Client Test Approach

CSD European Offering – Addendum for clients of Euronext Securities

VERSION 1.0

EURONEXT SECURITIES

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1. Purpose of this document

This document is an addendum to the “Client Test Approach – CSD European Offering – General approach for market participants” document, focused on specificities applicable only to clients of Euronext Securities which are not mentioned in the “…General approach for market participants”. As for the target audience of this document, the two documents must be read together for completeness of information in the following order:

- Client Test Approach – CSD European Offering – General approach for market participants
- Client Test Approach – CSD European Offering – Addendum for clients of Euronext Securities

2. Target audience

This document is intended for clients of Euronext Securities, in particular settlement agents, custodians, and other CSD participants, involved in or impacted by the European Offering. While not all clients of Euronext Securities are required to test the same services or scenarios, this document applies to all participants testing Euronext Securities services. Variations in scope and obligations are described where applicable and detailed further in the relevant test scenarios.

Note for Issuing Agents and Issuers
Due to the diversity of service configurations, timelines, and onboarding models applicable to these stakeholders, testing with Issuing Agens and Issuers is handled on a case-by-case basis. Issuing Agents and Issuers wishing to test services offered by Euronext Securities Milan are requested to contact Euronext Securities (CSD.onboarding@euronext.com) to initiate tailored onboarding and testing activities aligned with the specific needs of each Issuing Agent or Issuer.

3. Test preparation phase

3.1 Euronext preparation

Please refer to “Client Test Approach – CSD European Offering – General approach for market participants” document, as the first document to read, for information about preparatory steps to expect from Euronext Securities ahead of test execution, including information about detailed test documentation. Detailed test documentation from Euronext Securities can be accessed following this link.

3.2 Client preparation

Clients are expected to complete the necessary preparation activities ahead of test execution. Timely completion of these actions is critical to ensure that testing can start as planned. All clients must ensure they:

- Complete onboarding processes, if acting as a new participant
- Complete account set-up activities towards Euronext Securities

- Ensure access to the test environment (EUA, connected to T2S UTEST)
- Ensure access to relevant services introduced as part of the European Offering
- Verify connectivity is set-up to all relevant systems and networks (see more information below)
- Validate the accessibility and accuracy of test data provided by Euronext Securities
- Establish internal test governance and escalation procedures
- Establish clear internal processes for progress tracking and defect reporting
- Allocate appropriate resources and plan internal capacity for testing
- Nominate and share primary and backup points of contact with Euronext Securities
- Review and confirm understanding of the client test documentation
- Raise any difficulties, findings, or questions, related to the preparation to Euronext Securities

Connectivity to Euronext Securities' services

To test and use services provided by Euronext Securities, clients must ensure that the appropriate connectivity is in place before the start of testing. At a high level, the following connectivity options are available, with indicative set-up timelines:

Connectivity type	Current connectivity clients[1]	Clients with no connectivity
Euronext Managed Connectivity (EMC Solution)	2 weeks	3 months
Client Managed Connectivity (CMC Solution)	2 weeks	3 weeks
Indirect Connection (via Service Provider[2])	2 weeks	2 weeks
VPN (for test only)	2 weeks	2 weeks

Clients are responsible for initiating the connectivity process in due time based on their selected option. Please note that VPN connectivity may be leveraged as back-up alternative for the above-mentioned connectivity methods during the testing period, until permanent connectivity is established.

Detailed technical information, service descriptions, and connectivity requirements are available on our webpage. Further details on connectivity options can specifically be found in the Connectivity Service Description Document.

[1] Upon contract signing. Please note that this is Euronext effort and is not including activities that client needs to execute internally or with the Service Provider.
[2] Currently supported Service Providers are BT Radianz, Colt, ICE, FNN, OptionsIT, Pico, TNS, NEXI, DXC, Bloomberg, Fidessa, CQG, TradingTechnologies, iRess and others

4. Test execution phase

4.1 Testing timeline

As also shown in document “Client Test Approach – CSD European Offering – General approach for market participants”, testing is planned and executed according to defined timelines per service according to the overview below. For more information about testing timeline and milestones, please refer to the general approach document referenced above.

