share toward their non-EGC competitors. This could increase competition in markets where EGCs have a dominant market share and decrease competition in markets where EGCs have a less than dominant market share. The potential impact to competition in EGC product markets would be reduced to the extent that EGCs' auditors have already implemented certain concepts in the proposal, choose to perform other substantive procedures that are not substantive analytical procedures, or otherwise choose not to pass on their additional costs arising from the proposed requirements in the form of higher audit fees.

Overall, proposed AS 2305 and related amendments are expected to enhance the efficiency and quality of EGC audits and is expected to contribute to an increase in the quality of financial reporting by those EGCs. Furthermore, if certain aspects of the proposal did not

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Reducing Reporting Requirements on Audit Quality, Auditor Effort and Auditor Conservatism, 35 Accounting Research Journal 756, 756 (2022).

[97] PCAOB staff analysis indicates that, compared to exchange-listed non-EGCs, exchange-listed EGCs are approximately 2.6 times as likely to be audited by an NAF (source: EGC White Paper and Standard & Poor's).

[98] The enhanced quality of audits and financial information available to financial markets may result in investors perceiving less risk in capital markets. This, in turn, may lead to an increase in the supply of capital which could increase capital formation. *See, e.g.*, Chen et al., *Effects of Audit Quality* 892; Lambert, et al., *Accounting Information* 385.

[99] For a discussion of how increasing reliable public information about a company can reduce the risk premium, *see* David Easley and Maureen O'Hara, *Information and the Cost of Capital*, 59 Journal of Finance 1553 (2004).

apply to the audits of EGCs, auditors would need to address additional differing audit requirements in their methodologies, or policies and procedures, with respect to audits of EGCs and non-EGCs. This could create the potential for additional confusion.

Accordingly, and for the reasons explained above, the Board anticipates that, if it adopts the proposal, it will request the Commission to determine that it 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, to apply the proposal to audits of EGCs.

Question:

37. The Board requests comment generally on the analysis of the impacts of the proposal on EGCs. Are there reasons why the proposal should not apply to audits of EGCs? If so, what changes should be made so that the proposal would be appropriate for audits of EGCs? What impact would the proposal likely have on EGCs, and how would this affect efficiency, competition, and capital formation?

VI. EFFECTIVE DATE

The Board seeks comment on the amount of time auditors would need before the proposal would become effective, if adopted by the Board and approved by the SEC. Specifically, the Board is considering whether compliance with the adopted standard and related amendments should be required for audits of fiscal years beginning on or after December 15 of the year of approval by the SEC.

Question:

38. Would the proposed effective date present challenges for auditors? If so, what are those challenges, and how should they be addressed?

VII. OPPORTUNITY FOR PUBLIC COMMENT

The Board seeks comments on all aspects of its proposal, as well as specific comments on the proposed standard and the related and conforming amendments. Among other things, the Board seeks comment on the economic analysis relating to its proposal, including potential costs. To assist the Board in evaluating such matters, the Board requests relevant information and empirical data regarding the proposal.

Written comments should be sent by email to comments@pcaobus.org or through the Board's website at www.pcaobus.org. Comments may also be sent to the Office of the Secretary, PCAOB, 1666 K Street, NW, Washington, DC 20006-2803. All comments should refer to PCAOB Rulemaking Docket Matter No. 056 in the subject or reference line and should be received by the Board no later than August 12, 2024.

The Board will consider all comments received. After the close of the comment period, the Board will determine whether to adopt final rules, with or without changes from the proposal. Any final rules adopted will be submitted to the SEC for approval. Pursuant to Section 107 of the Sarbanes-Oxley Act, proposed rules of the Board do not take effect unless approved by the SEC. Standards are rules of the Board under the Sarbanes-Oxley Act.

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On the 12th day of June, in the year 2024, the foregoing was, in accordance with the bylaws of the Public Company Accounting Oversight Board,

ADOPTED BY THE BOARD.

