2023 Inspection

Marcum LLP

(Headquartered in New York, New York)

June 20, 2024

PCAOB RELEASE NO. 104-2024-110

PCAOB
PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD

EXECUTIVE SUMMARY

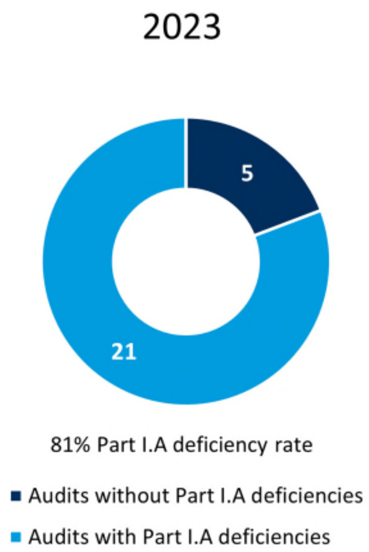
Our 2023 inspection report on Marcum LLP provides information on our inspection to assess the firm's compliance with Public Company Accounting Oversight Board (PCAOB) standards and rules and other applicable regulatory and professional requirements. This executive summary offers a high-level overview of what is included in this report:

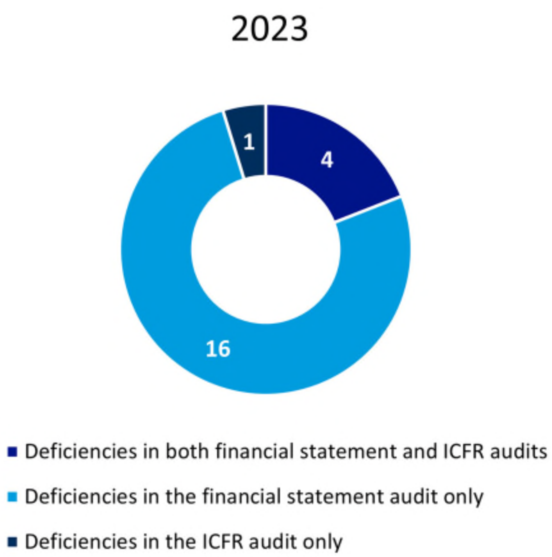
- Part I.A of the report discusses deficiencies ("Part I.A deficiencies") in certain issuer audits that were of such significance that we believe the firm, at the time it issued its audit report(s), had not obtained sufficient appropriate audit evidence to support its opinion(s) on the issuer's financial statements and/or internal control over financial reporting (ICFR).
- Part I.B of the report discusses certain deficiencies ("Part I.B deficiencies") that relate to instances of non-compliance with PCAOB standards or rules other than those where the firm had not obtained sufficient appropriate audit evidence to support its opinion(s). This section does not discuss instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence.
- Part I.C of the report discusses instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence ("Part I.C deficiencies").

If we include a Part I.A or Part I.B deficiency in this report — other than those deficiencies for audits with incorrect opinions on the financial statements and/or ICFR — it does not necessarily mean that the issuer's financial statements are materially misstated or that undisclosed material weaknesses in ICFR exist. If we include a Part I.C deficiency in this report, it does not necessarily mean that the Board has concluded the firm was not objective and impartial throughout the audit and professional engagement period. If we include a deficiency in Part I.A, Part I.B, or Part I.C of this report, it does not necessarily mean that the firm has not addressed the deficiency.

Overview of the 2023 Deficiencies Included in Part I

Twenty-one of the 26 audits we reviewed in 2023 are included in Part I.A of this report due to the significance of the deficiencies identified. The identified deficiencies primarily related to the firm's testing of controls over and/or substantive testing of revenue and related accounts, business combinations, and long-lived assets.





In connection with our 2023 inspection procedures for one audit, the issuer restated its financial statements to correct misstatements, and the firm revised and reissued its report on the financial statements.

The most common Part I.A deficiencies in 2023 related to testing an estimate, testing data or reports used in substantive testing, and performing substantive testing to address a risk of material misstatement.

The Part I.B deficiencies in 2023 related to engagement quality review, audit committee communications, management communications, risk assessment, consideration of fraud, the firm's audit report, critical audit matters, and Form AP.

The Part I.C deficiencies in 2023 related to audit committee pre-approval, financial relationships, and non-audit services.

Table of Contents

2023 INSPECTION

In the 2023 inspection of Marcum LLP, the PCAOB assessed the firm's compliance with laws, rules, and professional standards applicable to the audits of public companies.

We selected for review 26 audits of issuers with fiscal years generally ending in 2022. For each issuer audit selected, we reviewed a portion of the audit. We also evaluated elements of the firm's system of quality control.

What's Included in this Inspection Report

This report includes the following sections:

- **Overview of the 2023 Inspection and Historical Data by Inspection Year:** Information on our inspection, historical data, and common deficiencies.

- **Part I – Inspection Observations:**

    - **Part I.A:** Deficiencies that were of such significance that we believe the firm, at the time it issued its audit report(s), had not obtained sufficient appropriate audit evidence to support its opinion(s) on the issuer's financial statements and/or ICFR.

    - **Part I.B:** Certain deficiencies that relate to instances of non-compliance with PCAOB standards or rules other than those where the firm had not obtained sufficient appropriate audit evidence to support its opinion(s). This section does not discuss instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence.

    - **Part I.C:** Instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence.

  Consistent with the Sarbanes-Oxley Act ("Act"), it is the Board's assessment that nothing in Part I of this report deals with a criticism of, or potential defect in, the firm's quality control system. We discuss any such criticisms or potential defects in Part II. Further, you should not infer from any Part I deficiency, or combination of deficiencies, that we identified a quality control finding in Part II.

- **Part II – Observations Related to Quality Control:** Criticisms of, or potential defects in, the firm's system of quality control. Section 104(g)(2) of the Act restricts us from publicly disclosing Part II deficiencies unless the firm does not address the criticisms or potential defects to the Board's satisfaction no later than 12 months after the issuance of this report.

- **Appendix A – Firm's Response to the Draft Inspection Report:** The firm's response to a draft of this report, excluding any portion granted confidential treatment.

2023 Inspection Approach

In selecting issuer audits for review, we use both risk-based and random methods of selection. We make the majority of our selections based on (1) our internal evaluation of audits we believe have a heightened risk of material misstatement, including those with challenging audit areas, and (2) other risk-based characteristics, including issuer and firm considerations. We also select audits randomly to provide an element of unpredictability.

When we review an audit, we do not review every aspect of the audit. Rather, we generally focus our attention on audit areas we believe to be of greater complexity, areas of greater significance or with a heightened risk of material misstatement to the issuer's financial statements, and areas of recurring deficiencies. We may also select some audit areas for review in a manner designed to incorporate unpredictability.

Our selection of audits for review does not constitute a representative sample of the firm's total population of issuer audits. Additionally, our inspection findings are specific to the particular portions of the issuer audits reviewed. They are not an assessment of all of the firm's audit work nor of all of the audit procedures performed for the audits reviewed.

View the details on the scope of our inspections and our inspections procedures.

OVERVIEW OF THE 2023 INSPECTION AND HISTORICAL DATA BY INSPECTION YEAR

The following information provides an overview of our 2023 inspection as well as data from the previous two inspections. We use a combination of risk-based and random methods to select audits for review and to identify areas on which we focus our review. Because our inspection process evolves over time, it can, and often does, focus on a different mix of audits and audit areas from year to year and firm to firm. As a result of this variation, we caution that our inspection results are not necessarily comparable over time or among firms.

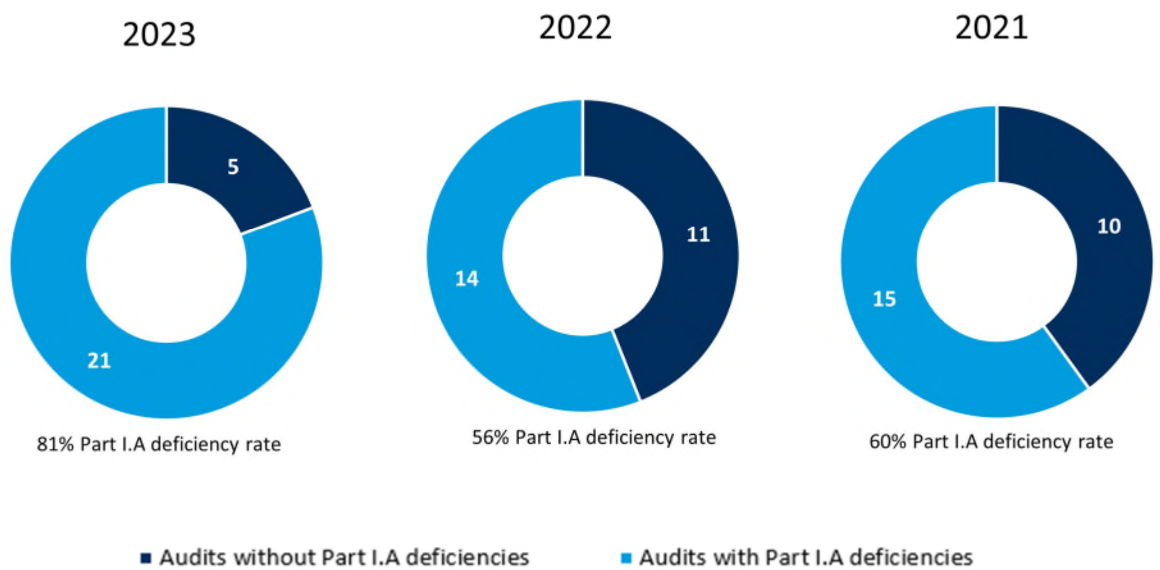
Audits Selected for Review

	2023	2022	2021
Total audits reviewed			
Total audits reviewed	26	25	25
Selection method			
Risk-based selections	24	23	19
Random selections	2	2	4
Target team selections[1]	0	0	2
Total audits reviewed	**26**	**25**	**25**
Principal auditor			
Audits in which the firm was the principal auditor	26	25	25
Audits in which the firm was not the principal auditor	0	0	0
Total audits reviewed	**26**	**25**	**25**
Audit type			
Integrated audits of financial statements and ICFR	6	4	2
Financial statement audits only	20	21	23
Total audits reviewed	**26**	**25**	**25**

[1] For further information on the target team's activities in 2021, refer to that inspection report.

Part I.A Deficiencies in Audits Reviewed

In 2023, 20 of the 21 audits appearing in Part I.A were selected for review using risk-based criteria. In 2022, all audits appearing in Part I.A were selected for review using risk-based criteria. In 2021, 14 of the 15 audits appearing in Part I.A were selected for review using risk-based criteria.

