



Audit Processes and Procedures

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SECTION 1: INTRODUCTION

The NYSE Market Data Administration team conducts audits of NYSE market data subscribers (customers). The purpose of an audit is to verify that a customer is in compliance in accordance with the market data agreements and policies. The objectives of a market data audit are to: 1) ensure that customers are accurately reporting usage consistent with their agreements; 2) assess whether controls on data usage are in place and working as intended; and 3) recommend corrective actions if any compliance issues are identified as a result of the audit.

In addition, NYSE performs the administrator functions for both Network A and Network B under the CTA and CQ Plans. As such, NYSE also conducts market data audits for CTA market data subscribers on behalf of the Plans using NYSE's audit processes and procedures.

This document describes NYSE's audit processes and procedures, including the audit framework, standard documentation requirements, and audit methodologies.

SECTION 2: AUDIT FRAMEWORK

The NYSE audit framework is a set of procedural guidelines for auditors to follow when conducting an audit, and provides a structured approach, governance, and control oversight at various points of the audit life cycle. NYSE's audit framework consists of four distinctive phases for each individual audit, and each phase contains a set of milestones that must be met for each audit. The chart below describes the phases and milestones.

AUDIT FRAMEWORK		
PHASE	DESCRIPTION	MILESTONES
Planning	During the planning phase of each audit, relevant background information is gathered to determine the objectives and scope of the audit. The customer is contacted to initiate the audit.	<ol style="list-style-type: none"> 1. Use a standard planning template, capture account details such as account background, selection criteria, audit objectives, and account risks. 2. Conduct internal scoping meeting with the overall audit team to review the planning document and finalize the scope of the audit. 3. Using a standard template, send out the audit engagement notification to the customer and schedule the kickoff call within 15 days of the audit notification. 4. Conduct the kickoff call with the customer to formally initiate the audit. The standard agenda for the kickoff call includes: <ol style="list-style-type: none"> a. Introduce audit team and roles. b. Provide overview of the four phases of the compliance methodology. c. Customer to provide a high-level overview of their firm's business and data usage. 5. Upon completion of the kickoff call, the audit requirements are sent to the customer via email with instructions for next steps.
Fieldwork	Once the audit is initiated and the audit staff receives data from the customer, the audit moves to the fieldwork phase executed by the audit staff. Customers are kept informed of the process through regular status updates via meetings and emails.	<ol style="list-style-type: none"> 1. Review and analyze data received from the customer. 2. Conduct walkthrough meeting(s) with the customer to review their full data usage process. 3. Conduct additional meetings and checkpoints with the customer to provide status and address additional questions.

<p>Reporting</p>	<p>In this phase the audit, results are officially shared with the customer and the customer has the opportunity to review and provide feedback.</p>	<ol style="list-style-type: none"> 1. If the audit results in no findings, provide the customer with an email summarizing the completion of the audit. 2. If the audit results in findings, communicate results to customer both verbally and via email. 3. Email the customer analysis materials supporting the findings, such as workbooks and policies, and allow the customer at least a 2-week validation period to review results and provide comments. 4. Conduct ad hoc meetings and checkpoints with the customer to address any additional questions.
<p>Closing</p>	<p>During this final phase, a closing meeting is scheduled, and a closing document is provided to the customer with recommendations to address any risks identified.</p>	<ol style="list-style-type: none"> 1. Conduct closing meeting for final review of audit findings, control weaknesses identified, and suggestions for post-review corrective actions. 2. Follow up by emailing the closing document which outlines all points discussed during the closing meeting

SECTION 3: DOCUMENTATION

Documentation is integral to NYSE’s audit practice. NYSE maintains two sets of documentation. The first is documentation of procedures that all auditors follow, which is referred to as the audit Framework and Methodology documentation. This set of documentation provides a consistent structure to facilitate the planning, execution, and supervision of audit engagements, and is the basis for review of the quality of the audit work because it provides the reviewer with written documentation to support the auditor's conclusions. The second type of documentation is the set of records that evidence the work the auditor has performed, referred to as the Individual Audit Workpapers. These serve as record keeping for the planning and execution of each individual audit engagement. The workpapers use a standard set of templates to capture the procedures performed, evidence obtained, and materials supporting the conclusions reached by the auditor. The charts below provide details for each document type and the templates used.

DOCUMENT TYPE	DESCRIPTION	DOCUMENT CONTENT
Framework and Methodology	Standard operating procedural documentation which describes the overall audit structure	<ul style="list-style-type: none"> • phases of the audit • standard procedural milestones for each phase • audit methodology • audit selection criteria • audit objectives • audit status tracking mechanisms

DOCUMENT TYPE	DESCRIPTION	TEMPLATE	DOCUMENT CONTENT
Individual Audit Workpapers	Standard workpaper templates are completed for each audit engagement	Planning document	<ul style="list-style-type: none"> • account background information • selection criteria • possible risks and compliance issues • team/resource allocation and roles • potential review scope
		Scoping document	<ul style="list-style-type: none"> • all information from the planning document • comments from scoping meeting • action items from scoping meeting
		Kick-off document	<ul style="list-style-type: none"> • kick-off meeting agenda • meeting attendees • information received from the kick-off meeting
		Walkthrough document	<ul style="list-style-type: none"> • walkthrough meeting minutes • attendees • information from the walkthrough meeting

		Liability document	<ul style="list-style-type: none">• Liability presentation and details• Customer validation of findings
		Closing document	<ul style="list-style-type: none">• key contact information• summary of review• liability findings• control weakness identified• recommendation for corrective actions• policies for reference

SECTION 4: METHODOLOGY/APPROACH

The audit methodology or approach refers to the particular set of processes and procedures applied by the audit engagement team to perform audits that are of a consistent quality.