/s/ Phoebe W. Brown

Phoebe W. Brown
Secretary

June 12, 2024

APPENDIX 1 – PROPOSED AUDITING STANDARD

AS 2305: Designing and Performing Substantive Analytical Procedures

INTRODUCTION

.01 This standard establishes requirements regarding designing and performing substantive analytical procedures.[1] AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*, requires the auditor to design and implement appropriate responses that address the assessed risks of material misstatement. This may include using substantive analytical procedures to address the assessed risks of material misstatement for certain relevant assertions of significant accounts and disclosures. Substantive analytical procedures are appropriate only when designed and performed, alone or in combination with other audit procedures, at a level of precision sufficient to respond to an assessed risk of material misstatement.[2] When designed and performed appropriately, substantive analytical procedures can provide relevant and reliable audit evidence.

.02 A substantive analytical procedure involves comparing a recorded amount or an amount derived from recorded amounts (as applicable, the "company's amount") to an expectation of that amount developed by the auditor to determine whether there is a misstatement. The auditor's expectation when performing a substantive analytical procedure is based on one or more plausible and predictable relationships among financial or nonfinancial data.

OBJECTIVE

.03 The auditor's objective when designing and performing a substantive analytical procedure is to obtain relevant and reliable audit evidence about one or more relevant assertions of a significant account or disclosure.

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[1] Paragraph .21 of AS 1105, *Audit Evidence*, describes analytical procedures addressed under PCAOB standards. Substantive analytical procedures differ from other types of analytical procedures that are required under PCAOB standards to achieve various objectives throughout the audit, in that they are performed to respond to assessed risks of material misstatement.

[2] *See* AS 2301.08, .37, .39, and .40. *See also*, AS 2301.11 and .13, which provide that when addressing significant risks, including fraud risks, the auditor should perform substantive procedures, including tests of details, that are specifically responsive to the assessed risks.

DESIGNING AND PERFORMING A SUBSTANTIVE ANALYTICAL PROCEDURE TO RESPOND TO A RISK OF MATERIAL MISSTATEMENT

.04 Under AS 2301, in designing and performing audit procedures, the higher the auditor's assessment of risk, the more persuasive audit evidence the auditor should obtain.[3] More persuasive audit evidence is obtained from a substantive analytical procedure when the procedure is more precise and uses more reliable information. The precision of a substantive analytical procedure depends on (i) the relevance of the information used in designing and performing the procedure, (ii) the plausibility and predictability of the relationship on which the procedure is based, and (iii) the amount of the threshold for evaluating differences between the auditor's expectation and the company's amount.

> Note: When designing and performing a substantive analytical procedure, the auditor should evaluate the relevance and reliability of information used in accordance with AS 1105. This includes, when such information is produced by the company, testing the accuracy and completeness of the information or testing the controls over the accuracy and completeness of that information.

Identifying a Sufficiently Plausible and Predictable Relationship

.05 The auditor must identify the relationship or relationships to be used in the substantive analytical procedure and determine whether each such relationship is sufficiently plausible and predictable. Making the determination should extend beyond inquiry.

.06 Relationships used in the substantive analytical procedure must be sufficiently plausible and predictable to achieve the objective of the procedure. When determining whether a relationship is sufficiently plausible and predictable, the auditor should take into account all relevant information of which the auditor is aware, including information obtained from:

a. The auditor's understanding of the company and its environment,[4] and

b. Other procedures performed in the audit and in reviews of interim financial information.

> Note: Events, conditions, and company activities that may affect the plausibility and predictability of a relationship, include specific unusual transactions or events,

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[3] *See* AS 2301.09 and .37.

[4] *See* paragraphs .07-.17 of AS 2110, *Identifying and Assessing Risks of Material Misstatement*, which describes events, conditions, and company activities that might reasonably be expected to have a significant effect on the risks of material misstatement.

accounting changes, business changes, or external factors, such as general economic conditions and industry factors.

Developing an Expectation

.07 The auditor should develop an expectation of the company's amount based on the relationship(s) identified pursuant to paragraphs .05 and .06. The auditor may not develop the expectation using the company's amount or information that is based on the company's amount.