Services	Feb	Mar	Apr	May	Jun	Jul	Aug
Front-to-back testing		**Test execution: March 5^{th} – July 31^{st}**					
ISO20022 Settlement Messages via MQ channel					**Test execution: June 1^{st} – July 31^{st}**		
Portfolio Migration and Position Transfer		**Test execution: March 5^{th} – July 31^{st}**					
Corporate Events				**Test execution: May 4^{th} – July 31^{st}**			
General Meetings and Proxy Voting				**Test execution: May 4^{th} – July 31^{st}**			
Fiscal Services (Tax)				**Test execution May 4^{th} – July 31^{s}**			
Post Trade Confirmation System (PTCS)		**Test execution: March 5^{th} – July 31^{st}**					
Registered Shares and Information on Registered Investors (IRI) – Euronext Securities as Investor CSD				**Test execution: May 4^{th} – July 31^{st}**			
Registered Shares and Information on Registered Investors (IRI) – Euronext Securities as Issuer CSD					**Test execution: June 1^{st} – July 31^{st}**		

Services	Feb	Mar	Apr	May	Jun	Jul	Aug
Stamp Duty				Test execution: May 4th – July 31st			

4.2 Test scenario prioritization

Test scenarios provided in the test documentation from Euronext Securities are prioritized using a risk-based approach, reflecting business criticality, regulatory impact, and operational risk. Scenarios are classified into three categories: High Priority, Medium Priority, and Low Priority. The categories are defined below.

High Priority
These are critical test scenarios that must be executed. Failure to successfully complete these tests would materially impact the usability, compliance, or stability of the service. For High Priority test scenarios, Euronext will apply a guided test execution approach. These scenarios will be executed following a defined sequence when explicitly indicated for the test. This approach is intended to focus the attention of all participants on the same parts of the end-to-end process at the same time, enabling aligned execution, shared learning, and more effective joint discussions on specific scenarios. By progressing through high-priority scenarios in a coordinated manner, testing can flow more smoothly, dependencies can be identified earlier, and issues impacting multiple participants can be addressed collectively. Further details on the sequencing and execution of high-priority scenarios are described in the Test Execution section of this document.

Medium Priority
These are important scenarios that are strongly recommended. While not strictly required for go-live, they significantly reduce operational risk and improve user confidence.

Low Priority
These are optional scenarios that add incremental value but are not required for the current release.

This prioritization ensures that testing efforts are focused on the most critical risks first, while allowing flexibility based on participant readiness and available resources.

4.3 Guided test execution

High Priority cases: Guided execution of test scenarios
For high-priority test scenarios, Euronext Securities will apply a guided test execution approach. These scenarios will be executed following a defined sequencing, which will be used as a reference during the regular coordination meetings. Euronext Securities will actively guide participants through these scenarios to ensure aligned execution and effective use of testing time.

As part of this guided approach:

- Required test data and references (ISINs or others) will be prepared and shared by Euronext Securities in the detailed test documentation, where applicable

- Dedicated test experts and subject matter experts will be available to support execution
- Daily support will be provided to address questions, clarify expected outcomes, and assist with issue analysis
- Outcomes of executed scenarios, identified issues, and next steps will be debriefed regularly to ensure common understanding across participants

This coordinated execution model is intended to focus all participants on the same critical scenarios at the same time, facilitate collective discussion of findings and dependencies, accelerate issue identification and resolution, and improve overall testing efficiency and readiness.

Medium- and Low Priority cases: Independent execution of test scenarios
For lower-priority test scenarios, guided execution will not be applied. Hence, for these test scenarios, clients should execute testing independently and in line with the published test scenarios and guidance. Also, for these test scenarios, Euronext Securities will provide functional and operational support throughout the execution phase in line with the defined client support model.

4.4 Entry & Exit criteria

Entry, hold, resume, and exit criteria define the formal conditions under which testing activities can start, be paused, resumed, or completed. They provide a controlled framework to ensure that testing is executed only when the required prerequisites are met and that progression between phases is based on objective readiness. These criteria are designed to protect testing quality, ensure efficient use of resources, and minimize operational and delivery risk.

The principles and categories of criteria described in this section apply across all testing activities with Euronext Securities for the European Offering services. The exact and detailed criteria are defined in the test plan for each service, considering service-specific risks, dependencies, and participant roles.

4.4.1 Entry criteria

Entry criteria define the conditions that must be met before a testing phase can start. To support this, Euronext Securities will organize preparatory meetings ahead of the client testing window to confirm readiness and comfort to begin testing. These sessions are intended to identify and address any practical questions or constraints related to test execution, such as resource availability, understanding of test scenarios and supporting documentation, and client support arrangements. See document “Client Test Approach – CSD European Offering – General approach for market participants” for more information. This approach ensures that all parties are aligned and adequately prepared before testing starts.

