2022 Inspection Marcum LLP

(Headquartered in Melville, New York)

November 28, 2023

PCAOB RELEASE NO. 104-2024-041

PCAOB
PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD

EXECUTIVE SUMMARY

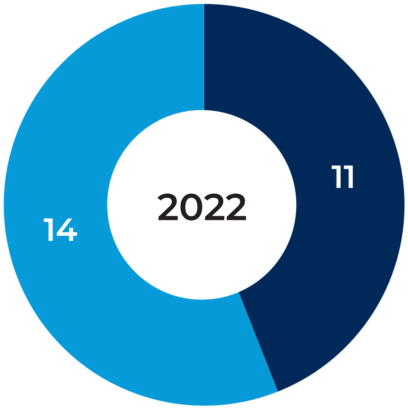
Our 2022 inspection report on Marcum LLP provides information on our inspection to assess the firm's compliance with Public Company Accounting Oversight Board (PCAOB) standards and rules and other applicable regulatory and professional requirements. This executive summary offers a high-level overview 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, which is new commencing with our 2022 inspection reports, 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.

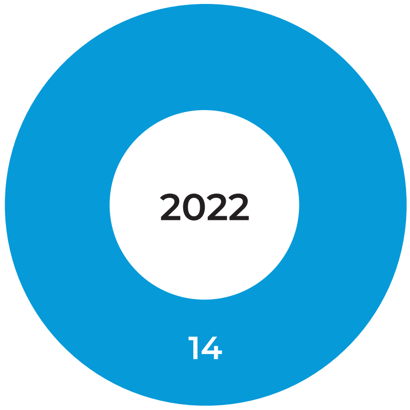
Overview of the 2022 Deficiencies Included in Part I

Fourteen of the 25 audits we reviewed in 2022 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 substantive testing of business combinations, revenue and related accounts, and goodwill and intangible assets.



56% Part I.A deficiency rate

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



- Deficiencies in both financial statement and ICFR audits
- Deficiencies in the financial statement audit only
- Deficiencies in the ICFR audit only

The most common Part I.A deficiencies in 2022 related to testing an estimate, evaluating the appropriateness of the issuer's accounting method or disclosure, and performing substantive testing to address a risk of material misstatement.

The Part I.B deficiencies in 2022 related to retention of audit documentation, engagement quality review, audit committee communications, the firm's audit report, management representation letters, critical audit matters, and Form AP.

The Part I.C deficiencies in 2022 related to audit committee pre-approval.

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2022 INSPECTION

In the 2022 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 25 audits of issuers with fiscal years generally ending in 2021. 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 2022 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.

2022 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 2022 INSPECTION AND HISTORICAL DATA BY INSPECTION YEAR

The following information provides an overview of our 2022 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.

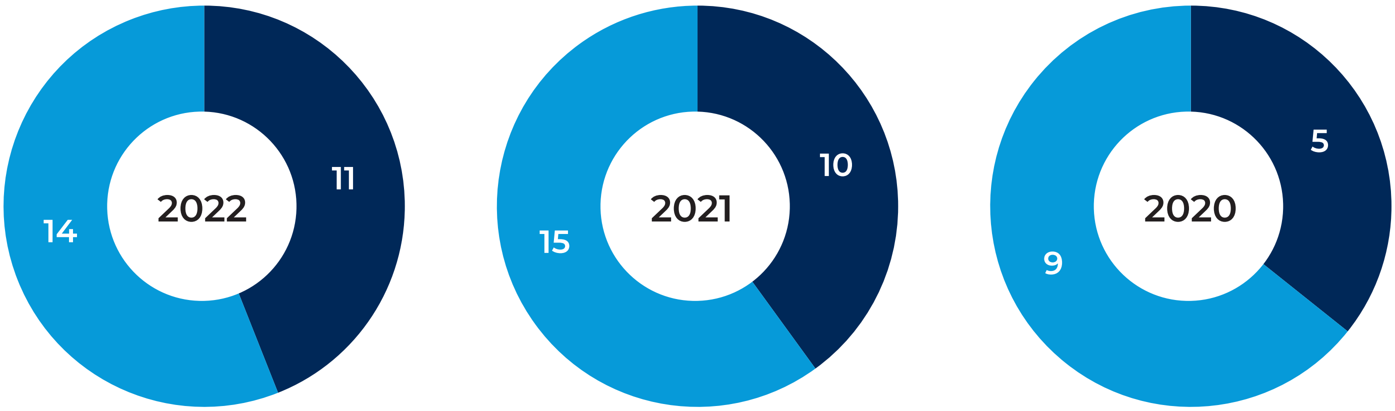
Audits Selected for Review

	2022	2021	2020
Total audits reviewed			
Total audits reviewed	25	25	14
Selection method			
Risk-based selections	23	19	12
Random selections	2	4	2
Target team selections[1]	0	2	0
Total audits reviewed	**25**	**25**	**14**
Principal auditor			
Audits in which the firm was the principal auditor	25	25	14
Audits in which the firm was not the principal auditor	0	0	0
Total audits reviewed	**25**	**25**	**14**
Audit type			
Integrated audits of financial statements and ICFR	4	2	7
Financial statement audits only	21	23	7
Total audits reviewed	**25**	**25**	**14**

[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 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. In 2020, eight of the nine audits appearing in Part I.A were selected for review using risk-based criteria.



56% Part I.A deficiency rate

60% Part I.A deficiency rate

64% Part I.A deficiency rate

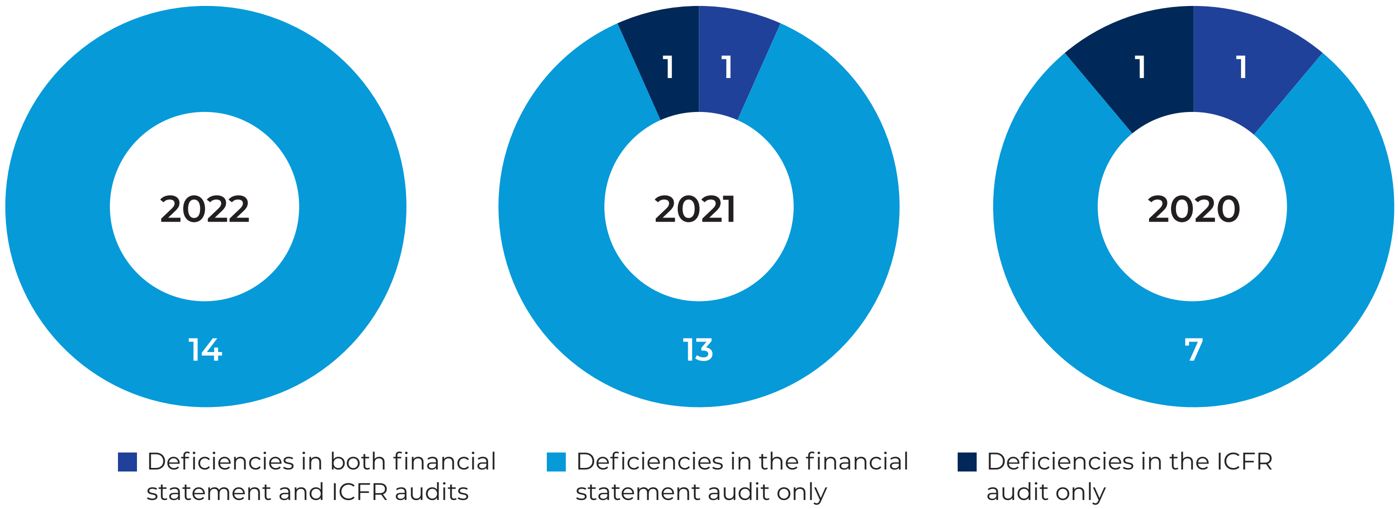
■ Audits without Part I.A deficiencies ■ Audits with Part I.A deficiencies