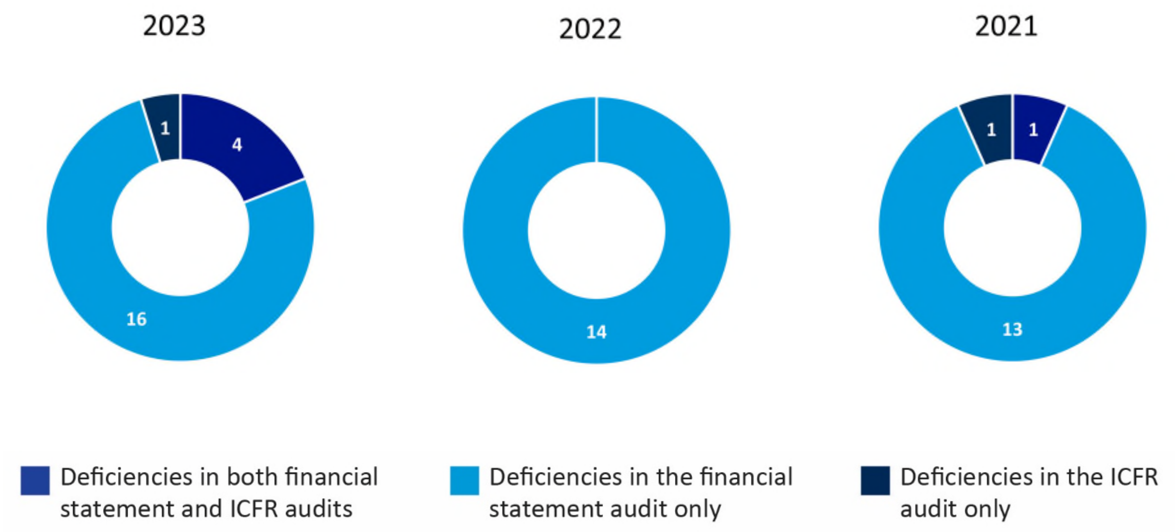


If we include a deficiency in Part I.A of our report, it does not necessarily mean that the firm has not addressed the deficiency. In many cases, the firm has performed remedial actions after the deficiency was identified. Depending on the circumstances, remedial actions may include performing additional audit procedures, informing management of the issuer of the need for changes to the financial statements or reporting on ICFR, or taking steps to prevent reliance on prior audit reports.

Our inspection may include a review, on a sample basis, of the adequacy of a firm's remedial actions, either with respect to previously identified deficiencies or deficiencies identified during the current inspection. If a firm does not take appropriate actions to address deficiencies, we may criticize its system of quality control or pursue a disciplinary action.

If we include a Part I.A or Part I.B deficiency in our report — other than those deficiencies for audits with incorrect opinions on the financial statements and/or ICFR — it does not necessarily mean that the issuer's financial statements are materially misstated or that undisclosed material weaknesses in ICFR exist. It is often not possible for us to reach a conclusion on those points based on our inspection procedures and related findings because, for example, we have only the information that the auditor retained and the issuer's public disclosures. We do not have direct access to the issuer's management, underlying books and records, and other information.

Audits Affected by the Deficiencies Identified in Part I.A



In connection with our 2023 inspection procedures for one audit, the issuer restated its financial statements to correct misstatements, and the firm revised and reissued its report on the financial statements.

Our 2022 inspection procedures involved two audits for which each issuer, unrelated to our review, filed a Form 8-K indicating that its previously issued financial statements should not be relied on and corrected misstatements in a subsequent filing.

Our 2021 inspection procedures involved seven audits, all of which were audits of SPACs or de-SPACs, for which each issuer, unrelated to our review, restated its financial statements to correct one or more misstatements and the firm revised and reissued its report on the financial statements.

The following tables and graphs summarize inspection-related information, by inspection year, for 2023 and the previous two inspections. We caution against making any comparison of the data provided without reading the descriptions of the underlying deficiencies in each respective inspection report.

Most Frequently Identified Part I.A Deficiencies

Deficiencies in audits of financial statements	Audits with Part I.A deficiencies		
	2023	2022	2021
Did not sufficiently test an estimate	16	10	1
Did not perform sufficient testing of data or reports used in the firm's substantive testing	16	7	3
Did not perform sufficient testing related to a significant account or disclosure or to address an identified risk	13	9	1

Deficiencies in ICFR audits	Audits with Part I.A deficiencies		
	2023	2022	2021
Did not identify and test any controls that addressed the risks related to a significant account or relevant assertion	4	0	2
Did not perform sufficient testing of the design and/or operating effectiveness of controls selected for testing	4	0	2
Did not identify and/or sufficiently test controls over the accuracy and completeness of data or reports that the issuer used in the operation of controls	3	0	1

Audit Areas Most Frequently Reviewed

This table reflects the five audit areas we have selected most frequently for review in each inspection year (and the related Part I.A deficiencies). For the issuer audits selected for review, we selected these areas because they were generally significant to the issuer's financial statements, may have included complex issues for auditors, and/or involved complex judgments in (1) estimating and auditing the reported value of related accounts and disclosures and (2) implementing and auditing the related controls.

2023			2022			2021		
Audit area	Audits reviewed	Audits with Part I.A deficiencies	Audit area	Audits reviewed	Audits with Part I.A deficiencies	Audit area	Audits reviewed	Audits with Part I.A deficiencies
Revenue and related accounts	17	15	**Revenue and related accounts**	16	6	**Revenue and related accounts**	15	4
Business combinations	6	5	**Business combinations**	11	8	**Equity and equity-related transactions**	9	9
Equity and equity-related transactions	6	1	**Equity and equity-related transactions**	9	1	**Investment securities**	8	0
Long-lived assets	5	5	**Investment securities**	7	0	**Inventory**	6	0
Goodwill and intangible assets	5	2	**Goodwill and intangible assets**	4	3	**Business combinations**	4	1

Audit Areas with Frequent Part I.A Deficiencies

This table reflects the audit areas with the most frequently identified Part I.A deficiencies in each inspection year with the corresponding results for the other two years presented.

Audit area	2023		2022		2021	
	Audits with Part I.A deficiencies	Audits reviewed	Audits with Part I.A deficiencies	Audits reviewed	Audits with Part I.A deficiencies	Audits reviewed
Revenue and related accounts	15	17	6	16	4	15
Business combinations	5	6	8	11	1	4
Long-lived assets	5	5	1	2	1	2
Goodwill and intangible assets	2	5	3	4	1	2
Equity and equity-related transactions	1	6	1	9	9	9

Revenue and related accounts: The deficiencies in 2023 primarily related to substantive testing of, and testing controls over, revenue. The deficiencies in 2022 related to substantive testing of revenue. The deficiencies in 2021 primarily related to substantive testing of, and testing controls over, revenue.

Business combinations: The deficiencies in 2023 primarily related to substantive testing, and testing controls over, significant assumptions used by the issuer to determine the fair values of assets acquired in a business combination. The deficiencies in 2022 primarily related to substantive testing of significant assumptions used by the issuer to determine the fair values of acquired assets and evaluating the appropriateness of the issuer's accounting for business combinations and related disclosures. The deficiencies in 2021 related to substantive testing of the fair values of acquired assets.

Long-lived assets: The deficiencies in 2023 primarily related to evaluating long-lived assets for possible impairment. The deficiency in 2022 related to testing the accuracy and completeness of data used in the substantive testing of long-lived assets. The deficiency in 2021 related to substantive testing of additions to long-lived assets.

Goodwill and intangible assets: The deficiencies in 2023 related to evaluating goodwill and intangible assets for possible impairment. The deficiencies in 2022 primarily related to evaluating intangible assets for possible impairment and the issuer’s presentation of intangible assets. The deficiency in 2021 related to testing controls over intangible assets.

Equity and equity-related transactions: The deficiencies in 2023 related to substantive testing of the fair values of warrants. The deficiency in 2022 related to substantive testing of significant assumptions used by the issuer to determine the fair value of stock-based compensation. The deficiencies in 2021 primarily related to evaluating the appropriateness of the issuer’s accounting method for certain warrants and certain redeemable shares.

Auditing Standards Associated with Identified Part I.A Deficiencies

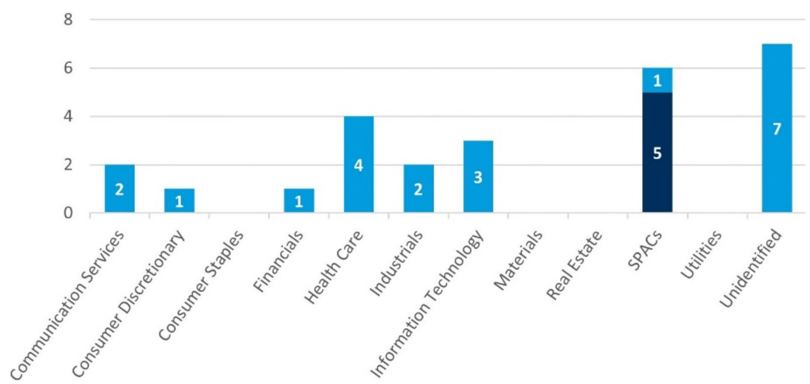
The following lists the auditing standards referenced in Part I.A of the 2023 and the previous two inspection reports, and the number of times that the standard is cited in Part I.A.

PCAOB Auditing Standards	2023	2022	2021
AS 1105, *Audit Evidence*	32	22	2
AS 1201, *Supervision of the Audit Engagement*	9	5	0
AS 1210, *Using the Work of an Auditor-Engaged Specialist*	0	5	0
AS 2201, *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*	35	0	7
AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*	47	14	3
AS 2305, *Substantive Analytical Procedures*	2	0	0
AS 2310, *The Confirmation Process*	2	0	0
AS 2315, *Audit Sampling*	3	0	0
AS 2401, *Consideration of Fraud in a Financial Statement Audit*	3	1	0
AS 2415, *Consideration of an Entity's Ability to Continue as a Going Concern*	0	1	0
AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements* (effective for fiscal years ending on or after December 15, 2020)	33	18	2
AS 2510, *Auditing Inventories*	3	0	0
AS 2810, *Evaluating Audit Results*	14	16	18

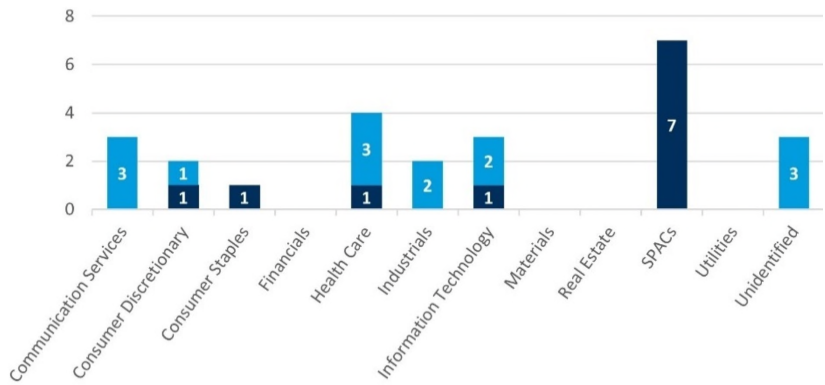
Inspection Results by Issuer Industry Sector

The majority of industry sector data is based on Global Industry Classification Standard (GICS) data obtained from Standard & Poor's (S&P). In instances where GICS data for an issuer is not available from S&P, classifications are assigned based upon North American Industry Classification System data. In instances where classifying an issuer using its industry sector could make an issuer identifiable, we have instead classified such issuer(s) as "unidentified."