Determining a Threshold for Evaluating Differences

.08 The auditor should determine a threshold for evaluating the difference between the auditor's expectation and the company's amount. The amount of the threshold should be set at or below tolerable misstatement,[5] taking into account the nature of the account or disclosure or, where applicable, the component of the account or disclosure.[6] When determining the threshold, the auditor should address the risk that the difference between the auditor's expectation and the company's amount represents a misstatement that would be material to the financial statements, individually or in combination with other misstatements within the account or disclosure, considering the possibility of undetected misstatements.

Differences Between the Auditor's Expectation and the Company's Amount

.09 If the difference between the auditor's expectation and the company's amount exceeds the threshold described in paragraph .08, the auditor should evaluate the difference, which includes performing audit procedures to determine whether there is a misstatement.[7] These procedures should extend beyond inquiry.

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[5] *See* paragraph .08 of AS 2105, *Consideration of Materiality in Planning and Performing an Audit*. "The auditor should determine tolerable misstatement at an amount or amounts that reduce to an appropriately low level the probability that the total of uncorrected and undetected misstatements would result in material misstatement of the financial statements."

[6] The auditor may perform a substantive analytical procedure for a component of a significant account or disclosure because the component might be subject to significantly differing risks. *See* AS 2110.63.

[7] *See* paragraph .12 of this standard for situations in which the auditor identifies information that is relevant to the auditor's expectation or threshold for evaluating differences and of which the auditor was not aware when developing the expectation or threshold.

.10 When the auditor determines that there is a misstatement, the auditor should evaluate the misstatement in accordance with AS 2810, *Evaluating Audit Results*[8] and, in an integrated audit, AS 2201, *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*.[9]

.11 If, after performing the procedures described in paragraph .09, the auditor is unable to determine whether there is a misstatement, the auditor should determine the effect on the audit. This includes:

a. Determining whether to revise the risk assessment in accordance with AS 2110.74;[10] and

b. Performing the audit procedures necessary to obtain sufficient appropriate audit evidence regarding the relevant assertion(s).

.12 As part of performing the procedures described in paragraph .09, the auditor may identify relevant information of which the auditor was not aware when initially designing the substantive analytical procedure. When such information is identified, the auditor should:

a. Evaluate the reliability of the information in accordance with AS 1105;

b. Determine whether to modify the design of the substantive analytical procedure in accordance with paragraphs .04-.08 of this standard or perform other substantive procedures to address the assessed risk; and

c. Determine whether to revise the risk assessment in accordance with AS 2110.74.

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[8] *See* AS 2810.10-.23, which discusses accumulating and evaluating identified misstatements.

[9] *See* paragraph AS 2201.B8 for the auditor's responsibilities to evaluate the effect of findings of the substantive auditing procedures performed on the effectiveness of internal control over financial reporting.

[10] *See* AS 2110.74 for the auditor's responsibilities for revising the risk assessment and planned audit procedures.

APPENDIX 2 – RELATED AMENDMENTS TO OTHER PCAOB AUDITING STANDARDS

In connection with the proposed standard, the Board is proposing related amendments to AS 1105, *Audit Evidence*, and AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*. Language that would be deleted by the proposed amendments is ~~struck through~~. Language that would be added by the proposed amendments is underlined. The presentation of proposed amendments to PCAOB standards by showing deletions and additions to existing sentences, paragraphs, and footnotes is intended to assist the reader in easily comprehending the Board's proposed changes to the auditing standards. The Board's proposed amendments consist of only the deleted or added language. This presentation does not constitute or represent a proposal of all or of any other part of the auditing standard or interpretation as amended by this proposal.

The Board is requesting comments on all aspects of the proposed related amendments.

AS 1105, *Audit Evidence*

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Analytical Procedures

.21 Analytical procedures involve ~~consist of~~ evaluations of financial information made by analyzing~~a study of~~ plausible relationships among ~~both~~ financial and nonfinancial data that can be external or company-produced.[11] Analytical procedures also encompass ~~the investigation of significant differences from expected amounts~~ evaluating the results of the procedures according to the relevant requirements of PCAOB standards.~~[11]~~ Analytical procedures may identify relevant information of which the auditor was not aware when initially designing the procedure.