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



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 2022 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		
	2022	2021	2020
Did not sufficiently test an estimate	10	1	2
Did not sufficiently evaluate the appropriateness of the issuer's accounting method or disclosure for one or more transactions or accounts	9	11	2
Did not perform sufficient testing related to a significant account or disclosure or to address an identified risk	9	1	3

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.

2022			2021			2020		
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	16	6	Revenue and related accounts	15	4	Revenue and related accounts	12	5
Business combinations	11	8	Equity and equity-related transactions	9	9	Inventory	6	2
Equity and equity-related transactions	9	1	Investment securities	8	0	Going concern	3	0
Investment securities	7	0	Inventory	6	0	Investment securities	2	2
Goodwill and intangible assets	4	3	Business combinations	4	1	Leases	2	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	2022		2021		2020	
	Audits with Part I.A deficiencies	Audits reviewed	Audits with Part I.A deficiencies	Audits reviewed	Audits with Part I.A deficiencies	Audits reviewed
Business combinations	8	11	1	4	0	1
Revenue and related accounts	6	16	4	15	5	12
Goodwill and intangible assets	3	4	1	2	0	2
Equity and equity-related transactions	1	9	9	9	0	1

Business combinations: 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.

Revenue and related accounts: The deficiencies in 2022 related to substantive testing of revenue. The deficiencies in 2021 and 2020 primarily related to substantive testing of, and testing controls over, revenue.

Goodwill and intangible assets: 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 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

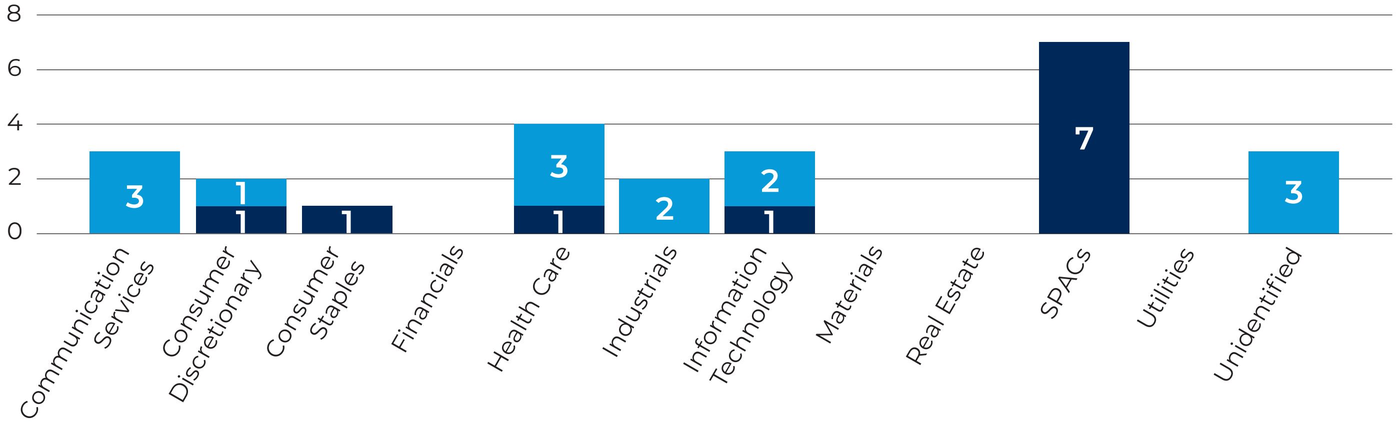
The following lists the auditing standards referenced in Part I.A of the 2022 and the previous two inspection reports, and the number of times that the standard is cited in Part I.A.

PCAOB Auditing Standards	2022	2021	2020
AS 1105, *Audit Evidence*	22	2	7
AS 1201, *Supervision of the Audit Engagement*	5	0	0
AS 1210, *Using the Work of an Auditor-Engaged Specialist*	5	0	0
AS 2201, *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*	0	7	7
AS 2301, *The Auditor's Responses to the Risks of Material Misstatement*	14	3	1
AS 2401, *Consideration of Fraud in a Financial Statement Audit*	1	0	0
AS 2415, *Consideration of an Entity's Ability to Continue as a Going Concern*	1	0	0
AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements* (effective for fiscal years ending on or after December 15, 2020)	18	2	-
AS 2501, *Auditing Accounting Estimates* (effective for fiscal years ending before December 15, 2020)	-	0	1
AS 2502, *Auditing Fair Value Measurements and Disclosures* (effective for fiscal years ending before December 15, 2020)	-	0	2
AS 2503, *Auditing Derivative Instruments, Hedging Activities, and Investments in Securities* (effective for fiscal years ending before December 15, 2020)	-	0	1
AS 2510, *Auditing Inventories*	0	0	2
AS 2810, *Evaluating Audit Results*	16	18	2

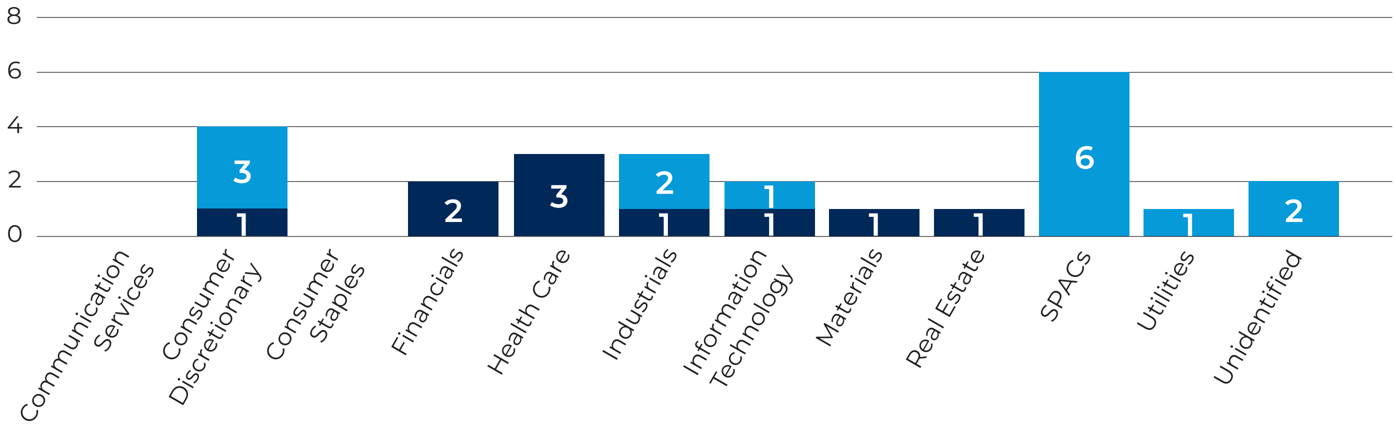
Inspection Results by Issuer Industry Sector

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."