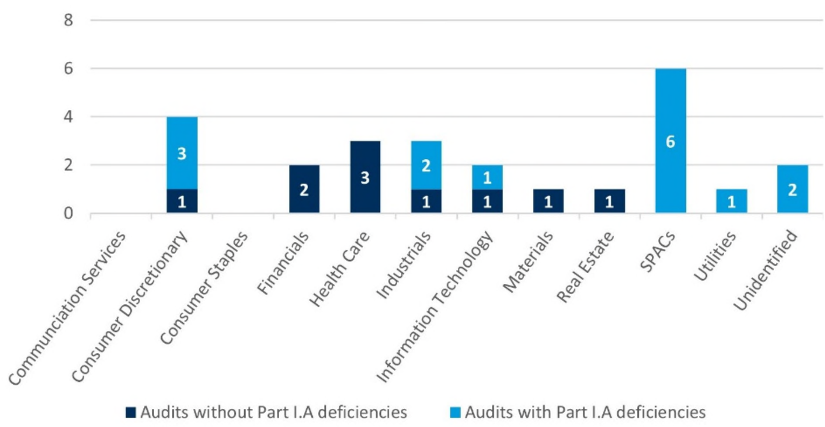
2023



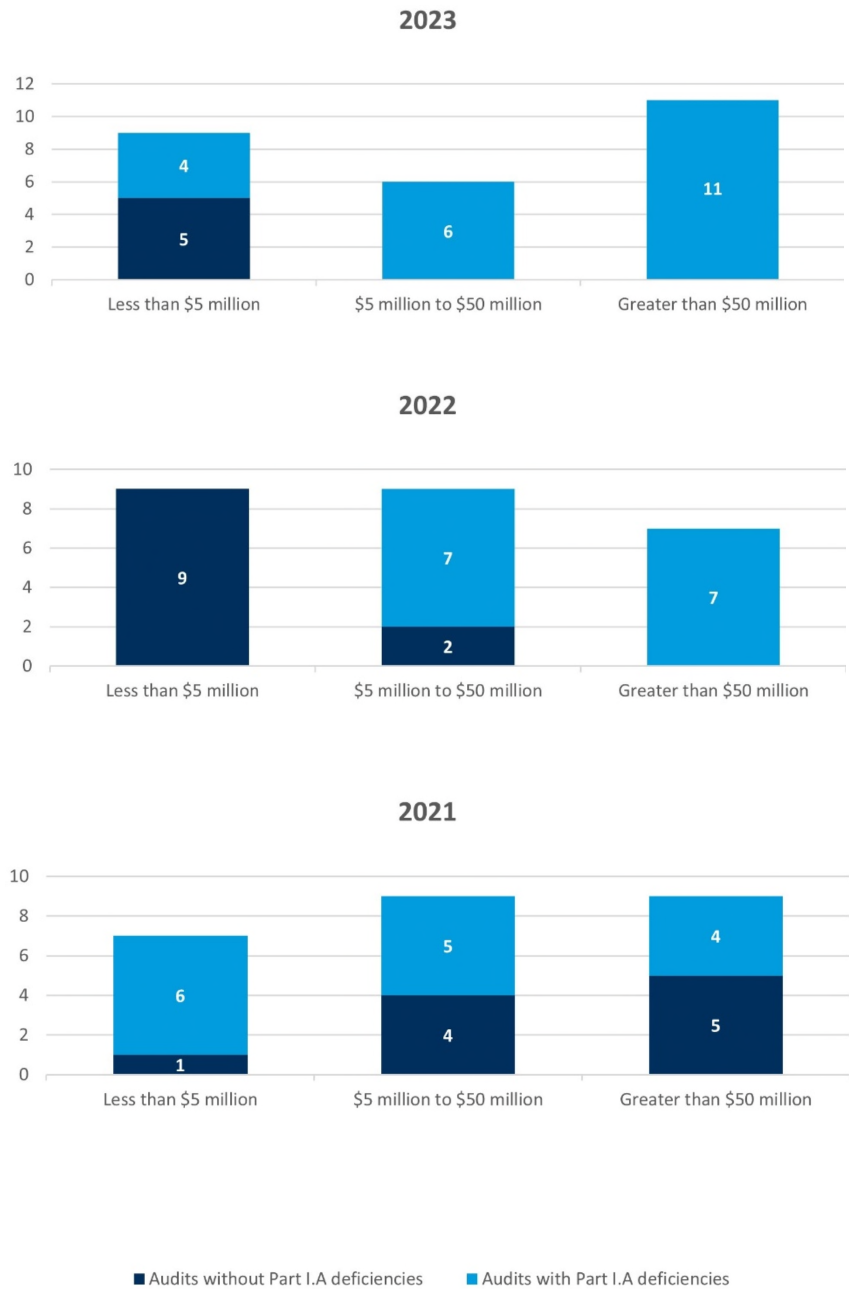
2022



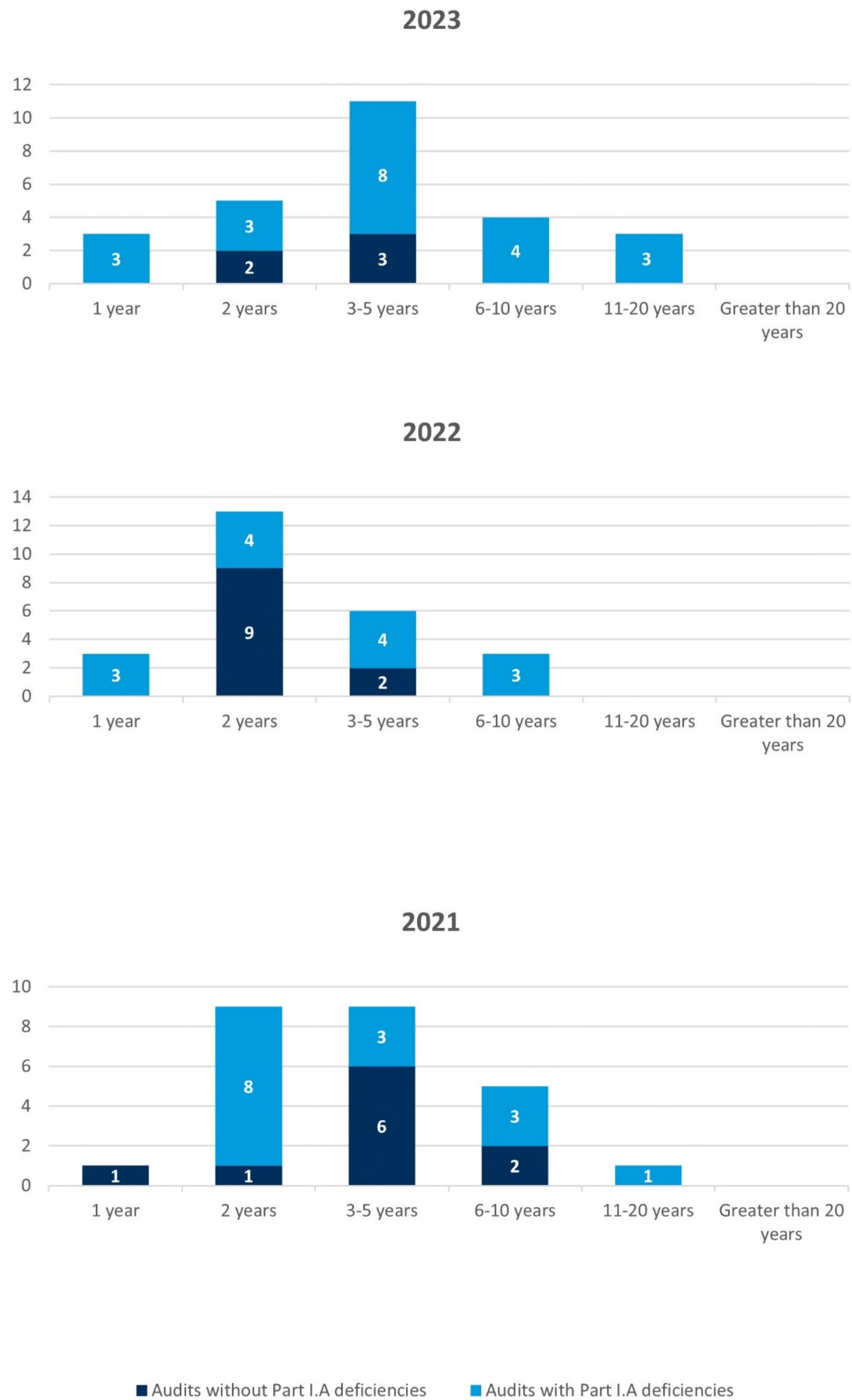
2021



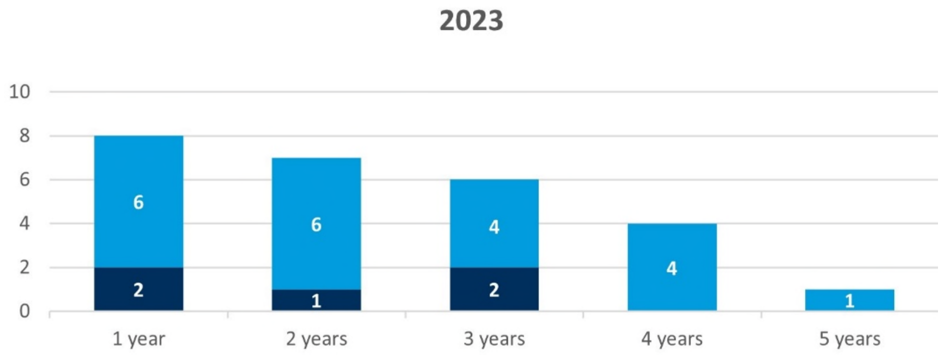
Inspection Results by Issuer Revenue Range

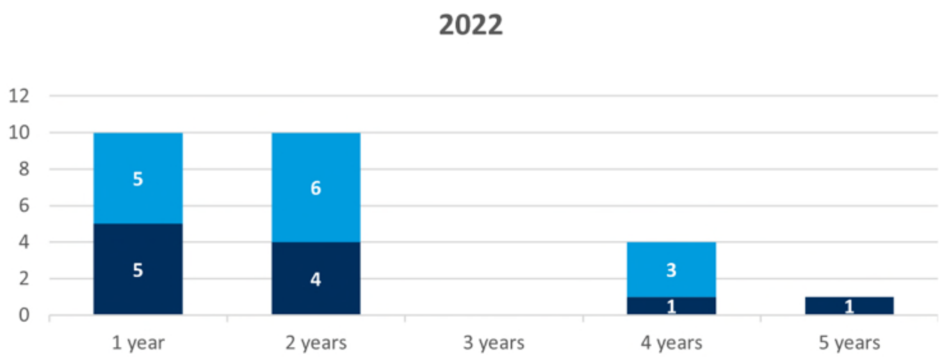


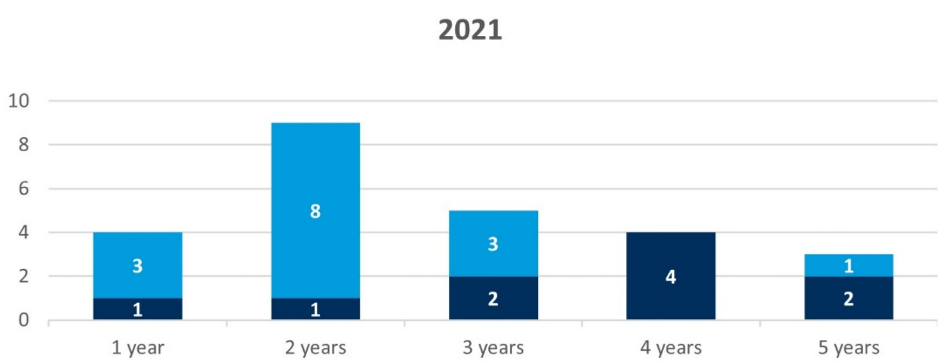
Inspection Results by the Firm's Tenure on the Issuer



Inspection Results by the Engagement Partner’s Tenure on the Issuer







■ Audits without Part I.A deficiencies ■ Audits with Part I.A deficiencies

Classification of Audits with Part I.A Deficiencies

Within Part I.A of this report, we classify each issuer audit in one of the categories discussed below based on the Part I.A deficiency or deficiencies identified in our review.

The purpose of this classification system is to group and present issuer audits by the number of Part I.A deficiencies we identified within the audit as well as to highlight audits with an incorrect opinion on the financial statements and/or ICFR.