[11] Paragraphs .46-.48 of AS 2110, address performing analytical procedures as risk assessment procedures. AS 2305, *Designing and Performing Substantive Analytical Procedures*, addresses~~establishes requirements~~ designing and ~~on~~ performing analytical procedures as substantive procedures. Paragraphs .05-.09 of AS 2810, *Evaluating Audit Results*, address performing analytical procedures in the overall review of the financial statements. Paragraphs .16 and .17 of AS 4105, *Reviews of Interim Financial Information*, address performing analytical procedures as part of conducting a review of interim financial information.

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AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*

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Nature of Substantive Procedures

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.40A *Substantive Procedures Applied to Accounts or Disclosures that Depend on Information the Company Received from External Sources*. When the auditor's substantive procedures are applied to accounts or disclosures that depend on information the company received from one or more external sources, such procedures should involve examining relevant information that the company received, or that the auditor obtained directly, from the external source(s).

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APPENDIX 3 – CONFORMING AMENDMENTS TO OTHER PCAOB STANDARDS

In connection with the proposed standard, the Board is proposing amendments to several auditing standards to conform to the requirements of the proposed standard. Language that would be deleted by the proposed amendments is ~~struck through~~. Language that would be added by the proposed amendments is <u>underlined</u>. The presentation of proposed amendments to PCAOB standards by showing deletions and additions to existing sentences, paragraphs, and footnotes, is intended to assist the reader in easily comprehending the Board's proposed changes to the auditing standards. The Board's proposed amendments consist of only the deleted or added language. This presentation does not constitute or represent a proposal of all or of any other part of the auditing standard or interpretation as amended by this proposal.

The Board is requesting comments on all aspects of the proposed conforming amendments.

PCAOB Standard	Paragraph(s)	Subject Heading of Paragraph Affected	Action(s)
AS 2110, *Identifying and Assessing Risks of Material Misstatement*	.48	Performing Analytical Procedures	Conforming amendment to footnote 27
AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*	.17	Testing Controls in an Audit of Financial Statements	Conforming amendment to footnote 14
AS 2401, *Consideration of Fraud in a Financial Statement Audit*	.53	Responses Involving the Nature, Timing, and Extent of Procedures to Be Performed	Conforming amendment to footnote 20
AS 2810, *Evaluating Audit Results*	.06	Performing Analytical Procedures in the Overall Review	Conforming amendment to footnote 3
AS 4105, *Reviews of Interim Financial Information*	.16	Analytical Procedures, Inquiries, and Other Review Procedures	Conforming amendment to paragraph .16
AT Section 701, *Management's Discussion and Analysis*	.20	Timing of Procedures	Conforming amendment to footnote 16

AS 2110, *Identifying and Assessing Risks of Material Misstatement*

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Performing Analytical Procedures

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.48 When performing an analytical procedure, the auditor should use his or her understanding of the company to develop expectations about plausible relationships among the data to be used in the procedure.[27] When comparison of those expectations with relationships derived from recorded amounts yields unusual or unexpected results, the auditor should take into account those results in identifying the risks of material misstatement.

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[27] *See* AS 1105.21, which provides that ~~A~~analytical procedures involve~~consist of~~ evaluations of financial information made by analyzing~~a study of~~ plausible relationships among financial and nonfinancial data that can be external or company-produced.

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AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*

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Testing Controls in an Audit of Financial Statements

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.17 Also, tests of controls must be performed in the audit of financial statements for each relevant assertion for which substantive procedures alone cannot provide sufficient appropriate audit evidence and when necessary to support the auditor's reliance on the accuracy and completeness of financial information used in performing other audit procedures.[14]

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[14] Paragraph .10 of AS 1105, *Audit Evidence*~~, and paragraph .16 of AS 2305, *Substantive Analytical Procedures*~~.