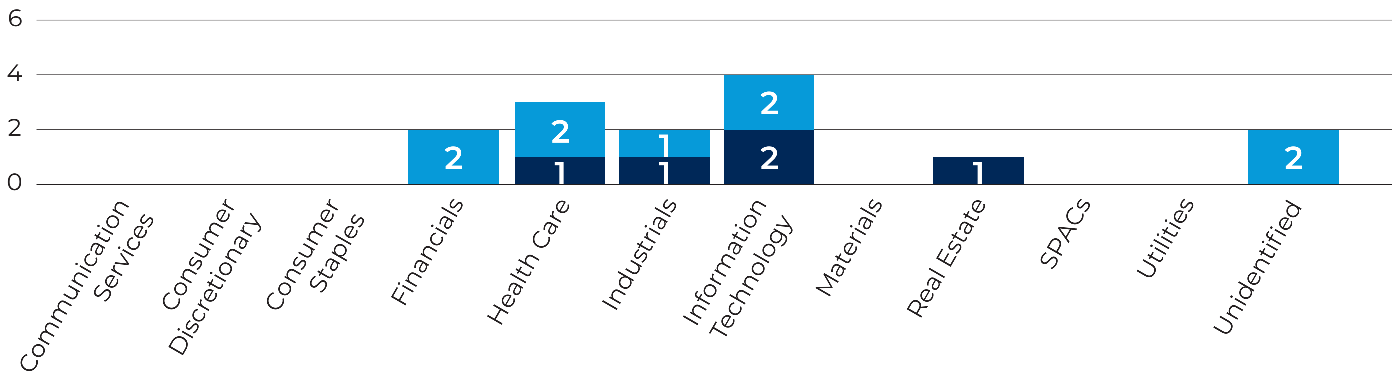
2022



2021



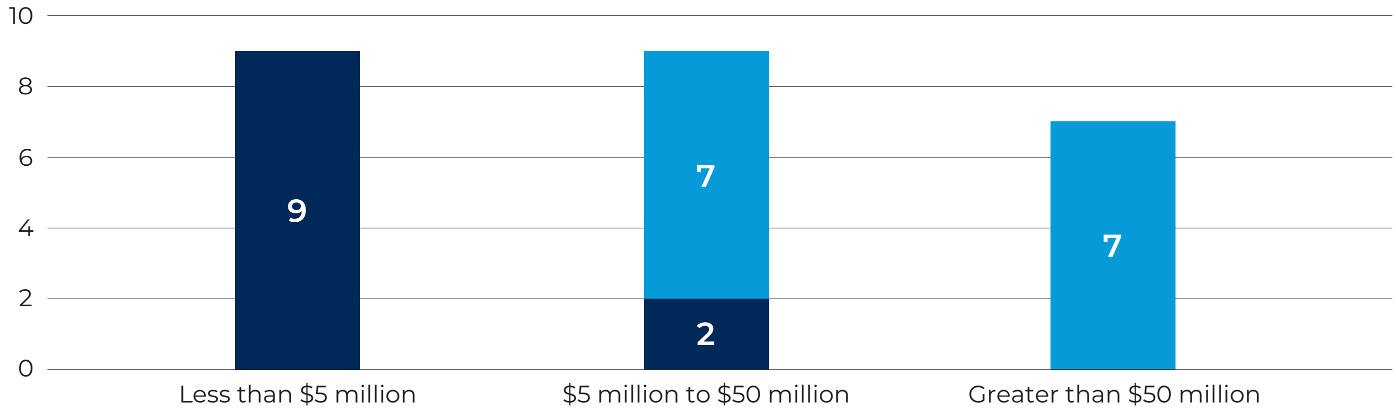
2020



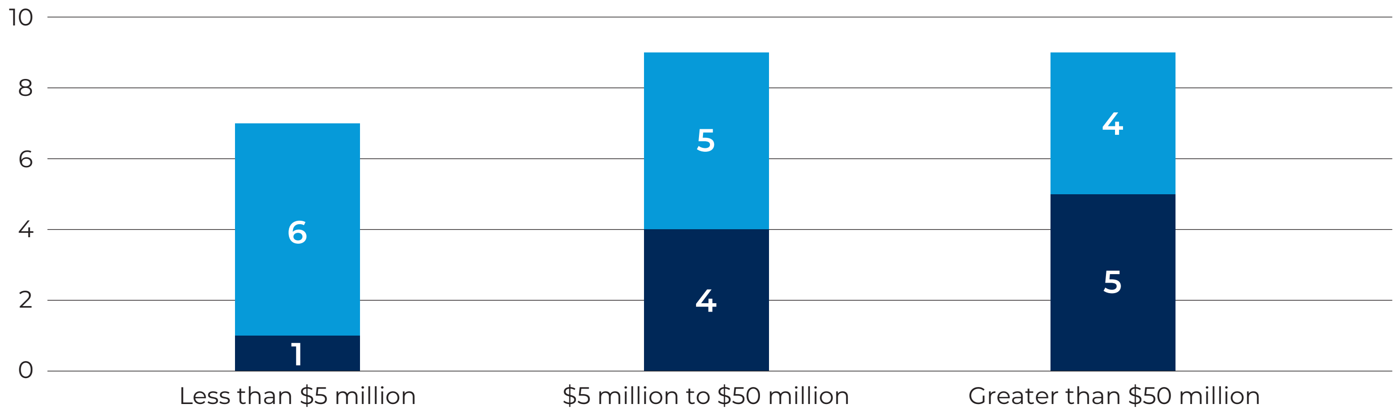
■ Audits without Part I.A deficiencies ■ Audits with Part I.A deficiencies