Audits with an Incorrect Opinion on the Financial Statements and/or ICFR

This classification includes instances where a deficiency was identified in connection with our inspection and, as a result, an issuer's financial statements were determined to be materially misstated, and the issuer restated its financial statements. It also includes instances where a deficiency was identified in connection with our inspection and, as a result, an issuer's ICFR was determined to be ineffective, or there were additional material weaknesses that the firm did not identify, and the firm withdrew its opinion, or revised its report, on ICFR. This classification does not include instances where, unrelated to our review, an issuer restated its financial statements and/or an issuer's ICFR was determined to be ineffective. We include any deficiencies identified in connection with our reviews of these audits in the audits with multiple deficiencies or audits with a single deficiency classification below.

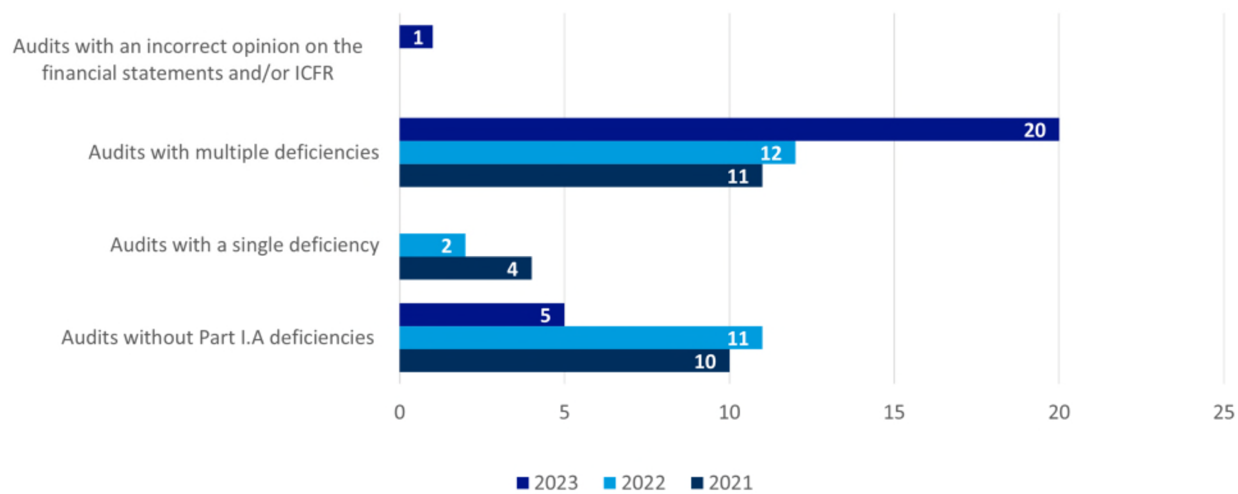
Audits with Multiple Deficiencies

This classification includes instances where multiple deficiencies were identified that related to a combination of one or more financial statement accounts, disclosures, and/or important controls in an ICFR audit.

Audits with a Single Deficiency

This classification includes instances where a single deficiency was identified that related to a financial statement account or disclosure or to an important control in an ICFR audit.

Number of Audits in Each Category



PART I: INSPECTION OBSERVATIONS

Part I.A of our report discusses deficiencies that were of such significance that we believe the firm, at the time it issued its audit report(s), had not obtained sufficient appropriate audit evidence to support its opinion(s) on the issuer's financial statements and/or ICFR.

Part I.B discusses certain deficiencies that relate to instances of non-compliance with PCAOB standards or rules other than those where the firm had not obtained sufficient appropriate audit evidence to support its opinion(s). This section does not discuss instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence.

Part I.C discusses instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence.

Consistent with the Act, it is the Board's assessment that nothing in Part I of this report deals with a criticism of, or potential defect in, the firm's quality control system. We discuss any such criticisms or potential defects in Part II. Further, you should not infer from any Part I deficiency, or combination of deficiencies, that we identified a quality control finding in Part II.

PART I.A: AUDITS WITH UNSUPPORTED OPINIONS

This section of our report discusses the deficiencies identified, by specific issuer audit reviewed, in the audit work supporting the firm's opinion(s) on the issuer's financial statements and/or ICFR.

We identify each issuer by a letter (e.g., Issuer A). Each deficiency could relate to several auditing standards, but we reference the PCAOB standard(s) that most directly relates to the requirement with which the firm did not comply.

We present issuer audits below within their respective deficiency classifications (as discussed previously). Within the classifications, we generally present the audits based on our assessment as to the relative significance of the identified deficiencies, taking into account the significance of the financial statement accounts and/or disclosures affected, and/or the nature or extent of the deficiencies.

Audits with an Incorrect Opinion on the Financial Statements and/or ICFR

Issuer A – Consumer Discretionary

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Long-Lived Assets** and **Journal Entries**.

Description of the deficiencies identified

With respect to **Long-Lived Assets**, for which the firm identified a significant risk:

The issuer performed an assessment of its long-lived assets for possible impairment at year end using various significant assumptions it developed based on its planned course of action. The firm's approach for substantively testing the issuer's impairment assessment was to test the issuer's process. The following deficiencies were identified:

- The firm did not identify and evaluate that the issuer did not comply with FASB ASC Topic 350, *Intangibles – Goodwill and Other*, and FASB ASC Topic 360, *Property, Plant, and Equipment*, because the issuer performed its impairment assessment of goodwill prior to performing its assessment of long-lived assets for possible impairment. (AS 2810.30)
- The firm did not sufficiently evaluate the reasonableness of certain significant assumptions, including taking into account factors affecting the issuer's intent and ability to carry out these assumptions, because its procedures were limited to inquiring of management and evaluating the assumptions for consistency with recent experience. (AS 2501.16 and .17)
- The firm did not sufficiently evaluate the reasonableness of certain other significant assumptions because its procedures were limited to evaluating the assumptions for consistency with certain industry information. Further, the firm did not perform procedures to evaluate the relevance and reliability of this industry information. (AS 1105.04 and .06; AS 2501.16)

In connection with our review, the issuer reevaluated its assessment of long-lived assets for possible impairment and concluded that misstatements existed that had not been previously identified. The issuer subsequently corrected these misstatements in a restatement of its financial statements, and the firm revised and reissued its report on the financial statements.

With respect to **Journal Entries**, for which the firm identified a fraud risk:

The firm identified a fraud risk related to the potential for management to override controls, including recording unsupported journal entries. The firm did not perform any substantive procedures to test journal entries to address this risk at certain business units. (AS 2401.58)

Audits with Multiple Deficiencies

Issuer B

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement and ICFR audits related to **Revenue**, **Investments**, and **Certain Assets**. The firm's internal inspection program inspected this audit and reviewed the investments area but did not identify the deficiencies below.

Description of the deficiencies identified

With respect to **Revenue**:

The issuer used several information-technology (IT) systems to process and record certain revenue at one business unit. The following deficiencies were identified:

- The firm did not identify and test any controls that addressed a risk of material misstatement related to the occurrence of revenue. (AS 2201.39)

- The firm selected for testing controls that consisted of the issuer's review of price list changes processed through certain of the issuer's IT systems. The firm did not identify and test any controls over the accuracy and completeness of certain information used in the operation of these controls. (AS 2201.39) In addition, the firm did not test, or test any controls over, the completeness of the population of items from which it selected its samples for testing these controls. (AS 1105.10)
- The firm did not identify and test any controls that addressed whether pricing was accurately applied in the recording of revenue. (AS 2201.39)

For revenue at three business units, one of which was affected by the audit deficiencies discussed above, the following additional deficiencies were identified:

- The firm did not evaluate whether the issuer was acting as a principal or as an agent. (AS 2301.08)
- The firm did not test whether revenue was recognized according to the contractual pricing. (AS 2301.08)
- For two of these business units, the firm's procedures to test this revenue consisted of testing a sample of transactions from certain periods. The firm did not perform any procedures to test the remaining population of this revenue. (AS 2315.24)

The issuer used multiple service organizations to host and/or maintain IT systems that the issuer used to initiate, process, and/or record transactions related to various types of revenue at five other business units. The firm obtained the service auditor's reports for these service organizations and identified certain complementary user controls that the service auditor's reports described as necessary. The following deficiencies were identified:

- The firm identified control deficiencies related to several complementary user controls that consisted of the issuer's (1) granting and removal of access to these IT systems and/or (2) monitoring of computer operations. The firm did not evaluate the effect of these deficiencies on the issuer's ability to meet control objectives stated in the service auditor's reports. (AS 2201.62 and .B22)
- The firm did not perform any procedures to evaluate whether the issuer had implemented certain of these controls. (AS 2201.39 and .B22)
- The firm did not identify that certain of these controls were not designed to satisfy the control objectives described in certain of the service auditor's reports. (AS 2201.42 and .B22)
- The firm did not perform sufficient procedures to test the accuracy and completeness of certain reports produced by the service organizations that the firm used in its substantive testing. (AS 2301.08)

For revenue at one of these five business units, the following additional deficiencies were identified:

- The firm did not perform any substantive procedures to evaluate the terms and conditions included in customer contracts. (AS 2301.08)

- The firm did not identify and evaluate the issuer's omission of certain required disclosures related to this revenue. (AS 2810.30 and .31)

For revenue at another business unit, the following deficiencies were identified:

- The firm did not evaluate the reliability of certain external information that it used in its substantive testing. (AS 1105.04 and .06)
- The issuer recorded this revenue net of certain deductions. The firm did not perform any substantive procedures to test these sales deductions. (AS 2301.08)

The firm subjected certain other of the issuer's business units to less extensive audit procedures. The following deficiencies were identified:

- To address the risks of material misstatement related to revenue for these business units, the firm selected for testing controls that included the issuer's comparisons and reviews of the (1) budget to actual results and (2) prior-period actual results to current-period actual results. The firm did not evaluate the specific review procedures that the control owners performed to investigate identified variances and determine whether items identified for follow up had been appropriately resolved. (AS 2201.42 and .44) In addition, the firm did not identify and test any controls over the review of the budget used in the operation of one of these controls. (AS 2201.39)
- For certain of these business units, the firm did not perform any procedures to test, or test controls over, the accuracy and completeness of certain issuer-produced information the firm used in its substantive testing, including substantive analytical procedures. (AS 1105.10; AS 2305.16)

With respect to **Investments** and **Certain Assets**, for both of which the firm identified a significant risk:

The issuer held certain investments and assets and engaged specialists to assist it in determining the fair values of these investments and assets using various significant assumptions developed by the issuer or the company's specialists. The following deficiencies were identified:

- The firm selected for testing controls that consisted of the issuer's review of the fair values of these investments and/or assets. The firm did not evaluate the specific review procedures that the control owners performed to assess the reasonableness of the methods, inputs, and assumptions used to determine the fair values. (AS 2201.42 and .44)
- The firm identified misstatements in its substantive testing of certain investments. The firm did not evaluate whether the misstatements it identified should have had an effect on the firm's conclusion about the effectiveness of the issuer's controls. (AS 2201.B8)

With respect to **Investments**:

For certain investments, the following additional deficiencies were identified:

- For certain of these investments, the firm did not perform any procedures to test the fair values. (AS 2501.07)
- For another investment, the firm did not perform any procedures to evaluate the reasonableness of a significant assumption developed by the issuer. (AS 2501.16)

- For certain other investments, the issuer used the investees' unaudited financial results in estimating the fair values. The firm did not sufficiently evaluate the investees' financial results it used as audit evidence because it did not apply, or request that another auditor apply, appropriate auditing procedures to the unaudited financial statements. (AS 1105.B3)

With respect to **Certain Assets**:

For certain of these assets, the firm used an auditor-employed specialist to assist it with testing the fair values of these assets. The following additional deficiencies were identified:

- The firm did not perform any procedures to evaluate the reasonableness of certain significant assumptions developed by the issuer. (AS 2501.16)
- The firm did not identify that the auditor-employed specialist did not perform procedures to evaluate the reasonableness of certain significant assumptions developed by certain of the company's specialists. (AS 1105.A8b; AS 1201.C6 and .C7)

For certain other of these assets, the following additional deficiencies were identified:

- The issuer used a service organization for the recordkeeping of these assets, and this service organization used sub-service organizations for certain functions. The firm did not obtain an understanding of, or test, any relevant controls at these sub-service organizations. (AS 2201.39 and .B19)
- The firm did not perform procedures to evaluate the reasonableness of a significant assumption developed by one of the company's specialists. (AS 1105.A8b) In addition, the firm did not perform procedures to test, or (as discussed above) sufficiently test controls over, the relevance and reliability of information produced by the service organization discussed above and used by the company's specialist to estimate the fair value of these assets. (AS 1105.A8a)

Issuer C

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement and ICFR audits related to **Revenue** and a **Business Combination**. The firm's internal inspection program inspected this audit and reviewed the Revenue and Business Combination areas but did not identify the deficiencies below.