For each audit, the same standard set of audit review procedures is followed, as described in the chart below.

PROCEDURE	DESCRIPTION
Planning a Review	Following an assignment of a review, the planning phase is kicked off. Review workpapers are completed for record keeping.
Scoping	Internal scoping meeting is held for the team to collectively determine the nature and extent of the review period, with 3 years as the standard. Workpapers are updated to reflect the agreement and approval of scope of review.
Audit Announcement	The audit announcement email formally notifies the customer of the initiation of the review, with details on review period and scope, request to schedule the kickoff meeting, and request for customer's audit contacts.
Kickoff Meeting	The kickoff meeting formally begins the review by introducing the audit team, share audit methodology, setting expectations on data that will requested from the customer, and answering any questions about the audit process.
Documentation Request	A documentation/data request email is sent to the customer within 48 hours after the kickoff meeting, specifying the expected submission date, and includes a detailed review agenda as well as technical requirements for data submission.
Walkthrough Meeting(s)	The walkthrough meeting(s) is conducted to review the customers data usage process.
Fieldwork	Fieldwork is initiated upon receipt of required data and encompass data analytics, and if any findings are identified, the applicable liability calculation.
Liability Presentation	Reporting is initiated when the preliminary liability is presented to the customer.
Closing Meetings	At the end of the audit engagement a closing meeting is conducted with the customer to officially conclude the review.

SECTION 5: REVIEW TYPES

There are multiple types of reviews that can be performed based on the customer’s contractual obligations, data usage, and risk profile. Within each review type, NYSE employs a systematic method to logically review the account being audited. Some common review types are listed below but not limited to:

- Feeds vs. fees
- Non-display usage
- Datafeed redistribution
- Internal device entitlement
- External device entitlement
- Nonprofessional
- Quote metering

The chart below describes the types of common reviews and the review method.

REVIEW TYPE	REVIEW METHOD
Feeds vs. Fees Review	Ensure that the customer is properly assessed the appropriate access fees, redistribution fees, etc. Analysis includes reconciling datafeeds received by the customer with corresponding applicable fees based on receipt and usage types.
Non-Display Usage	Ensure the customer adheres to the non-display policies, and that non-display declarations are completed properly. A data usage assessment is performed to review system functionalities for non-display use, use cases, and data dissemination.
Datafeed Redistribution	Ensure all datafeeds are properly controlled and datafeed redistribution is accurately reported. Analysis includes reconciling datafeed distribution records with reported usage.
Entitlement Reviews	<p>Ensure that a customer has the proper entitlements to control and track both their internal devices and systems consumption as well as any external data redistribution. Analysis includes validating that the customer’s reported usage matches the entitlement data and identifying any discrepancies.</p> <p>Depending on the customer profile, a sampling methodology may be used if there are large amounts of data. In such instance, if any findings are identified, the liability calculation is extrapolated based on the error rate of the sampling data.</p>

<p>Nonprofessional Reviews</p>	<p>Ensure users reported as nonprofessionals are correctly classified as per the Nonprofessional Policy. Analysis includes reviewing the data required as part of the Nonprofessional Subscriber Agreement/Exhibit B (subscriber name and address, employer information, job title, employment function) to confirm the subscriber qualifies to receive the data at the nonprofessional rate.</p> <p>Depending on the customer profile and nonprofessional database size, a sampling methodology may be used if there are large amounts of data. In such instance, if any findings are identified, the liability calculation is extrapolated based on the error rate of the sampling data.</p> <p>Broadly speaking there are 4 types of misclassifications:</p> <ol style="list-style-type: none"> 1. Registered professional - Any users that are registered (i.e., FINRA, NFA, CSA, IAPD) but reported as nonprofessionals are considered misclassified. <p>For CTA subscribers, NYSE uses the UCERT tool to automate confirmation of the FINRA CRD registration. This is a tool that is available to all CTA nonprofessional redistributors at no cost and can be used as part of their nonprofessional users onboarding and validation process.</p> <ol style="list-style-type: none"> 2. Not an individual - Any user that is not a natural person but is reported as a nonprofessional is considered misclassified. 3. Professional not registered - Any users deemed as professionals that are not based on registration, for example a trader or investment advisor. 4. Insufficient record - Cases where a user’s status cannot be documented due to missing information are considered to have insufficient records. Findings on the insufficient records are based on three factors: A) total nonprofessionals user base; B) total confirmed number of users misclassified; and C) total number of insufficient records cases
<p>Quote metering</p>	<p>Ensure that a customer that reports quote usage has a quote metering system that is accurately counting quotes. Analysis includes review of the required quote meter audit report to determine if it meets the policy requirements and if the quote metering system has the requisite functionalities.</p>

SECTION 6: AUDIT COMPLETION

After the audit review is completed, the customer is notified of any findings and/or liability exposure. The customer is also provided with supporting documentation, with details supporting the identified exceptions and findings listed in an Excel spreadsheet. The customer is provided a minimum of 14 days to validate the findings.

At the final stage of the audit, a closing document is prepared at the end of the review. As part of ongoing account support, the account manager and operations specialist assigned to the customer's account are included in the closing meeting to help the customer with any corrective actions such as updating contracts, repapering subscribers, tracking account changes, and assisting in any changes in reporting.

Lastly, workpapers and internal tracking documentation are updated and archived in compliance with record keeping requirements.