Inspection Results by Issuer Revenue Range

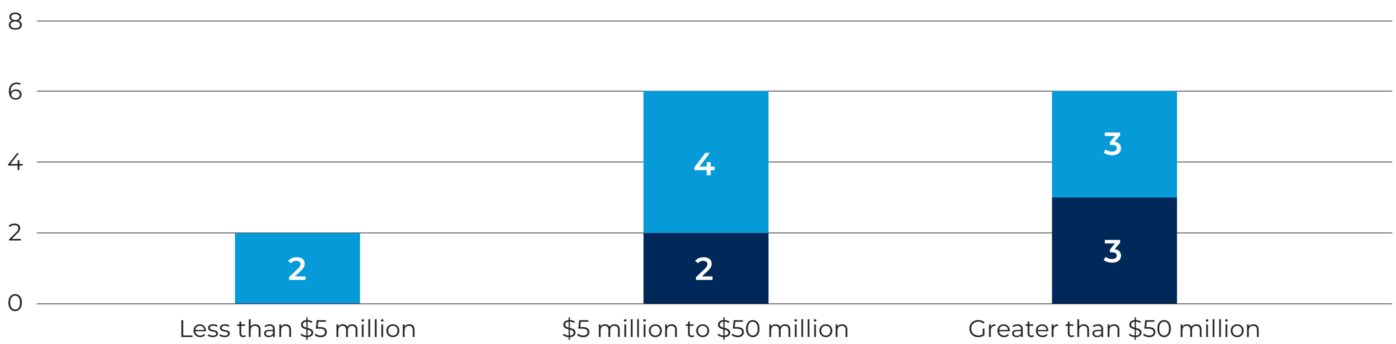
2022



2021



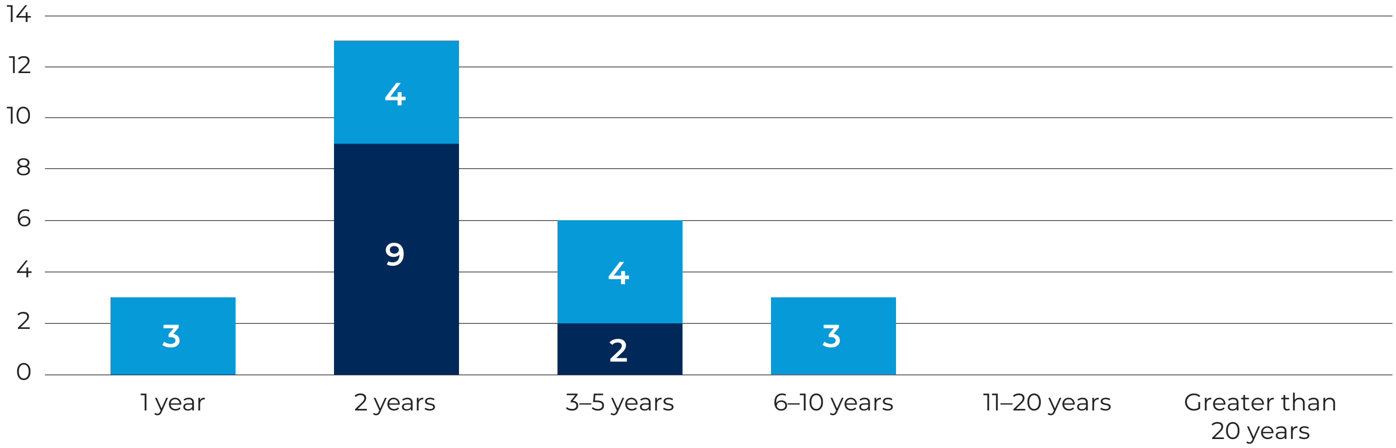
2020



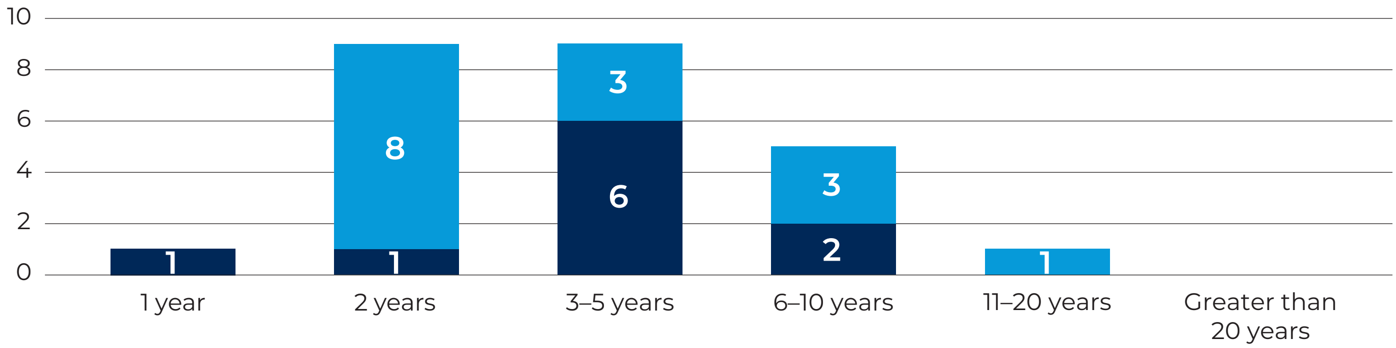
■ Audits without Part I.A deficiencies ■ Audits with Part I.A deficiencies