Description of the deficiencies identified

With respect to **Revenue**, for which the firm identified a fraud risk.

The issuer used various service organizations to host and/or maintain IT systems that the issuer used to initiate, process, and record transactions related to revenue at one business unit. In its testing of controls over this account, the firm tested certain IT-dependent manual controls that used data and reports generated or maintained by these IT systems. As a result of the deficiencies in the firm's testing of IT general controls (ITGCs) discussed below, the firm's testing of these IT-dependent manual controls was not sufficient. (AS 2201.46)

The firm obtained the service auditor's reports for these service organizations and identified certain complementary user controls that the service auditor's reports described as necessary. The following deficiencies were identified:

- The firm identified control deficiencies related to various complementary user controls that consisted of the issuer's reviews of user access to these IT systems. The firm did not sufficiently evaluate the severity of these control deficiencies because it did not evaluate, or fully evaluate, the magnitude of the potential misstatements resulting from these deficiencies. (AS 2201.62 and .B22)

- With respect to change management, the firm did not test the design and operating effectiveness of certain complementary user controls that the service auditor's report described as necessary. (AS 2201.39 and .B22)

For revenue at this business unit, which was affected by the audit deficiencies discussed above, the following additional deficiencies related to the firm's testing of controls were identified:

- The firm identified various control deficiencies in its testing of controls. The firm did not perform sufficient procedures to evaluate the severity of these control deficiencies because it did not evaluate the magnitude of the potential misstatements resulting from the deficiencies. (AS 2201.62)

- The firm identified multiple misstatements in its substantive testing. The firm did not evaluate whether the misstatements it identified should have had an effect on the firm's conclusion about the effectiveness of the issuer's controls. (AS 2201.B8)

- For one type of revenue, the firm did not identify and test any controls that addressed whether the performance obligation was satisfied before revenue was recognized. (AS 2201.39)

- The firm selected for testing a control that included the issuer's review of the accuracy of pricing information used to record this first type of revenue. The firm did not identify and test any controls over the accuracy of certain information used in the operation of this control. (AS 2201.39)

- For a second type of revenue, the firm did not identify and test any controls over the accuracy and completeness of certain information the issuer used to record revenue. (AS 2201.39)

- For the second type of revenue, the firm selected for testing a control consisting of the issuer's review of recorded revenue. The firm did not evaluate the specific review procedures that the control owner performed to assess the allocation of revenue. (AS 2201.42 and .44) In addition, the firm did not identify and test any controls over the accuracy and completeness of certain information used in the operation of this control. (AS 2201.39)

For two types of revenue at two business units, one of which was affected by certain of the audit deficiencies discussed above, the firm used certain issuer-produced information in its substantive testing of this revenue. The firm did not perform any procedures to test, or test any controls over, the accuracy and completeness of this information. (AS 1105.10)

With respect to a **Business Combination**, for which the firm identified a significant risk:

During the year, the issuer acquired a business and engaged a specialist to assist it in determining the fair values of certain acquired assets using various significant assumptions. The following deficiencies were identified:

- The firm selected for testing a control that consisted of the issuer's review of the recognition and fair values of acquired assets, including the assumptions used. The firm did not evaluate the specific review procedures that the control owners performed to assess (1) the reasonableness of certain assumptions and (2) whether all identifiable intangible assets were recognized. (AS 2201.42 and .44)

- The firm did not perform procedures, beyond inquiry, to evaluate the reasonableness of a significant assumption developed by the issuer. (AS 2501.16)

- The firm did not sufficiently evaluate the reasonableness of another significant assumption developed by the issuer because it did not evaluate significant differences between this assumption and the issuer's historical and recent experience. (AS 2501.16)

- The firm did not evaluate the relevance and reliability of external information it used in its substantive testing of certain significant assumptions. (AS 1105.04 and .06)

- The firm used an auditor-employed specialist to evaluate a significant assumption developed by the company's specialist. The firm did not identify that the work of the auditor-employed specialist did not provide sufficient appropriate audit evidence because the auditor-employed specialist did not evaluate the relevance and reliability of external information the company's specialist used. (AS 1105.A8a; AS 1201.C6 and .C7)

The firm did not evaluate whether separately identifiable intangible assets should have been recorded related to (1) certain technology in development and (2) technical expertise possessed by the acquired business. (AS 2301.08)

Issuer D

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement and ICFR audits related to **Inventory**, **Revenue**, and **Journal Entries**. The firm's internal inspection program inspected this audit and reviewed the Inventory and Journal Entries areas but did not identify the deficiencies below.

Description of the deficiencies identified

For certain business units, the issuer used an IT system to initiate, process, and record transactions related to inventory and revenue. In its testing of controls over these accounts, the firm tested various automated controls that used data generated or maintained by this IT system. The firm selected for testing a control over change management for this system but did not evaluate whether this control was designed to address all program changes. (AS 2201.42) As a result of the deficiency in the firm's testing of the ITGC discussed above, the firm's testing of these automated controls was not sufficient. (AS 2201.46)

With respect to **Inventory**:

For certain inventory, which was affected by the ITGC testing deficiencies discussed above, the following additional deficiencies related to the firm's testing of controls were identified:

- The firm selected for testing an automated control over inventory costing. The firm did not sufficiently test the design and operating effectiveness of this control as it limited its testing to only certain scenarios, without identifying and evaluating all relevant configurations. (AS 2201.42 and .44) In addition, the firm did not identify that this control was not designed to address whether inventory was valued in accordance with the issuer's policy. (AS 2201.42)

- The firm did not identify and test any controls over an input the issuer used in determining the cost of inventory. (AS 2201.39)
- The issuer performed cycle counts of inventory, and the issuer's cycle-count policy required inventory to be counted at specific frequencies during the year. The firm selected for testing controls that consisted of the issuer's review of cycle-count results. The firm did not test the aspects of one of these controls that addressed whether inventory counts were performed in accordance with the issuer's designated count frequency in its cycle-count policy. (AS 2201.42 and .44) In addition, the firm did not identify and test any controls over the accuracy and completeness of certain information used in the operation of these controls. (AS 2201.39)
- The firm identified exceptions in its substantive testing of the existence of inventory but did not evaluate the effect of these exceptions on the effectiveness of the issuer's cycle-count controls. (AS 2201.B8)

The firm's substantive procedures to test the unit cost of this inventory consisted of selecting a sample of items for testing. The firm did not perform sufficient procedures to test the unit cost because it inspected supporting documentation for only a portion of the quantity of these items held at year end. (AS 2301.08) In addition, the firm did not perform any substantive procedures to test an input used in determining the cost of this inventory. (AS 2301.08)

The firm's approach to substantively test certain of the issuer's reserve for excess and obsolete inventory was to develop an independent expectation of the estimate. The firm did not perform procedures to demonstrate it had a reasonable basis for an assumption and the method used to develop its independent expectation. (AS 2501.22)

With respect to **Revenue**, for which the firm identified a fraud risk:

For certain revenue, which was affected by the ITGC testing deficiencies discussed above, the issuer recognized revenue when a product was shipped. The firm selected for testing various automated controls over revenue recognition but did not test the aspects of these controls that addressed whether shipment had occurred before revenue was recognized. (AS 2201.42 and .44)

With respect to **Journal Entries**, for which the firm identified a fraud risk:

The firm identified a fraud risk related to the potential for management to override controls, including recording unsupported journal entries. The firm did not perform any substantive procedures to test journal entries to address this risk at certain business units. (AS 2401.58)

Issuer E

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, **Deferred Revenue**, **Long-Lived Assets**, and **Journal Entries**. This was the firm's initial audit of this issuer.

Description of the deficiencies identified

With respect to **Revenue**, for which the firm identified a fraud risk:

For one type of revenue, the firm selected the revenue transactions from the issuer's largest customers for testing but did not perform any substantive procedures to test the remaining portion of this revenue. (AS 1105.27; AS 2301.08 and .13)

For another type of revenue, the firm did not perform any substantive procedures to test whether certain performance obligations had been satisfied before revenue was recognized. (AS 2301.08 and .13)

For both of these types of revenue, certain of the issuer's arrangements included multiple performance obligations. The firm did not perform any substantive procedures to evaluate whether the issuer's allocation of revenue to separate performance obligations was based on the relative standalone selling prices. (AS 2301.08)

With respect to **Deferred Revenue**:

The firm did not perform procedures, beyond inquiring of management, to test certain deferred revenue. (AS 2301.08)

With respect to **Long-Lived Assets**:

During the year, events or changes in circumstances existed indicating that the carrying value of the issuer's long-lived assets may not be recoverable and the issuer performed assessments of its long-lived assets for possible impairment. The following deficiencies were identified:

- The firm did not evaluate whether the issuer, in conformity with FASB ASC Topic 350 and FASB ASC Topic 360, performed its assessments of long-lived assets for possible impairment prior to performing an impairment assessment of goodwill. (AS 2301.08)
- The issuer concluded that the carrying amount of one asset group was recoverable. The firm did not identify that the issuer did not consider certain indicators of possible impairment in its assessment of these assets. (AS 2301.08; AS 2810.03)
- The firm's approach for substantively testing the issuer's impairment assessment for a second asset group was to test the issuer's process. The firm did not evaluate whether the issuer had a reasonable basis for its selection of a significant assumption from a range of potential assumptions. (AS 2501.16)
- The firm's approach for substantively testing the issuer's impairment assessment for a third asset group was to develop independent expectations of the fair values of these assets. The firm did not perform sufficient procedures to demonstrate it had a reasonable basis for certain significant assumptions it developed because it did not (1) take into account the issuer's intent and ability to carry out these assumptions and (2) demonstrate it had a reasonable basis for its selection of these assumptions from a range of potential assumptions. (AS 2501.22) In addition, the firm did not evaluate the relevance and reliability of external information used in developing its independent expectations. (AS 1105.04 and .06)

The firm did not sufficiently evaluate whether the issuer's method to estimate depreciation expense for certain assets was in conformity with FASB ASC Topic 360 because it did not evaluate whether the issuer's method of when to start depreciating an asset represented when the asset was placed in service. (AS 2501.10)

The firm did not perform any procedures to evaluate a difference it identified in its testing of long-lived assets. (AS 2301.08)

With respect to **Journal Entries**, for which the firm identified a fraud risk:

To identify and select journal entries for testing, the firm identified fraud characteristics and obtained a list of all journal entries with these characteristics. The firm did not perform sufficient procedures to test those journal entries because it examined the underlying support for only certain journal entries, without having an appropriate rationale for limiting its testing to those certain journal entries. (AS 2401.61)

Issuer F – Information Technology

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, **Goodwill, Long-Lived Assets**, and **Digital Assets**.

