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TECHNICAL NOTE ON FINANCIAL MARKETS INFRASTRUCTURES: SUPERVISION AND OVERSIGHT OF GOVERNANCE AND RISK MANAGEMENT AT EURONEXT CLEARING AND EURONEXT SECURITIES MILAN

This Technical Note on Financial Market Infrastructures for the Italy FSAP was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on July 2026.

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TECHNICAL NOTE

FINANCIAL MARKET INFRASTRUCTURES: SUPERVISION AND OVERSIGHT OF GOVERNANCE AND RISK MANAGEMENT AT EURONEXT CLEARING AND EURONEXT SECURITIES MILAN

Prepared By
Monetary and Capital Markets Department

This Technical Note was prepared by IMF staff in the context of the Financial Sector Assessment Program in Italy. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at http://www.imf.org/external/np/fsap/fssa.aspx

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Glossary

APC	Antiprocyclicality
BdI	Banca d'Italia
CCO	Chief Compliance Officer
CCP	Central Counterparty
CCPRR	Regulation (EU) 2021/23 of the European Parliament and of the Council of 16 December 2020 on a framework for the recovery and resolution of central counterparties
CONSOB	National Commission for Companies and the Stock Exchange
COO	Chief Operating Officer
CPMI	Committee on Payments and Market Infrastructures
CRO	Chief Risk Officer
CSD	Central Securities Depository
CSDR refit	Regulation (EU) 2023/2845 as regards settlement discipline, cross-border provision of services, supervisory cooperation, provision of banking-type ancillary services and requirements for third-country central securities depositories
DORA	Digital Operational Resilience Act
EC	European Commission
EMIR	Regulation (EU) No 648/2012 on OTC derivatives, central counterparties and trade repositories
EMIR 3	Regulation (EU) 2024/2987 as regards measures to mitigate excessive exposures to third-country central counterparties and improve the efficiency of Union clearing markets.
ENXC	Euronext Clearing, commercial name of Cassa di Compensazione e Garanzia
ES	Expected Shortfall
ESMA	European Securities and Markets Authority
ES-MIL	Euronext Securities Milan, commercial name of Monte Titoli
EU	European Union
FMI	Financial Market Infrastructure
FSAP	Financial Sector Assessment Program
ICSD	International Central Securities Depository
IM	Initial Margin
IOSCO	International Organization of Securities Commissions
ISLA	Internal Service Level Agreement
MEF	Ministry of Economy and Finance
MoU	Memorandum of Understanding
MPOR	Margin Period of Risk
MTF	Multilateral Trading Facility
P&L	Profit and Loss
PFMI	Principles for Financial Market Infrastructures
PTPC	Post Trade Participants Committee
R&E	Review and Evaluation
RTS	Regulatory Technical Standard

T2	Target 2
T2S	Target 2 Securities
TR	Trade Repository
TV	Trading Venue
TUF	Consolidated Law on Finance - Testo unico delle disposizioni in materia di intermediazione finanziaria
VaR	Value at Risk
VM	Variation Margin

EXECUTIVE SUMMARY

The FSAP reviewed the regulation, supervision, and oversight of two key financial market infrastructures in Italy, Euronext Clearing (ENXC), a central counterparty, and Euronext Securities Milan (ES-MIL), a central securities depository. This technical note assesses: (i) the roles of Banca d'Italia (BdI) and the Capital Markets Supervisory Commission (CONSOB) in supervising ENXC and ES-MIL in line with CPMI-IOSCO's Principles for Financial Market Infrastructures (PFMIs); (ii) governance arrangements under PFMI Principle 2; and (iii) risk management frameworks under PFMI Principle 3, including ENXC's margin requirements under PFMI Principle 6.

BdI and CONSOB share supervisory responsibility for both ENXC and ES-MIL, with the terms of their cooperation formalized through a Memorandum of Understanding (MoU). The authorities ensure effective cooperation through clear and well-documented procedures that coordinate their interactions with ES-MIL and ENXC, minimizing duplicative information requests. International cooperation is robust with supervisory colleges serving as a cornerstone of EU cooperation. ENXC has a college of supervisors, while a college will be set up soon for ES-MIL. These colleges facilitate harmonized supervisory approaches across member states, supported by ESMA groups and the Target 2 Securities (T2S) cooperative framework.