Inspection Results by the Firm's Tenure on the Issuer

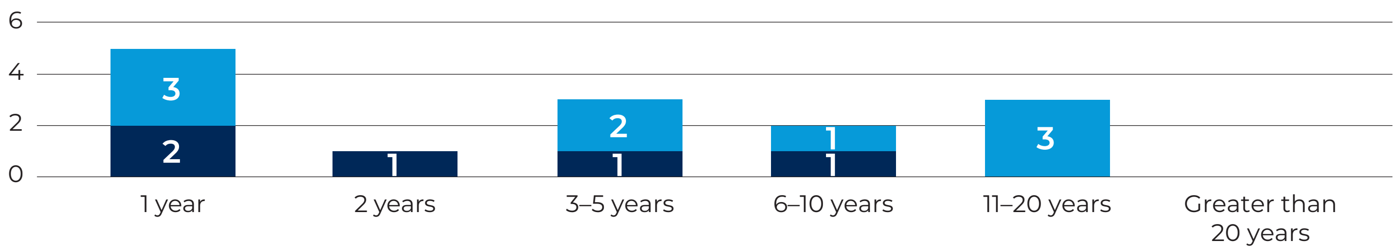
2022



2021



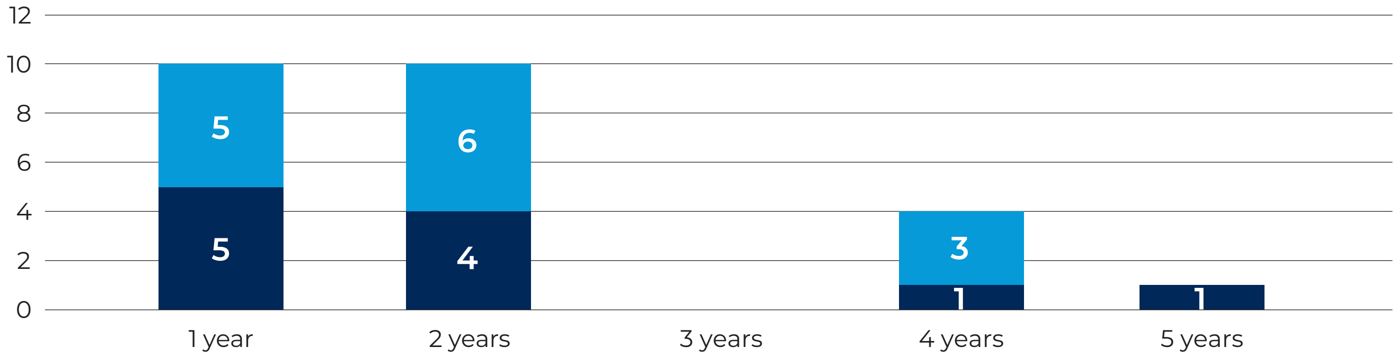
2020



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

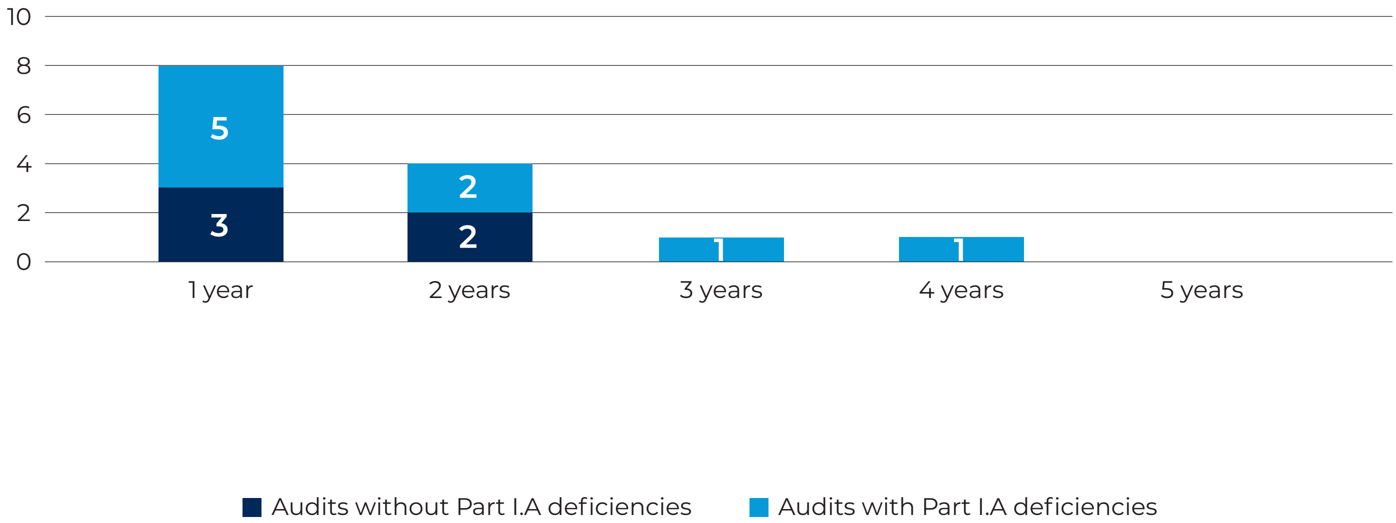
Inspection Results by the Engagement Partner's Tenure on the Issuer

2022



2021

2020



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.

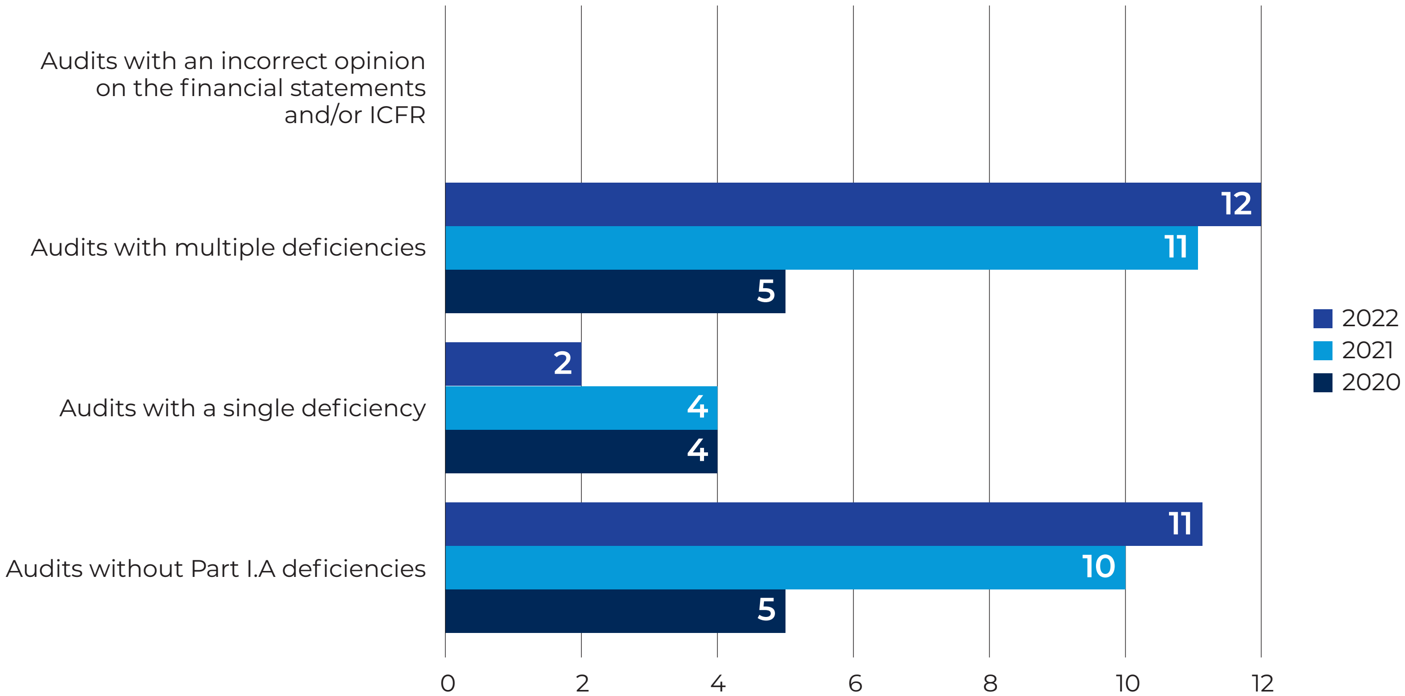
Audits with Multiple Deficiencies

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

None

Audits with Multiple Deficiencies

Issuer A

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, an **Investment**, and **Intangible Assets**. 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 certain revenue, the firm did not identify and evaluate that the issuer's determination that it was acting as an agent was not in conformity with FASB ASC Topic 606, *Revenue from Contracts with Customers*. (AS 2810.30)

The firm did not identify and evaluate the issuer's omission of a required disclosure under FASB ASC Topic 606 related to how the issuer recognized this revenue. (AS 2810.30 and .31)

Unrelated to our review, the issuer reevaluated its accounting and disclosures for this revenue and concluded that material misstatements existed that had not been previously identified. The issuer subsequently filed a Form 8-K indicating that its previously issued financial statements should not be relied on and corrected these misstatements in a subsequent filing.