Description of the deficiencies identified

With respect to **Revenue**, for which the firm identified a fraud risk:

The issuer recorded certain revenue based on data in an electronic environment that were tracked and provided by a service organization. The firm used certain information produced by this service organization in its substantive testing of this revenue but did not test, or test any controls over, the accuracy and completeness of this information. (AS 2301.08 and .13)

For a second type of revenue, the firm did not evaluate whether revenue was recognized in conformity with certain relevant requirements of FASB ASC Topic 606, *Revenue from Contracts with Customers*. (AS 2301.08 and .13) In addition, the firm did not evaluate the reliability of certain external information it used in its substantive testing of this revenue. (AS 1105.04 and .06)

For a third type of revenue, the firm did not perform any substantive procedures to test whether performance obligations had been satisfied before revenue was recognized. (AS 2301.08 and .13)

With respect to **Goodwill**, for which the firm identified a significant risk, and **Long-Lived Assets**:

The issuer engaged a specialist to perform an assessment of its goodwill for possible impairment. The firm's approach for substantively testing the issuer's impairment assessment was to test the issuer's process, and the firm used an auditor-employed specialist to evaluate certain significant assumptions used. The following deficiencies were identified:

- The firm did not evaluate the reasonableness of certain significant assumptions developed by the company's specialist or developed by the issuer. (AS 1105.A8b; AS 2501.16)

- The firm did not identify that the auditor-employed specialist did not evaluate the relevance of external information used by the company's specialist to develop certain other significant assumptions. (AS 1105.A8a; AS 1201.C6 and .C7)

During the year, events or changes in circumstances existed indicating that the carrying value of the issuer's long-lived assets may not be recoverable. The firm did not evaluate whether the issuer performed an assessment of long-lived assets for possible impairment, which, in conformity with FASB ASC Topic 350 and FASB ASC Topic 360, was required to be performed prior to performing an impairment assessment of goodwill. (AS 2301.08 and .11)

With respect to **Digital Assets**, for which the firm identified a significant risk:

The issuer performed an assessment of its digital assets for possible impairment. The firm used certain external information in its testing of the issuer's impairment assessment but did not evaluate the relevance and reliability of this information. (AS 1105.04 and .06)

Issuer G

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, **Accounts Receivable**, and **Inventory**. This was the firm's initial audit of this issuer.

Description of the deficiencies identified

With respect to **Revenue**, for which the firm identified a fraud risk:

The issuer recognized certain revenue over time based on labor costs incurred to date relative to total estimated labor costs to complete the contract. The following deficiencies were identified:

- For projects designated as complete, the firm did not perform sufficient procedures to evaluate whether the method used by the issuer to record revenue was in conformity with FASB ASC Topic 606 because it did not evaluate (1) whether the performance obligations were satisfied and (2) certain evidence that suggested these projects were not complete. (AS 2501.10; AS 2810.03)
- For projects designated as in-process, the firm did not sufficiently evaluate the reasonableness of the issuer's significant assumption related to total estimated labor hours because it did not evaluate significant differences between this assumption and the issuer's recent experience. (AS 2501.16)
- The firm did not perform any procedures to evaluate certain differences it identified in its testing of labor costs incurred. (AS 2301.08 and .13)

For another type of revenue, the firm did not perform any substantive procedures to test whether the performance obligations had been satisfied before revenue was recognized. (AS 2301.08 and .13)

For a third type of revenue, the firm did not perform any substantive procedures to evaluate the terms and conditions included in customer contracts. (AS 2301.08 and .13)

The firm did not identify and evaluate the issuer's omission of certain disclosures required under FASB ASC Topic 606. (AS 2810.30 and .31)

With respect to **Accounts Receivable**:

The firm sent positive confirmation requests to the issuer's customers for a sample of accounts receivable. The following deficiencies were identified:

- For one confirmation that was returned with exceptions, the firm did not evaluate the nature of those exceptions. (AS 2310.33)
- For certain confirmations that were not returned, the firm did not perform alternative procedures that provided sufficient appropriate audit evidence that these balances represented valid receivables as of the confirmation date. (AS 2310.31)

With respect to **Inventory**:

The firm observed the issuer's physical counts and performed independent test counts of inventory after year end. The following deficiencies were identified:

- The firm did not perform any procedures to test the existence of a certain type of inventory. (AS 2301.08)
- The firm did not perform procedures, beyond inquiring of management, to test intervening transactions between year end and the date of its inventory observations. (AS 2510.12)

The firm's substantive procedures to test the unit cost of inventory consisted of selecting a sample of items for testing. For certain items in its sample, the firm did not perform sufficient procedures to test the unit cost because its procedures were limited to comparing the recorded raw materials cost to supporting documentation for the most recent purchase. (AS 2301.08) In addition, for certain other items in its sample, the firm did not perform any procedures to test the raw materials cost and/or the labor and overhead costs allocated to these items. (AS 2301.08)

The firm did not perform any procedures to evaluate whether certain inventory was recorded at the lower of cost or net realizable value. (AS 2301.08)

The firm did not perform any procedures to test, or test controls over, the accuracy and completeness of certain information produced by the issuer that the firm used in its testing of the net realizable value of certain other inventory. (AS 1105.10)

Issuer H – Health Care

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue** and a **Long-Lived Asset**.

Description of the deficiencies identified

With respect to **Revenue**, for which the firm identified a fraud risk:

The issuer recorded revenue net of customer discounts, returns, rebates, and other deductions. The firm did not perform any substantive procedures to test these revenue deductions. (AS 2301.08 and .13)

For one type of revenue, the firm did not perform any substantive procedures to test whether performance obligations had been satisfied before revenue was recognized. (AS 2301.08 and .13)

The firm did not identify and evaluate the issuer's omission of certain disclosures required under FASB ASC Topic 606. (AS 2810.30 and .31)

With respect to a **Long-Lived Asset**, for which the firm identified a significant risk:

The issuer capitalized certain labor costs and external costs associated with the development of this asset. Capitalized labor costs were estimated using a significant assumption. The following deficiencies were identified:

- The firm did not perform any procedures to evaluate the reasonableness of this significant assumption. (AS 2501.16)
- The firm used certain issuer-produced reports in its substantive testing of this asset but did not perform any procedures to test, or test controls over, the accuracy and completeness of these reports. (AS 1105.10)
- The firm did not evaluate whether the issuer's capitalization of external costs was in conformity with FASB ASC Topic 350. (AS 2301.08 and .11)

The firm did not evaluate whether the method used by the issuer to estimate amortization expense for capitalized external costs was in conformity with certain requirements of FASB ASC Topic 350. (AS 2501.10)

The issuer performed an assessment of this long-lived asset for possible impairment and concluded that it was recoverable. The firm did not identify that the issuer did not consider certain indicators of possible impairment in its assessment of this asset. (AS 2301.08 and .11; AS 2810.03)

Issuer I – Health Care

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Inventory** and **Revenue**.

Description of the deficiencies identified

With respect to **Inventory**, for which the firm identified a significant risk:

The issuer performed full physical counts of inventory at various locations before year end. For certain locations, the firm observed the issuer's physical counts and performed independent test counts. The following deficiencies were identified:

- The firm did not perform any procedures to test the existence of a type of work-in-process inventory at the locations observed. (AS 2301.08 and .11)
- For certain inventory, the firm did not apply appropriate tests of intervening transactions between the date of the issuer's counts and year end. (AS 2510.12)

For certain other locations, the firm did not perform any procedures to test the existence of inventory. (AS 2510.09)

For certain locations, the firm's substantive procedures to test the unit cost of inventory consisted of selecting a sample of items for testing. The following deficiencies were identified:

- The firm did not perform procedures to evaluate certain differences it identified in its testing. (AS 2301.08 and .11)
- The firm did not perform sufficient procedures to test the labor and overhead costs the issuer capitalized to inventory because its procedures were limited to comparing the costs to those capitalized in the prior year. (AS 2301.08 and .11)
- The firm did not perform any procedures to test, or test controls over, the accuracy and completeness of certain issuer-produced information used in its substantive testing. (AS 1105.10)

For certain other locations, the firm did not perform any substantive procedures to test the unit cost of inventory. (AS 2301.08 and .11)

The firm did not perform substantive procedures to test the issuer's inventory reserves. (AS 2501.07)

With respect to **Revenue**, for which the firm identified a fraud risk:

The firm's substantive procedures to test certain revenue included selecting a sample of transactions for testing. The firm's sample was too small to provide sufficient appropriate audit evidence because, in determining the sample size, the firm did not take into account tolerable misstatement, the allowable risk of incorrect acceptance, and the characteristics of the population. (AS 2315.16, .23, and .23A)

The firm did not identify and evaluate a misstatement in a disclosure required under FASB ASC Topic 606. (AS 2810.30 and .31)

Issuer J – Health Care

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to a **Business Combination** and **Revenue**.

Description of the deficiencies identified

With respect to a **Business Combination**, for which the firm identified a significant risk:

During the year, the issuer acquired a business and engaged a specialist to assist it in determining the fair values of an acquired intangible asset and the consideration transferred using various significant assumptions. The firm's approach for substantively testing the fair values of the acquired intangible asset and the consideration transferred was to test the issuer's process. The following deficiencies were identified:

- With respect to the fair value of a portion of the consideration transferred, the firm did not evaluate whether the method used by the issuer to determine the fair value was in conformity with FASB ASC Topic 820, *Fair Value Measurement*. Further, the firm did not evaluate certain information provided by the company's specialist that suggested that the issuer's method to determine the fair value of this consideration may not be appropriate. (AS 2501.10; AS 2810.03)

- With respect to the fair value of the remaining consideration transferred, the firm did not perform procedures, beyond inquiring of management, to evaluate the reasonableness of certain significant assumptions developed by the company's specialist or by the issuer. (AS 1105.A8b; AS 2501.16)

- With respect to the intangible asset, the firm used an auditor-employed specialist to evaluate a significant assumption developed by the issuer. The firm did not identify that the auditor-employed specialist did not perform procedures, beyond inquiring of management, to evaluate the reasonableness of this assumption. (AS 1201.C6 and .C7; AS 2501.16) In addition, the firm did not perform procedures, beyond inquiring of management, to evaluate the reasonableness of another significant assumption developed by the issuer. (AS 2501.16)

The firm did not identify and evaluate the issuer's omission of certain disclosures required under FASB ASC Topic 805, *Business Combinations,* and FASB ASC Topic 820 related to certain assets acquired. (AS 2810.30 and .31)

With respect to **Revenue**:

The firm did not identify and evaluate the issuer's omission of a disclosure required under FASB ASC Topic 250, *Accounting Changes and Error Corrections,* related to a change in estimate. (AS 2810.30 and .31)

Issuer K – Health Care

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Business Combinations** and **Intangible Assets**, for both of which the firm identified a significant risk.

Description of the deficiencies identified

The issuer acquired multiple businesses, which included acquiring intangible assets. In addition, during the year, events or changes in circumstances existed indicating that the carrying value of these acquired intangible assets may not be recoverable. The issuer engaged a specialist to assist it in (1) determining the initial fair values of these acquired intangible assets and the provision for contingent consideration to be paid to the sellers and (2) performing an assessment of these acquired intangible assets for impairment. The following deficiencies were identified as of the acquisition date and/or at year end:

- The firm used an auditor-employed specialist to evaluate certain significant assumptions developed by the company's specialist and used in the measurement or assessment of these acquired intangible assets. The firm did not identify that the auditor-employed specialist did not perform any procedures, beyond inquiring of management, to evaluate these assumptions. (AS 1105.A8b; AS 1201.C6 and .C7)

- The firm did not sufficiently evaluate the reasonableness of certain other significant assumptions developed by the issuer and used in the measurement or assessment of these acquired intangible assets because the firm did not evaluate the relevance and reliability of external information it used. (AS 1105.04 and .06) In addition, the firm did not perform any procedures to evaluate the relevance and reliability of certain of this information used by the company’s specialist in determining the fair value of the contingent consideration. (AS 1105.A8a)

- The firm did not sufficiently evaluate the reasonableness of certain other significant assumptions developed by the issuer and used in the measurement or assessment of these acquired intangible assets because it did not (1) evaluate a significant difference between one of these assumptions and the issuer’s experience or (2) take into account the issuer’s intent and ability to carry out certain of these assumptions. (AS 2501.16 and .17)

For these business combinations, the firm did not identify and evaluate the issuer’s omission of certain required disclosures related to contingent considerations. (AS 2810.30 and .31)

Issuer L – Industrials

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue** and **Inventory**.