ES-MIL is advancing strategic and expansion efforts, to position itself as a European hub-like CSD for securities markets. Governance innovations include applying consistent committee compositions across the Euronext group CSDs (in Milan, Porto, Copenhagen, and Oslo) while customizing the setup for each CSD discussion. Board members possess relevant expertise and participate in regular training tailored to both group-wide and entity-specific needs.

Further governance improvements are recommended to address potential competing priorities at ES-MIL. These include clarifying responsibilities in group and CSD roles, monitoring staff capacity amid increased role sharing, strengthening board performance evaluations with independent reporting, and enhancing CRO reporting lines and conflict of interest policies.

Governance arrangements at ENXC are clearly defined and documented. Roles and responsibilities are clearly defined, with the CRO maintaining adequate independence with direct reporting line to the board. The organization has expanded its skilled workforce to meet operational needs and has comprehensive policies to manage conflicts of interest. Communication with participants is effective, supported by established channels such as the Clearing Post Trade Participants Committee (PTCP) and the Risk Committee. Moving forward, ENXC should enhance its board performance evaluation policy by increasing evaluation frequency, introducing formal individual assessments, and preparing independent evaluation reports.

ES-MIL and ENXC's risk management frameworks cover risk identification, analysis, treatment, and continuous monitoring of strategic, financial, and operational risks. ENXC's recovery and resolution frameworks are established and evolving. While the recovery plan has been enhanced through exchanges with authorities and has comprehensive scenarios and recovery tools, ENXC's resolution plan was first approved this year and will undergo improvements in following cycles. Priorities include key areas of resolvability, among which a resolution communication plan to channel relevant information to all the stakeholders, including participants where necessary. In addition, the Crisis Management Group should be dissolved and consolidate its tasks in the newly created Resolution College.

Targeted enhancements are needed to strengthen risk management at ES-MIL. ES-MIL should secure CRO and Board independence, which is critical given the current uniform Risk Appetite Framework (RAF) across all Euronext CSDs, that may constrain ES-MIL's flexibility. In addition, joint recovery planning with other Euronext-owned CSDs is encouraged to leverage synergies and support group-wide resilience. Enhanced cooperation through coordinated recovery exercises with other supervisors and clear Board accountability over outsourced functions are also recommended.

ENXC is expanding its business and is the CCP of choice for Euronext trading venues, with conservative margining practices. The entity applies conservative margin models with ample coverage of regulatory requirements. ENXC ensures transparency and effective communication by disclosing comprehensive risk information publicly and to its participants through multiple channels including the Clearing PTPC and the Risk Committee.

Supervisory authorities are granted timely access to detailed operational and risk-related information, supporting effective oversight. Margin models are continuously tested and validated, with intraday monitoring, daily risk assessments, periodic comprehensive reviews, and demonstrated performance in ESMA stress tests. ENXC makes available to its participants and their clients tools to replicate margin calculations. Recommendations include maintaining clear and objective documentation of all risk management procedures and sharing sensitivity analysis results with all participants.

BdI and CONSOB perform their duties under high quality standards. Both authorities act under clear mandates, apply structured supervisory processes, and maintain proactive engagement with stakeholders. These practices ensure a robust framework that supports compliance with international standards and reinforces resilience across FMIs.