With respect to an **Investment**:

During the year, the issuer invested in an entity. The following deficiencies were identified:

- The firm did not evaluate whether the business purpose (or lack thereof) of this investment indicated that it may have been entered into to engage in fraudulent financial reporting given certain facts regarding this investment. (AS 2401.67)
- The firm did not evaluate whether the issuer's accounting for this investment was in conformity with certain requirements of GAAP. (AS 2301.08)
- The firm did not identify and evaluate that the issuer's presentation of this investment within the statement of cash flows was not in conformity with FASB ASC Topic 230, *Statement of Cash Flows*. (AS 2810.30 and .31)

Unrelated to our review, the issuer reevaluated its accounting for this investment and concluded that a material misstatement existed that had not been previously identified. The issuer corrected this misstatement in a subsequent filing.

With respect to an **Investment** and **Intangible Assets**:

The firm did not perform sufficient procedures to evaluate the issuer's presentation of an investment and certain intangible assets as current assets, because it did not evaluate the issuer's intent to consume all or a portion of these assets within one year from the balance sheet date. (AS 2301.08)

With respect to **Intangible Assets**:

The firm did not identify and evaluate that the method the issuer used to estimate the impairment of certain intangible assets was not in conformity with FASB ASC Topic 350, *Intangible Assets Goodwill and Other*. (AS 2810.30)

Unrelated to our review, the issuer reevaluated its accounting for these assets and concluded that material misstatements existed that had not been previously identified. The issuer subsequently filed a Form 8-K indicating that its previously issued financial statements should not be relied on and corrected these misstatements in a subsequent filing.

Issuer B

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**.

Description of the deficiencies identified

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

During the year, the issuer acquired multiple businesses 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 did not perform procedures, beyond inquiry of management, to evaluate the reasonableness of certain significant assumptions developed by the issuer. (AS 2501.16)
- The firm used an auditor-employed specialist to evaluate certain significant assumptions developed by the company's specialist and used in the measurement of certain acquired intangible assets. The firm did not identify that the auditor-employed specialist did not perform any procedures to evaluate these assumptions. (AS 1105.A8b; AS 1201.C6 and .C7)
- For one of these business combinations, the firm did not sufficiently evaluate the relevance and reliability of the company's specialist's work because it did not identify and evaluate inconsistencies between the measurement of, or significant assumptions used in, the enterprise fair value estimated by the company's specialist compared to both (1) the fair value of the consideration transferred by the issuer and (2) certain significant assumptions developed by the company's specialist. (AS 1105.A9 and .A10)
- For one of these business combinations, the fair value measurement of acquired customer relationships resulted in a negative balance, and the issuer concluded that an associated intangible asset did not exist. The firm did not evaluate whether the negative fair value represented future contract losses and should have been recorded as an assumed liability in conformity with FASB ASC Topic 805, *Business Combinations*. (AS 2301.08)

The firm used an auditor-engaged specialist to assist it with testing the fair value of an acquired asset, which was determined by the company's specialist. The auditor-engaged specialist's approach consisted of (1) testing the issuer's process and (2) developing an independent expectation of the fair value as a range. The following deficiencies were identified:

- The firm did not identify that the auditor-engaged specialist did not sufficiently evaluate whether the valuation method used by the company's specialist was appropriate under the circumstances, because it did not consider the highest and best use of the acquired asset. (AS 1105.A8c; AS 1210.09 and .12)
- When testing the issuer's process, the firm did not identify that the auditor-engaged specialist did not perform any procedures to evaluate the reasonableness of a significant assumption developed by the company's specialist. (AS 1105.A8b; AS 1210.09 and .12)
- The firm did not evaluate whether the auditor-engaged specialist's independent expectation of the fair value as a range encompassed only reasonable outcomes and was supported by sufficient appropriate audit evidence. (AS 1210.09 and .12; AS 2501.25) In addition, the firm did not perform any procedures to evaluate the relevance and reliability of certain information used by the auditor-engaged specialist to develop its independent expectation. (AS 1105.04 and .06; AS 1210.09 and .12)
- The firm did not identify and evaluate that the issuer incorrectly recorded the fair value of the acquired asset determined by the company's specialist. (AS 2810.30)

In connection with our review, the issuer reevaluated its accounting for this asset and determined that an error existed that had not been previously identified. The issuer corrected this error in a subsequent filing.

With respect to **Intangible Assets**:

The firm did not identify and evaluate that the method the issuer used to estimate the impairment of certain intangible assets was not in conformity with FASB ASC Topic 350. (AS 2810.30)

Unrelated to our review, the issuer reevaluated its accounting for these assets and concluded that misstatements existed that had not been previously identified. The issuer subsequently filed a Form 8-K indicating that its previously issued financial statements should not be relied on and corrected these misstatements in a subsequent filing.

The firm did not identify and evaluate that the issuer's omission of certain disclosures for assets measured at fair value on a nonrecurring basis was not in conformity with FASB ASC Topic 820, *Fair Value Measurements*. (AS 2810.30 and .31)

The firm did not perform sufficient procedures to evaluate the issuer's presentation of certain intangible assets as current assets, because it did not evaluate the issuer's intent to consume all or a portion of these assets within one year from the balance sheet date. (AS 2301.08)

Issuer C

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit related to **Business Combinations**, for which the firm identified a significant risk. This was the firm's initial audit of this issuer.

Description of the deficiencies identified

During the year, the issuer acquired multiple businesses 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:

- For certain acquired assets in these business combinations, the firm did not perform any procedures to evaluate the reasonableness of certain significant assumptions developed by the company's specialist or developed by the issuer, including evaluating significant differences between the useful lives assigned to these assets and the cash flow forecast periods used to determine their fair values. (AS 1105.A8b; AS 2501.16)
- For two of these business combinations, the firm used an auditor-employed specialist to evaluate another significant assumption developed by the company's specialist and used in the measurement of these acquired assets. The firm did not identify that the auditor-employed specialist did not perform any procedures to evaluate this assumption. (AS 1105.A8b; AS 1201.C6 and .C7)
- For one of these business combinations, the firm used an auditor-engaged specialist to assist it with testing the fair value of another acquired asset, which was determined by the company's specialist. The firm did not identify that the auditor-engaged specialist did not perform any procedures to evaluate the reasonableness of the significant assumptions developed by the company's specialist. (AS 1105.A8b; AS 1210.09 and .12) In addition, the firm did not perform any procedures to evaluate the relevance and reliability of certain information used by the company's specialist in determining the fair value of this asset. (AS 1105.A8a)