4.4.2 Hold criteria

Hold criteria define situations where testing must be temporarily paused, in cases such as:

- Occurrence of unexpected blocking issues
- Introduction of unplanned or planned new deliveries or system versions
- Repeated or prolonged unavailability of required resources
- Interrupting scope changes impacting the validity of ongoing tests
- Change requests requiring additional risk assessment before continuation

When hold criteria are triggered, the testing phase is paused until the situation is assessed and resolved. Due to the unpredictability of such event, the client test support panel will inform the relevant parties immediately after detection. As soon as a timing for resume is known a communication will be shared by Euronext Securities. This way clients can ensure the availability of resources and start testing again.

During the Hold-Resume time window, the frequency of the status meetings and reporting may increase to keep all parties close in the loop and aligned when and as long as needed.

4.4.3 Resume criteria

Resume criteria define the conditions under which testing can safely restart after a hold. When testing can resume relevant parties will be informed immediately. Testing may resume once:

- Required resources are available again or suitable replacements have been secured
- Blocking issues or interruptions have been resolved and validated
- The intake process has been successfully re-completed where applicable
- A clear resume signal has been communicated and acknowledged by all testing participants

4.4.4 Exit criteria

Exit criteria define the conditions that must be met for a testing phase to be considered successfully completed. The recommended criteria to guide readiness and completion of the test execution are:

- All test cases market “High Priority” have been executed in line with the test plan
- In case of defects, they have been re-tested and closed
- Risks have been either mitigated or accepted
- Only mutually accepted issues remain (if any)
- Agreement to close the testing phase between Euronext and stakeholders

5. Roles & responsibilities

Executing test activities for the European Offering is a collaborative effort between Euronext Securities and its clients, with specific responsibilities to be fulfilled by each. Responsibilities described in this section apply to testing activities only, and the exact scope of testing and required actions are further detailed in the applicable test plans and test scenarios.

5.1 Responsibilities of Euronext Securities

Euronext Securities is responsible for:

- Provide relevant test scenarios to execute for the relevant market participant segments interacting with Euronext Securities
- Providing and maintaining test environments and test data
- Supporting test execution involving settlement transactions and other relevant services offered by Euronext Securities to the market participants
- Supporting defect analysis, resolution, and retesting

- Confirming readiness for services in scope of the European Offering from Euronext Securities' perspective

5.2 Responsibilities of clients of Euronext Securities

Clients have a general responsibility to ensure that testing is executed in line with the agreed test plans and timelines, that defects are reported following the defined defect management process, to ensure timely communication and escalation of issues, and that formal readiness confirmations are provided where relevant. Specific responsibilities are defined further below.

Settlement Agents
Settlement Agents are responsible for validating settlement processing and communication with CSDs. Their key responsibilities include the following:

- Executing settlement-related test scenarios
- Validating connectivity, messaging, and operational processes
- Validating settlement instruction processing and confirmations
- Determining, at their own discretion, the number of Trading Members with whom testing is required to achieve sufficient confidence for sign-off on end-to-end market flow testing
- Where settlement involves other market infrastructures or alternative CSDs, assessing the need to perform testing with those infrastructures and coordinating such testing directly with the relevant parties; testing with Euronext Securities will be supported as part of the European Offering testing
- Reporting defects
- Confirming operational readiness via dedicated form

Custodians
Custodians are responsible for validating safekeeping, settlement, and asset servicing flows relevant to their role. Their key responsibilities include:

- Executing relevant test scenarios
- Validating connectivity, messaging, and operational processes
- Reporting defects
- Confirming readiness for services in scope

Issuing Agents[3]
Issuing Agents are responsible for validating issuance-related and issuer-facing services. Their key responsibilities include:

- Executing test scenarios related to issuance and issuer services
- Validating new tools, interfaces, and reporting
- Coordinating with issuers and Euronext Securities on issue resolution
- Involve registrars as needed in testing

[3] Issuing Agents and Issuers should contact Euronext Securities directly for tailored onboarding and testing.

Issuing Agents typically act on behalf of Issuers for operational matters, including testing and onboarding, unless otherwise defined between the parties.

6. Defect management process

Defect management is a key component of the European Offering testing activities for Euronext Securities. The objective is to ensure that defects identified during testing are captured, assessed, communicated, and addressed in a transparent and coordinated manner, while avoiding duplication of effort across participants.