Table 1. Italy: Main Recommendations			
No.	Recommendation	Timing[1]	Responsibility
	Responsibilities of the Authorities – ES-MIL and ENXC		
1	Enhance and formalize the cooperation among supervisors of the four Euronext CSDs and with other entities within the group.	ST	BdI, CONSOB
2	Formalize cooperation arrangements with authorities supervising Euronext N.V.	ST	BdI, CONSOB
3	Enhance regularity of on-site supervisory activities at ENXC.	MT	BdI, CONSOB
4	Require ES-MIL to update its PFMI self-assessment.	I	CONSOB, BdI
5	Enhance legal protection of employees at BdI and CONSOB.	I	MEF, CONSOB, BdI
	Governance – ES-MIL and ENXC		
6	Require ES-MIL to address potential competing priorities between ES-MIL, other Euronext CSDs and the group.	I	CONSOB, BdI
7	Ensure participants continue playing an active role in ES-MIL project implementation.	MT	CONSOB, BdI
8	Continuously monitor that ES-MIL maintains adequate staff levels.	I	CONSOB, BdI
9	Require ES-MIL and ENXC to strengthen their boards performance evaluation policies.	ST	BdI, CONSOB
10	Require ES-MIL to establish an additional reporting line for the CRO direct to a non-executive director on the Board as per the PFMIs.	I	CONSOB, BdI
11	Require ES-MIL to enhance its conflict-of-interest policy.	ST	CONSOB, BdI
12	Require ENXC to maintain strong engagement with participants and explore integrating the Clearing PTPC within the PTPC steering structure.	MT	BdI, CONSOB
	Risk Management Framework – ES-MIL and ENXC		
13	Ensure adequate independence of the CRO and the Board at ES-MIL.	I	CONSOB, BdI
14	Require ES-MIL to initiate coordinated recovery planning with other CSDs owned by Euronext group.	ST	CONSOB, BdI
15	Initiate joint recovery exercises with authorities supervising other Euronext CSDs.	ST	CONSOB, BdI
16	Ensure that the ES-MIL Board maintains ultimate responsibility for all outsourced activities.	I	CONSOB, BdI
17	Continue enhancing ENXC's resolution plan finalizing resolution for all critical services and prioritize developing a resolution communication plan.	ST	BdI
18	Dissolve ENXC's Crisis Management Group.	I	BdI

Table 1. Italy: Main Recommendations (concluded)			
	Margin – ENXC		
19	Require ENXC to share sensitivity analysis results with all participants.	I	BdI, CONSOB
20	Continue to ensure that all procedures related to ENXC's risk management are well-documented and objective including for new asset classes cleared.	ST	BdI, CONSOB

[1] I Immediate (within 1 year); NT Near Term (within 1-2 years); MT Medium Term (within 3–5 years).

INTRODUCTION[1]

1. This technical note presents the findings and recommendations that arise from the FSAP review of the regulatory, supervisory and risk management framework regarding certain aspects of ENXC and ES-MIL. The review assesses the adherence of the authorities and of the FMIs to the PFMIs. It covers:

- The responsibilities of the Italian authorities in regulating, supervising, and overseeing ES-MIL and ENXC, according to the CPMI-IOSCO PFMIs and the Disclosure framework and Assessment methodology.[2]
- The assessment of Principle 2 of the PFMIs on governance arrangements for ES-MIL and ENXC.
- The assessment of Principle 3 of the PFMIs on the risk management framework for ES-MIL and ENXC, and on margin requirements for ENXC under Principle 6 of the PFMIs.

2. The assessment draws on document reviews, responses to questionnaires, and in-person meetings with BdI, CONSOB, ESMA, ES-MIL, ENXC, and market participants. It considers national laws, EU regulations, and operational procedures, ensuring a comprehensive evaluation of supervisory practices and risk controls.

OVERVIEW OF THE CLEARING AND SETTLEMENT LANDSCAPE

3. The Italian FMIs comprise two key post-trading Financial Market Infrastructures (FMIs):

- *The CSD ES-MIL,* commercial name of Monte Titoli, is based in Milan and offers issuance, custody and settlement services for equities and bonds. The Euronext Group has other 3 CSDs: in Copenhagen (Denmark), Oslo (Norway), and Porto (Portugal). As part of the group's expansion plans, Euronext wants to leverage on ES-MIL to build a consolidated model for issuance, safekeeping, and settlement services from Euronext Trading Venues (TVs) in Amsterdam, Brussels, Milan, and Paris.
- *The CCP ENXC,* commercial name of Cassa di Compensazione e Garanzia, offers clearing services for equities, bonds, repos, and derivatives. It is the first and only CCP in the Euronext Group and according to the expansion plans of the group, it is transitioning from a local Italian