For certain business combinations, the firm did not perform any procedures to test the fair values of certain other acquired assets. (AS 2501.07) In addition, for two of these business combinations, the firm did not perform any procedures to test the existence of certain of these assets upon acquisition. (AS 2301.08)

For two business combinations, the firm's approach for substantively testing the fair values of the provisions for contingent consideration to be paid to the sellers was to develop independent expectations of the estimates using an auditor-employed specialist. The following deficiencies were identified:

- The firm did not perform any procedures to evaluate the reasonableness of certain significant assumptions developed by the issuer, which were also used by the firm to develop its independent expectations. (AS 2501.16)
- For one of these business combinations, the firm did not evaluate a significant difference between the firm's independent expectation and the issuer's recorded contingent consideration. (AS 2810.13)
- For the other business combination, the firm used the auditor-employed specialist to evaluate a significant assumption developed by the company's specialist, which was also used by the firm to develop its independent expectation. The firm did not identify that the auditor-employed specialist did not perform any procedures to evaluate this assumption. (AS 1105.A8b; AS 1201.C6 and .C7)

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

Issuer D – Communication Services

Type of audit and related areas affected

In our review, we identified deficiencies in the financial statement audit related to **Revenue**, **Going Concern**, and **Stock-Based Compensation**.

Description of the deficiencies identified

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

For two 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)

For one of these types of revenue and another type, the issuer recognized revenue based on electronic activity. The firm used activity information produced by certain of the issuer's service organizations in its substantive testing of this revenue but did not perform any procedures to test the accuracy and completeness of this information. (AS 2301.08 and .13)

With respect to **Going Concern**:

During the year under audit, the firm identified conditions and events that caused it to believe there could be substantial doubt about the issuer's ability to continue as a going concern for a reasonable period of time and concluded that the substantial doubt was alleviated by management's plans. The firm did not sufficiently test the reliability of the issuer's operating forecast that the firm used in its evaluation of management's plans. The firm compared the forecast to the issuer's results for the two months subsequent to year end and an issuer-prepared sensitivity analysis but did not evaluate the significant differences it identified. (AS 1105.04 and .06; AS 2415.03, .08, and .09)

With respect to **Stock-Based Compensation**:

During the year, the issuer granted stock options to certain employees. The firm did not perform any procedures to evaluate the reasonableness of certain significant assumptions the issuer used to estimate the fair value of these stock options. (AS 2501.16)

Issuer E – Industrials

Type of audit and related areas affected

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

Description of the deficiencies identified

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

For one 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 this same type of revenue, the firm did not identify and evaluate misstatements related to contract assets under FASB ASC Topic 606. (AS 2810.30 and .31)

For another type of revenue, the firm selected for testing an automated control over the initiation, processing, and recording of revenue transactions in order to rely on the accuracy and completeness of certain issuer-produced information that the firm used in its substantive testing. The firm did not sufficiently test the configuration of this control as it limited its testing to only certain scenarios, without addressing the risks of material misstatement associated with the untested scenarios. (AS 2301.19 and .21)

With respect to **Business Combinations**:

During the year, the issuer acquired several businesses. For one business combination, the following deficiencies were identified:

- The firm did not perform any procedures to test the fair value of assets acquired and liabilities assumed. (AS 2501.07)
- The firm did not perform procedures to (1) evaluate the issuer's accounting for certain warrants issued in connection with the acquisition as equity; (2) test, beyond recalculation, the conversion ratio of equity instruments of the acquired company to equity instruments of the acquiror; and (3) test transaction costs incurred. (AS 2301.08)

For two business combinations, the firm did not identify and evaluate the issuer's omission of certain required disclosures under FASB ASC Topic 820 related to certain assets acquired and a liability assumed. (AS 2810.30 and .31)

Issuer F – Consumer Discretionary

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 significant risk:

The issuer recorded certain revenue based on information provided by its customers. In the firm's substantive testing of this revenue, the firm used this information but did not evaluate its reliability. (AS 1105.04 and .06)

With respect to a **Long-Lived Asset**:

The issuer capitalized certain labor costs associated with the development of an asset. The firm used labor hours in its substantive testing of this asset but did not perform any procedures to test, or test any controls over, the accuracy and completeness of these labor hours. (AS 1105.10)

Issuer G – Information Technology

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**:

The firm did not identify and evaluate the issuer's (1) misstatement in and (2) omission of certain disclosures related to the disaggregation of revenue that are required under FASB ASC Topic 606. (AS 2810.30 and .31)

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

The firm used reports produced by the issuer in its substantive procedures to test (1) the reserve for excess and obsolete inventory and (2) whether finished goods inventory was recorded at the lower of cost or net realizable value. The firm did not perform any procedures to test, or test any controls over, the accuracy and completeness of these reports. (AS 1105.10)

Issuer H – Health Care

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit related to a **Business Combination**, for which the firm identified a significant risk. This was the firm's initial audit of this issuer.

Description of the deficiencies identified

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

- The firm did not perform procedures, beyond inquiry, to evaluate the reasonableness of certain significant assumptions developed by the issuer. (AS 2501.16)
- 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 auditor-employed specialist did not perform any procedures to evaluate this assumption. (AS 1105.A8b; AS 1201.C6 and .C7)

The firm did not evaluate whether, in conformity with FASB ASC Topic 805, a separately identifiable intangible asset existed related to the retail customer base of the acquired business. (AS 2301.08)

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

Issuer I – Communication Services

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit 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 a specialist to assist it in determining the fair value of an acquired intangible asset using various significant assumptions. The following deficiencies were identified:

- The firm did not sufficiently evaluate the reasonableness of certain significant assumptions developed by the issuer because it did not (1) evaluate the relevance and reliability of certain market information it used and (2) take into account whether these assumptions were consistent with the issuer's intent and ability to carry out its plans. (AS 1105.04 and .06; AS 2501.16 and .17)
- The firm did not perform procedures, beyond inquiry, to evaluate the reasonableness of certain other significant assumptions developed by the company's specialist or developed by the issuer. (AS 1105.A8b; AS 2501.16)

The firm did not evaluate whether, in conformity with FASB ASC Topic 805, separately identifiable intangible assets existed related to the existing customer base and trade names of the acquired business. (AS 2301.08)

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

Issuer J – Health Care

Type of audit and related area affected

In our review, we identified deficiencies in the financial statement audit 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 a specialist to assist it in determining the fair values of certain acquired intangible assets using various significant assumptions. The following deficiencies were identified:

- The firm did not sufficiently evaluate the reasonableness of a significant assumption developed by the issuer because it did not evaluate a significant difference between this assumption and the issuer's recent experience. (AS 2501.16)
- 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 auditor-employed specialist did not perform any procedures to evaluate this assumption. (AS 1105.A8b; AS 1201.C6 and .C7)
- The firm did not perform procedures, beyond inquiring of management, to evaluate the reasonableness of certain other significant assumptions developed by the company's specialist or developed by the issuer. (AS 1105.A8b; AS 2501.16)