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AS 2401, *Consideration of Fraud in a Financial Statement Audit*

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Responses Involving the Nature, Timing, and Extent of Procedures to Be Performed

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.53 The following are examples of responses to assessed fraud risks involving the nature, timing, and extent of audit procedures:

- Performing procedures at locations on a surprise or unannounced basis, for example, observing inventory on unexpected dates or at unexpected locations or counting cash on a surprise basis.
- Requesting that inventories be counted at the end of the reporting period or on a date closer to period end to minimize the risk of manipulation of balances in the period between the date of completion of the count and the end of the reporting period.
- Making oral inquiries of major customers and suppliers in addition to sending written confirmations, or sending confirmation requests to a specific party within an organization.

- Performing substantive analytical procedures using disaggregated data, for example, comparing gross profit or operating margins by location, line of business, or month to auditor-developed expectations.[20]

- If other auditors or referred-to auditors[20A] are auditing the financial statements of one or more of the company's locations or business units,[20B] where applicable, discussing with them the extent of work that needs to be performed to address the fraud risk resulting from transactions and activities relating to these locations or business units.

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[20] AS 2305, *Designing and Performing Substantive Analytical Procedures*, establishes requirements ~~regarding~~ when designing and performing substantive analytical procedures ~~as substantive tests~~.

[20A] The terms "other auditor" and "referred-to auditor," as used in this standard, have the same meaning as defined in Appendix A of AS 2101, *Audit Planning*.

[20B] The term "business units" includes subsidiaries, divisions, branches, components, or investments.

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AS 2810, *Evaluating Audit Results*

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Performing Analytical Procedures in the Overall Review

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.06 As part of the overall review, the auditor should evaluate whether:

a. The evidence gathered in response to unusual or unexpected transactions, events, amounts, or relationships previously identified during the audit is sufficient; and

b. Unusual or unexpected transactions, events, amounts, or relationships[3] indicate risks of material misstatement that were not identified previously, including, in particular, fraud risks.

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[3] Paragraphs .46-.48 of AS 2110, *Identifying and Assessing Risks of Material Misstatement*~~, and paragraph .03 of AS 2305, *Substantive Analytical Procedures*~~.

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AS 4105, *Reviews of Interim Financial Information*

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Analytical Procedures, Inquiries, and Other Review Procedures

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.16 *Analytical procedures and related inquiries.* The accountant should apply analytical procedures to the interim financial information to identify and provide a basis for inquiry about the relationships and individual items that appear to be unusual and that may indicate a material misstatement. Analytical procedures, for the purposes of this section, should include:

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See Appendix A [paragraph .54] of this section for examples of analytical procedures an accountant may consider performing when conducting a review of interim financial information. The accountant may find the guidance in AS 2305, *Designing and Performing Substantive Analytical Procedures*, useful in conducting a review of interim financial information.

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AT Section 701, *Management's Discussion and Analysis*

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Timing of Procedures

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.20 Proper planning by the practitioner contributes to the effectiveness of the attest procedures in an examination or a review of MD&A. Performing some of the work in conjunction with the audit of the historical financial statements or the review of interim financial statements may permit the work to be carried out in a more efficient manner and to be completed at an earlier date. When performing an examination or a review of MD&A, the practitioner may consider the results of tests of controls, analytical procedures,[fn 16] and substantive tests performed in a financial statement audit or analytical procedures and inquiries made in a review of financial statements or interim financial information.

[FN 16] ~~AS 2305, *Substantive Analytical Procedures*, defines analytical procedures as "evaluations of financial information made by a study of plausible relationships among both financial and nonfinancial data. Analytical procedures range from simple comparisons to the use of complex models involving many relationships and elements of data."~~ In applying analytical procedures to MD&A, the practitioner develops expectations of matters that would be discussed in MD&A by identifying and using plausible relationships that are reasonably expected to exist based on the practitioner's understanding of the client and of the industry in which the client operates, and the knowledge of relationships among the various financial elements gained through the audit of financial statements or review of interim financial information. Refer to paragraph .21 of AS 1105, *Audit Evidence*, ~~2305~~ for further discussion of analytical procedures.

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