Description of the deficiencies identified

With respect to **Revenue**, for which the firm identified a fraud risk:

Certain of the issuer’s revenue arrangements included multiple performance obligations. The issuer allocated the total transaction price for each of these arrangements to the separate performance obligations based on the relative standalone selling prices. The firm selected a sample of these arrangements for testing. The following deficiencies were identified:

- The firm did not perform any substantive procedures to evaluate whether the issuer’s identification of performance obligations was in conformity with FASB ASC Topic 606. (AS 2301.08 and .13)
- The firm did not perform any substantive procedures to test whether the allocation of the transaction prices was based on standalone selling prices. (AS 2301.08)
- For certain of the arrangements selected for testing, the firm did not perform any procedures to test whether certain performance obligations had been satisfied before revenue was recognized. (AS 2301.08 and .13)

With respect to **Inventory**, for which the firm identified a significant risk:

For certain inventory, the firm’s approach for substantively testing the reserve for excess and obsolete inventory was to test the issuer’s process. The following deficiencies were identified:

- The firm did not sufficiently evaluate whether the method used by the issuer to develop the reserve was appropriate because it did not evaluate whether the issuer’s reserve took into account the issuer’s forecasted sales. (AS 2501.10)
- The firm did not sufficiently evaluate the reasonableness of certain significant assumptions used by the issuer to estimate the reserve for excess and obsolete inventory because its procedures were limited to inquiry of management and performing a sensitivity analysis that indicated that,

if certain alternative assumptions were used, the reserve would change by a significant amount. (AS 2501.16)

- The firm did not perform any procedures to test, or test controls over, the accuracy and completeness of an issuer-produced report the firm used in its substantive testing of the reserve for excess and obsolete inventory. (AS 1105.10)

For certain other inventory, the firm did not perform sufficient substantive procedures to test whether this inventory was recorded at the lower of cost or net realizable value because its procedures were limited to a year over year comparison of product-level gross margins. (AS 2301.08 and .11)

Issuer M – Information Technology

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to a **Derivative Asset** and **Long-Lived Assets**.

Description of the deficiencies identified

With respect to a **Derivative Asset**, for which the firm identified a significant risk:

The issuer engaged a valuation specialist to assist in determining the fair value of this derivative asset. The firm's approach for substantively testing the fair value of this derivative asset was to develop an independent expectation, using certain assumptions developed by the issuer or the company's specialist. The following deficiencies were identified:

- The firm did not sufficiently evaluate the reasonableness of a significant assumption developed by the issuer because the firm did not take into account management's written plans that indicated the issuer may not have the intent and ability to carry out the assumption. (AS 2501.16 and .17)
- The firm used an auditor-employed specialist to evaluate the reasonableness of a significant assumption developed by the company's specialist. The firm did not identify that the work of the auditor-employed specialist did not provide sufficient appropriate audit evidence because it did not (1) perform procedures to evaluate the reasonableness of a significant assumption developed by the company's specialist and (2) evaluate the relevance and reliability of information from external sources the company's specialist used to develop this assumption. (AS 1105.A8a and .A8b; AS 1201.C6 and .C7)

With respect to **Long-Lived Assets,** for which the firm identified a significant risk:

During the year, the issuer identified events indicating that the carrying value of its long-lived assets may not be recoverable. The issuer performed an impairment analysis using forecasted cash flows that it developed using various assumptions. The following deficiencies were identified:

- The firm did not perform any procedures to evaluate the reasonableness of certain significant assumptions. (AS 2501.16)

- The firm did not perform procedures to evaluate the reasonableness of another significant assumption, beyond reviewing the effect that certain external events would have on the assumption. (AS 2501.16)
- The firm did not perform sufficient procedures to evaluate whether the method used by the issuer to develop its impairment analysis was in conformity with the requirements of FASB ASC Topic 360 because it did not evaluate whether certain assets were (1) assets under development at the time of the impairment analysis and, as a result, the issuer should have included the carrying value of these assets in its impairment analysis or (2) capital expenditures that would increase the service potential of the long-lived asset group and, as a result, the issuer should have excluded the cash flows associated with these assets in its impairment analysis. (AS 2501.10)

Issuer N

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Deferred Revenue**, **Commissions Expense**, and **Accrued Commissions**.

Description of the deficiencies identified

With respect to **Deferred Revenue**, **Commissions Expense**, and **Accrued Commissions**, for all of which the firm identified a significant risk:

The firm did not perform any procedures to test, or test controls over, the accuracy and/or completeness of issuer-produced reports that the firm used in its substantive testing of certain deferred revenue, certain commissions expense, and certain accrued commissions. (AS 1105.10)

With respect to **Commissions Expense**:

The firm's substantive procedures to test commissions expense included substantive analytical procedures. The firm did not develop expectations at a level of precision that provided the desired level of assurance that differences that could be potential material misstatements, individually or in the aggregate, would be identified for investigation. (AS 2305.17)

Issuer O – Communication Services

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue** and a **Business Combination**.

Description of the deficiencies identified

With respect to **Revenue**, for which the firm identified a fraud risk:

The issuer recorded certain revenue based on data in an electronic environment that were tracked and provided by two service organizations. The firm used information produced by these service organizations in its substantive testing of this revenue but did not test, or test any controls over, the accuracy and completeness of this information. (AS 2301.08 and .13)

With respect to a **Business Combination**, for which the firm identified a significant risk:

During the year, the issuer acquired a business and determined the fair value of a liability assumed in connection with the acquisition using various significant assumptions. The following deficiencies were identified:

- The firm did not sufficiently evaluate the reasonableness of a significant assumption because it did not (1) take into account the issuer's intent and ability to carry out this assumption and (2) evaluate a significant difference between this assumption and the issuer's recent experience. (AS 2501.16 and .17)
- The firm did not perform any procedures to evaluate the reasonableness of another significant assumption. (AS 2501.16)

Issuer P

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement and ICFR audits related to a **Business Combination**, for which the firm identified a significant risk.

Description of the deficiencies identified

During the year, the issuer acquired a business and engaged specialists to determine the fair values of certain acquired assets using various significant assumptions. The following deficiencies were identified:

- The firm selected for testing controls that consisted of the issuer's reviews of the recognition and fair values of acquired assets, including the assumptions used. The firm did not evaluate the specific review procedures that the control owners performed to assess (1) the reasonableness of certain assumptions, (2) the fair value of acquired inventory, and (3) whether all identifiable intangible assets were recognized. (AS 2201.42 and .44)
- The firm did not perform any substantive procedures to test the fair value of acquired inventory. (AS 2501.07) In addition, the firm used certain issuer-produced reports in its substantive testing of the existence of acquired inventory but did not perform procedures to test, or test controls over, the accuracy and completeness of these reports. (AS 1105.10)
- The firm's approach for substantively testing the fair value of an acquired intangible asset was to test the issuer's process, and the firm used an auditor-employed specialist to evaluate a significant assumption developed by one of the company's specialists. The firm did not identify that the work of the auditor-employed specialist did not provide sufficient appropriate audit evidence because the auditor-employed specialist did not evaluate the relevance and reliability of external information it used in evaluating the reasonableness of this assumption. (AS 1105.04 and .06; AS 1201.C6 and .C7)
- The sample size the firm used in its substantive procedures to test the fair values of certain other acquired assets was too small to provide sufficient appropriate audit evidence because in determining the sample size, the firm did not take into account the tolerable misstatement for the population. (AS 2315.16, .23, and .23A)

The firm did not evaluate whether a separately identifiable intangible asset should have been recorded related to certain rights held by the acquired business. (AS 2301.08)

Issuer Q – Industrials

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, for which the firm identified a fraud risk.

Description of the deficiencies identified

For three types of revenue, the firm selected a sample of revenue transactions for testing. The following deficiencies were identified:

- For two of these types of revenue, the firm did not test whether revenue was recognized according to the contractual terms for certain of the transactions selected for testing. (AS 2301.08 and .13)
- For two of these types of revenue, the firm did not perform any procedures to test, or test controls over, the accuracy and completeness of issuer-prepared reports that the firm used in its substantive testing. (AS 1105.10)
- For one of these types of revenue, the firm did not perform any substantive procedures to test whether certain performance obligations had been satisfied before revenue was recognized. (AS 2301.08 and .13)

The firm did not identify and evaluate the issuer's omission of, and a misstatement in, certain disclosures required under FASB ASC Topic 606. (AS 2810.30 and .31)

The firm used an issuer-prepared schedule in its substantive testing of a revenue disclosure. The firm did not perform any procedures to test, or test controls over, the accuracy and completeness of this schedule. (AS 1105.10)

Issuer R – Information Technology

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, for which the firm identified a fraud risk.

Description of the deficiencies identified

For four types of revenue, the firm selected a sample of revenue transactions for testing. The following deficiencies were identified:

- For three of these types of revenue, the firm did not test whether revenue was recognized according to the contractual terms for certain of the transactions selected for testing. (AS 2301.08 and .13)
- For three of these types of revenue, the firm did not perform any substantive procedures to test whether performance obligations had been satisfied before revenue was recognized. (AS 2301.08 and .13)

- For one of these types of revenue, the firm did not evaluate whether the issuer was acting as a principal or as an agent. (AS 2301.08 and .13)

The firm did not identify and evaluate the issuer's omission of certain disclosures required under FASB ASC Topic 606. (AS 2810.30 and .31)

Issuer S – Communication Services

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, for which the firm identified a fraud risk.

Description of the deficiencies identified

The issuer recognized revenue from certain arrangements as single performance obligations satisfied over time on a straight-line basis. The firm selected a sample of these arrangements for testing. The following deficiencies were identified:

- The firm did not perform substantive procedures to evaluate whether recognizing revenue for multiple services as a single performance obligation recognized over time on a straight-line basis was in conformity with FASB ASC Topic 606 beyond reading an issuer-prepared memorandum. (AS 2301.08 and .13)
- For certain of the arrangements selected for testing, the firm did not perform any procedures to test whether the performance obligation was being satisfied before revenue was recognized. (AS 2301.08 and .13)

Issuer T – Financials

Type of audit and related area affected

In our review, we identified deficiencies in the ICFR audit related to an **Investment**, for which the firm identified a significant risk.

Description of the deficiencies identified

The issuer used two service organizations for the custody, recordkeeping, and processing of certain transactions related to an investment, and these service organizations used sub-service organizations for certain functions. The firm obtained the service auditor's reports for these service organizations and identified certain complementary user controls that the service auditor's reports described as necessary. The following deficiencies were identified:

- The firm selected for testing controls over the issuer's authorization of these transactions with the custodian. The firm did not test the aspects of these controls that addressed whether the custodian's system was configured to require appropriate authorizations prior to completing these transactions. (AS 2201.42, .44, and .B22) In addition, the firm did not identify and test any controls over an authentication device that the issuer used to authorize these transactions. (AS 2201.39)

- The firm did not obtain an understanding of, or test, any relevant controls at certain sub-service organizations. (AS 2201.39 and .B19)

Issuer U – SPACs

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit related to **Warrants**, for which the firm identified a significant risk.