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

Issuer K – Information Technology

Type of audit and related area affected

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

Description of the deficiencies identified

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:

- For certain acquired intangible assets, the firm did not perform procedures, beyond inquiring of management, to evaluate the reasonableness of certain significant assumptions developed by the issuer. (AS 2501.16)
- In its testing of the fair values of certain acquired assets, the firm used the company's specialist's valuation report as audit evidence, without performing procedures to evaluate the work of the company's specialist. (AS 1105.A6-.A10; AS 2501.07)

The firm did not perform procedures to test certain other assets acquired and liabilities assumed, beyond tracing these amounts to the general ledger of the acquired business. (AS 2301.08; AS 2501.07)

The firm did not identify and evaluate the issuer's (1) omission of and (2) misstatements in certain disclosures required under FASB ASC Topic 805 and/or FASB ASC Topic 820. (AS 2810.30 and .31)

Issuer L – Industrials

Type of audit and related area affected

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

Description of the deficiencies identified

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

- The firm did not sufficiently evaluate the reasonableness of certain significant assumptions developed by the issuer because it did not (1) take into account the issuer's intent and ability to carry out these assumptions, (2) take into account changes in conditions or events affecting the issuer, and/or (3) evaluate significant differences between the assumptions and the issuer's historical financial information. (AS 2501.16 and .17)
- The firm did not perform any procedures to evaluate the reasonableness of certain other significant assumptions developed by the company's specialist or developed by the issuer. (AS 1105.A8b; AS 2501.16)
- The firm did not test the accuracy and completeness of historical financial information produced by the issuer that (1) the firm used in evaluating the reasonableness of certain of these assumptions developed by the issuer and (2) was used by the company's specialist to develop another of these assumptions. (AS 1105.10 and .A8a)

Audits with a Single Deficiency

Issuer M – Communication Services

Type of audit and related area affected

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

Description of the deficiency identified

The issuer recognized certain revenue based on electronic activity. The firm used activity information produced by certain of the issuer's service organizations in its substantive testing of this revenue but did not perform any procedures to test the accuracy and completeness of this information. (AS 2301.08 and .13)

Issuer N – Health Care

Type of audit and related area affected

In our review, we identified a deficiency in the financial statement audit related to **Intangible Assets**.

Description of the deficiency identified

The issuer evaluated its intangible assets for possible impairment using various significant assumptions it developed based on the issuer's planned course of action. The firm did not sufficiently evaluate the reasonableness of these significant assumptions because it did not (1) evaluate whether the issuer had a reasonable basis for these assumptions and (2) take into account changes in conditions or events affecting the issuer. Further, when evaluating the issuer's ability to carry out its planned course of action, the firm performed a sensitivity analysis for these assumptions but did not evaluate the significant differences between the alternative assumptions it used in this analysis and the issuer's recent experience. (AS 2501.16 and .17)

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 four of 25 audits reviewed, the firm did not assemble a complete and final set of audit documentation for retention within 45 days following the report release date. In these instances, the firm was non-compliant with AS 1215, *Audit Documentation*.
- In one of 25 audits reviewed, the firm did not obtain the engagement quality reviewer's concurring approval of issuance of the audit report prior to its issuance. In this instance, the firm was non-compliant with AS 1220, *Engagement Quality Review*.
- In two of 25 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 these instances, the documentation of the engagement quality review was non-compliant with AS 1220, *Engagement Quality Review*.
- In 19 of 25 audits reviewed, the firm did not make a required communication to the issuer's audit committee related to the names, locations, 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 one of 25 audits reviewed, the firm did not communicate to the issuer's audit committee all of the uncorrected misstatements that it identified. In this instance, the firm was non-compliant with AS 1301, *Communications with Audit Committees*.
- In one of 21 audits reviewed, the firm did not evaluate whether control deficiencies individually, or in combination, represented a material weakness or significant deficiency that required communication to management and the issuer's audit committee. In this instance, the firm was non-compliant with AS 1305, *Communications About Control Deficiencies in an Audit of Financial Statements*.
- In one of four audits reviewed, the firm did not include in its report on ICFR a disclosure regarding the exclusion of acquired businesses from the scope of both management's assessment and the firm's audit of ICFR. 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 six of 25 audits reviewed, the firm did not make certain required communications to the issuer's audit committee related to its evaluation of the issuer's identification of, accounting for, and disclosure of its relationships and transactions with related parties. In these instances, the firm was non-compliant with AS 2410, *Related Parties*.

- In one of five audits reviewed, the firm included in its audit report an explanatory paragraph describing substantial doubt about the issuer's ability to continue as a going concern but did not include an appropriate title. In this instance, the firm was non-compliant with AS 2415, *Consideration of an Entity's Ability to Continue as a Going Concern*.

- In one of 25 audits reviewed, the firm did not provide management with a complete list of uncorrected misstatements to be included in or attached to the management representation letter. In this instance, the firm was non-compliant with AS 2805, *Management Representations*.

- In eight of nine 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 one or more matters that were communicated, or required to be communicated, to the issuer's audit committee and that related to accounts or disclosures that were material to the financial statements. 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*. These instances of non-compliance do not necessarily mean that other critical audit matters should have been communicated in the auditor's report.

- In two of nine audits reviewed, the engagement team did not take into account certain required factors in determining whether or not a matter was a critical audit matter. 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*. These instances of non-compliance do not necessarily mean that other critical audit matters should have been communicated in the auditor's report.

- In one of nine audits reviewed, the engagement team determined that there were no critical audit matters but did not include the required language, and the appropriate title, in the auditor's report. 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 one of nine audits reviewed, the firm determined a matter was a critical audit matter but did not communicate this critical audit matter in the firm's audit report. 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 one of 21 audits reviewed, the firm's audit report did not include explanatory language about the firm's responsibilities with respect to ICFR in a non-integrated audit. In this instance, the firm was non-compliant with AS 3105, *Departures from Unqualified Opinions and Other Reporting Circumstances*.

- In one of five audits reviewed, the firm's report on Form AP included inaccurate information regarding the office of the firm issuing the audit report. In this instance, the firm was non-compliant with PCAOB Rule 3211, *Auditor Reporting of Certain Audit Participants*.

- In two of five audits reviewed, the firm's report on Form AP either included inaccurate information or omitted information related to the participation in the audit by certain other accounting firms. 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, 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. We identified 19 instances across 10 issuers in 25 audits reviewed in which this circumstance appears to have occurred related to certain audit services.

Firm-Identified

The firm did not bring to our attention any instances of potential non-compliance with SEC rules or instances of non-compliance with PCAOB rules related to maintaining independence.

While the firm did not bring to our attention any instances of potential noncompliance, 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 those issuers. Therefore, we caution against making any comparison of firm-identified instances of potential non-compliance across firms.

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

November 10, 2023

Ms. Christine Gunia
Acting 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 2022 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 2022 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 2022 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.

Sincerely,

Marcum LLP

Marcum LLP

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