6.1 Defect identification and reporting

Defects may be identified by any market participant during test execution. Participants are encouraged to report defects as soon as they are discovered to allow timely analysis and mitigation.

Defects can be reported through:

- **Bilateral communication**[4], where a participant identifies and reports a defect directly, and
- **Regular testing coordination meetings**, where defects can be raised, discussed, and tracked collectively.

6.2 Defect handling and coordination

Once a defect is reported, Euronext Securities will analyse and assess the reported issue, including its impact and priority. Where relevant, the defect and its status will be shared with the wider testing community to increase transparency, prevent multiple participants from testing the same failing scenario, and align expectations on known limitations or fixes in progress. Follow-up actions, including resolution, workaround, or retesting, will be coordinated with impacted participants.

To support structured coordination, Euronext Securities will maintain a central defect tracking file, covering all defects, statuses, priorities, and next steps. This file will be shared with relevant stakeholders ahead of each recurring test coordination meeting and will serve as the single reference point for discussion, alignment, and progress tracking during testing.

This collaborative approach supports efficient testing execution, maximizes reuse of test outcomes, and reduces unnecessary duplication of testing efforts. Any client-specific or confidential information will not be shared.

[4] See document "Client Test Approach – CSD European Offering – General approach for market participants" for detailed point of contact.

6.3 Defect resolution and retesting

Defects are addressed based on their severity, business impact, and relevance to go-live readiness. Once a fix or mitigation is implemented impacted participants will be informed, retesting will be organized as required, and outcomes will be communicated through the established testing communication channels.

7. Environments & technical set-up

Testing with Euronext Securities for the European Offering is conducted using a dedicated test environment that mirror, as closely as possible, the target production set-up. The environment is EUA (connected to T2S UTEST) and is made available to support consistent and reliable test execution across all services in scope.

As a general principle, the test environment required for the European Offering is available and operational during normal working hours throughout the testing period. This availability applies across the different services and infrastructures from Euronext Securities and is intended to provide participants with stable access for test execution, analysis, and retesting activities.

The test environment will remain open also after the testing period is completed, however please note that (1) sign-off must be completed as part of the testing period, and (2) support from Euronext Securities can only be granted on an exceptional basis after the testing period.

Any deviations from the standard availability described above, including exceptional incidents or planned maintenance, will be communicated to clients in due time.

8. Reporting & KPIs

Reporting during the European Offering testing is designed to support transparency, coordination, and issue resolution, while avoiding unnecessary administrative overhead for clients.

A key principle of the testing approach is that Euronext Securities will monitor that its applications and services are delivered as planned, while clients are expected to perform the testing relevant to their role and services in line with the published test documentation and to raise any concern in timely manner. The primary focus of reporting is therefore on issues, risks, and overall readiness, rather than on detailed test execution metrics.

Reporting is organized to facilitate efficient coordination and timely resolution of issues identified during testing. It is supported through regular coordination meetings, targeted written updates where relevant, and ongoing bilateral exchanges to address specific issues or clarifications. Reporting activities are centred on shared understanding of the testing situation, known limitations, and actions required to ensure overall readiness.

8.1 Focus of reporting

Reporting during the testing period focuses on the following areas:

Defects and issues

- Identification of new defects and/or issues raised during testing
- Status of open, resolved, and blocking defects
- Visibility on known defects and/or issues impacting multiple participants

Risk and impact assessment

- Identification of risks that could impact service readiness or timelines
- Assessment of the operational or functional impact of identified defects

Resolution and mitigation

- Progress on issue resolution and planned fixes
- Agreed workarounds or mitigations where applicable
- Coordination of re-testing where required

Key dependencies and constraints

- Dependencies between services or participants
- Constraints that may impact testing efficiency or readiness

8.2 Key Performance Indicators (KPIs)

KPIs used during testing are limited and targeted and are intended to support issue management and readiness assessment rather than to measure client testing performance. Indicative KPIs include:

- Number of open defects by severity per service
- Number of unresolved blocking issues per service

These indicators are reviewed regularly as part of the testing governance to identify areas requiring additional focus or support.

9. Readiness sign-off

Please refer to document “Client Test Approach – CSD European Offering – General approach for market participants” for information regarding readiness sign-off. Relevant sign-off documentation can be found on the European Offering Documentation website.

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