Description of the deficiencies identified

During the year, the issuer issued warrants that were recorded as liabilities. The firm's approach for substantively testing the fair value of these warrants at issuance was to develop an independent expectation of the estimate using an auditor-employed specialist. The following deficiencies were identified:

- The firm did not identify that the auditor-employed specialist did not perform procedures to demonstrate it had a reasonable basis for the method it used to develop its independent expectation. (AS 1201.C6 and .C7; AS 2501.22)
- The firm did not identify that the auditor-employed specialist did not perform sufficient procedures to demonstrate it had a reasonable basis for a significant assumption it developed because the auditor-employed specialist did not (1) evaluate whether the external data it used to develop this assumption were relevant to the assumption, beyond observing that the data were from companies with similar market capitalization, and (2) evaluate the reasonableness of using the low end of the range of the comparable company data in developing this assumption. (AS 1105.04 and .06; AS 1201.C6 and .C7; AS 2501.22)

Audits with a Single Deficiency

None

PART I.B: OTHER INSTANCES OF NON-COMPLIANCE WITH PCAOB STANDARDS OR RULES

This section of our report discusses certain deficiencies that relate to instances of non-compliance with PCAOB standards or rules other than those where the firm had not obtained sufficient appropriate audit evidence to support its opinion(s). This section does not discuss instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence.

When we review an audit, we do not review every aspect of the audit. As a result, the areas below were not necessarily reviewed on every audit. In some cases, we assess the firm's compliance with specific PCAOB standards or rules on other audits that were not reviewed and include any instances of non-compliance below.

The deficiencies below are presented in numerical order based on the PCAOB standard or rule with which the firm did not comply. We identified the following deficiencies:

- In one of 26 audits reviewed, the work papers did not contain sufficient information to enable an experienced auditor, having no previous connection with the engagement, to understand all of the procedures performed by the engagement quality reviewer, including evidence that the engagement quality reviewer evaluated the engagement team's responses to the significant risks identified. In this instance, the documentation of the engagement quality review was non-compliant with AS 1220, *Engagement Quality Review*.

- In eight of 26 audits reviewed, the firm did not make certain required communications to the audit committee related to the name, location, and planned responsibilities of other accounting firms or other persons not employed by the firm that performed audit procedures in the audit. In these instances, the firm was non-compliant with AS 1301, *Communications with Audit Committees*.

- In two of 26 audits reviewed, the firm did not provide a copy of the management representation letter to the audit committee. In these instances, the firm was non-compliant with AS 1301, *Communications with Audit Committee*s, and AS 2805, *Management Representations*.

- In three of 26 audits reviewed, the firm did not inquire of the audit committee, management, and/or others within the company about the risks of material misstatement, including fraud risks. In these instances, the firm was non-compliant with AS 2110, *Identifying and Assessing Risks of Material Misstatement*.

- In one of 26 audits reviewed, the firm did not presume that there was a fraud risk involving improper revenue recognition and did not have an appropriate rationale for how this presumption was overcome. In this instance, the firm was non-compliant with AS 2110, *Identifying and Assessing Risks of Material Misstatement*.

- In one of six audits reviewed, the firm did not communicate, in writing, to management and the audit committee all significant deficiencies identified during the audit. In this instance, the firm was non-compliant with AS 2201, *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*.

- In 14 of 26 audits reviewed, the firm, when testing journal entries for evidence of possible material misstatement due to fraud, did not have an appropriate rationale for limiting its testing of entries it identified as having certain fraud risk characteristics to certain entries. In these instances, the firm was non-compliant with AS 2401, *Consideration of Fraud in a Financial Statement Audit*.

- In four of 26 audits reviewed, the firm, when testing journal entries for evidence of possible material misstatement due to fraud, did not appropriately consider the characteristics of potentially fraudulent journal entries in determining the criteria it used to identify and select journal entries for testing. In these instances, the firm was non-compliant with AS 2401, *Consideration of Fraud in a Financial Statement Audit*.

- In one of 26 audits reviewed, the firm's audit report was not addressed to the shareholders. In this instance, the firm was non-compliant with AS 3101, *The Auditor's Report on an Audit of Financial Statements When the Auditor Expresses an Unqualified Opinion.*

- In three of 14 audits reviewed, the firm's communication of certain critical audit matters in the audit report did not describe for a matter the principal considerations that led the firm to determine that the matter was a critical audit matter or included language that was inconsistent with information in the firm's audit documentation. In these instances, the firm was non-compliant with AS 3101, *The Auditor's Report on an Audit of Financial Statements When the Auditor Expresses an Unqualified Opinion.*

- In one of 14 audits reviewed, the engagement team performed procedures to determine whether or not matters were critical audit matters but, in performing those procedures, did not include certain matters that were communicated to the audit committee and that related to accounts or disclosures that were material to the financial statements. In addition, the engagement team did not take into account certain required factors in determining whether or not certain matters were critical audit matters. In this instance, the firm was non-compliant with AS 3101, *The Auditor's Report on an Audit of Financial Statements When the Auditor Expresses an Unqualified Opinion*. This instance of non-compliance does not necessarily mean that critical audit matters should have been communicated in the auditor's report.

- In two of 26 audits reviewed, the firm's report on Form AP omitted information related to the participation in the audit by certain other accounting firms. In addition, in one other audit reviewed, the firm's report on Form AP included inaccurate information regarding the issuer CIK number. In these instances, the firm was non-compliant with PCAOB Rule 3211, *Auditor Reporting of Certain Audit Participants*.

PART I.C: INDEPENDENCE

This section of our report discusses instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence. An instance of potential non-compliance with SEC rules or an instance of non-compliance with PCAOB rules does not necessarily mean that the Board has concluded the firm was not objective and impartial throughout the audit and professional engagement period. Although this section includes instances of potential non-compliance that we identified and the firm brought to our attention, there may be other instances of non-compliance with SEC or PCAOB rules related to independence that were not identified through our procedures or the firm's monitoring activities.

PCAOB-Identified

We identified the following instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence:

- Under Rule 2-01(c)(7) of Regulation S-X, an accountant is not independent if it does not obtain audit committee pre-approval for audit and non-audit services. In 26 audits reviewed, we identified 20 instances across 14 issuers in which this circumstance appears to have occurred related to certain audit services.

Firm-Identified

During the inspection, the firm brought to our attention that it had identified, through its independence monitoring activities, for a 12-month period, eight instances across seven issuers,[2] representing approximately 2% of the firm's total reported issuer audits, in which the firm or its personnel appeared to have impaired the firm's independence because it may not have complied with Rule 2-01(c) of Regulation S-X related to maintaining independence.

While we have not evaluated the underlying reasons for the instances of potential non-compliance, the number, large or small, of firm-identified instances of potential non-compliance may be reflective of the size of the firm, including the number of non-U.S. associated firms in the global network; the design and effectiveness of the firm's independence monitoring activities; and the size and/or complexity of the issuers it audits, including the number of affiliates of the issuer. Therefore, we caution against making any comparison of these firm-identified instances of potential non-compliance across firms.

The instances of potential non-compliance related to financial relationships and non-audit services:

- The firm reported five instances of potential non-compliance with Rule 2-01(c)(1) of Regulation S-X regarding financial relationships, all of which occurred at the firm or involved its personnel. All of these instances related to investments in audit clients. Four of the financial relationships were instances where a partner in the same office as the engagement partner for an issuer had a financial relationship with that issuer. One of the financial relationships related to a member of an engagement team.

[2] The firm-identified instances of potential non-compliance do not necessarily relate to the issuer audits that we selected for review.

- The firm reported three instances of potential non-compliance with Rule 2-01(c)(4) of Regulation S-X regarding non-audit services. All of these instances related to services provided by the firm that the firm determined to be prohibited, such as performing management functions or bookkeeping.

The firm has reported to us that it has evaluated these instances of potential non-compliance and determined in all instances that its objectivity and impartiality were not impaired. The firm also reported to us that it communicated these instances to the issuers' audit committees as required by PCAOB Rule 3526.

PART II: OBSERVATIONS RELATED TO QUALITY CONTROL

Part II of our report discusses criticisms of, and potential defects in, the firm's system of quality control.

We include deficiencies in Part II if an analysis of the inspection results, including the results of the reviews of individual audits, indicates that the firm's system of quality control does not provide reasonable assurance that firm personnel will comply with applicable professional standards and requirements. Generally, the report's description of quality control criticisms is based on observations from our inspection procedures.

This report does not reflect changes or improvements to the firm's system of quality control that the firm may have made subsequent to the period covered by our inspection. The Board does consider such changes or improvements in assessing whether the firm has satisfactorily addressed the quality control criticisms or defects no later than 12 months after the issuance of this report.

When we issue our reports, we do not make public criticisms of, and potential defects in, the firm's system of quality control, to the extent any are identified. If a firm does not address to the Board's satisfaction any criticism of, or potential defect in, the firm's system of quality control within 12 months after the issuance of our report, we will make public any such deficiency.

APPENDIX A: FIRM'S RESPONSE TO THE DRAFT INSPECTION REPORT

Pursuant to Section 104(f) of the Act, 15 U.S.C. § 7214(f), and PCAOB Rule 4007(a), the firm provided a written response to a draft of this report. Pursuant to Section 104(f) of the Act and PCAOB Rule 4007(b), the firm's response, excluding any portion granted confidential treatment, is attached hereto and made part of this final inspection report.

The Board does not make public any of a firm's comments that address a nonpublic portion of the report unless a firm specifically requests otherwise. In some cases, the result may be that none of a firm's response is made publicly available.

In addition, pursuant to Section 104(f) of the Act, 15 U.S.C. § 7214(f), and PCAOB Rule 4007(b), if a firm requests, and the Board grants, confidential treatment for any of the firm's comments on a draft report, the Board does not include those comments in the final report. The Board routinely grants confidential treatment, if requested, for any portion of a firm's response that addresses any point in the draft that the Board omits from, or any inaccurate statement in the draft that the Board corrects in, the final report.

MARCUM
ACCOUNTANTS ▲ ADVISORS

May 24, 2024

Ms. Christine Gunia
Director
Division of Registration and Inspections
Public Company Accounting Oversight Board
1666 K Street, N.W.
Washington DC 20006

Re: Response to the Draft Report on the 2023 Inspection of Marcum LLP

Dear Ms. Gunia:

Marcum LLP (the "Firm") is pleased to provide our response to Part I of the Public Company Accounting Oversight Board's (the "PCAOB") Draft Report on the 2023 inspection of Marcum LLP (the "Draft Report").

The Firm respects and values the PCAOB's inspection process, which through formal communications and through interactions with PCAOB staff helps us identify areas where we can continue to improve and strengthen audit quality to the benefit of investors, other stakeholders and the capital markets in general. As we have after every inspection, we carefully considered the matters brought to our attention in connection with the 2023 inspection and have taken actions to enhance our policies and procedures as part of our commitment to the highest standards of audit quality.

We have also thoroughly evaluated the matters described in Part I.A of the Draft Report and have taken steps to fulfil our responsibilities under AS 2901, *Consideration of Omitted Procedures after the Report Date* and AS 2905, *Subsequent Discovery of Facts Existing at the Date of the Auditor's Report*.

We appreciate the opportunity to respond to the Draft Report and welcome the opportunity to discuss our response and look forward to continuing to work with the PCAOB on matters of interest to our public company auditing practice.

Very truly yours,

Marcum LLP

Marcum LLP

Marcum LLP / 10 Melville Park Road / Melville, NY 11747 / **Phone** 631.414.4000 / **marcumllp.com**