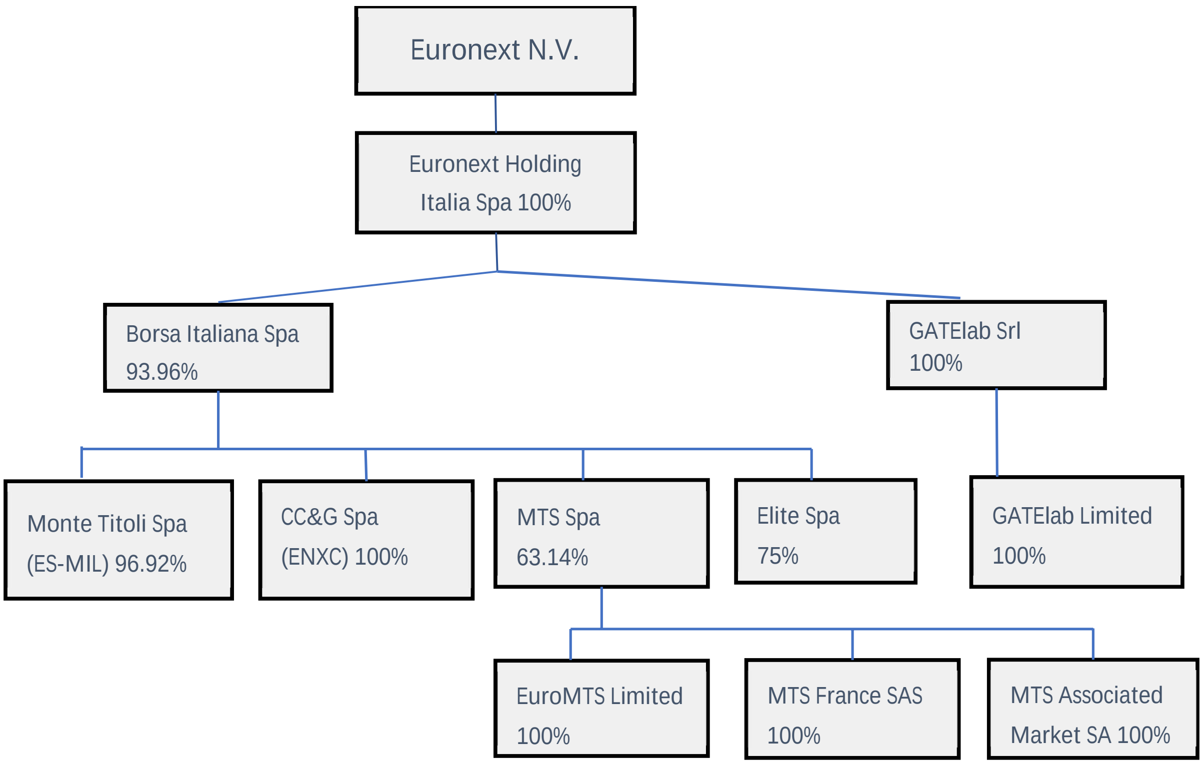
[1] This Technical Note was prepared by Yaiza Cabedo (IMF).

[2] CPMI-IOSCO Principles for Financial Market Infrastructures (PFMIs), and CPMI-IOSCO PFMI Disclosure framework and Assessment methodology.

infrastructure to a pan-European hub for clearing the trades initiated in Euronext's trading platforms.[1]

4. Both infrastructures are integrated within the Euronext Group, facilitating cross-border transactions and harmonized post-trade services. ES-MIL and ENXC interact with multiple payment systems, TVs, and other FMIs, supporting Italy's role in the broader European financial ecosystem. Detailed information on statistics on ES-MIL and ENXC's participants, volumes, and historical developments are available in Annex I.

Figure 1. Italy: Euronext Group Ownership Diagram in Italy



Source: Diagram prepared by IMF with information from the authorities.

5. BdI is part of the four central banks (4CB) responsible for developing and operating Eurosystem's TARGET Services infrastructure. Within TARGET, T2 is the system for settling gross

[1] In November 2025, weeks after the mission visited Italy, Euronext announced the acquisition of ATHEX Group. The group the Greek capital market including listing of bonds and shares, trading of bonds, derivatives, stocks and ETFs, and post-trading services through ATHEXCLEAR (CCP) and ATHEXCSD (CSD). This is not shown in the diagram as we are only illustrating the Italian entities in the group.

payments, T2S for settling securities transactions in central bank money, and TIPS for settling instant payments.[1]

6. ES-MIL is a member of T2S, the Eurosystem's platform for settling securities transactions in central bank money, since 2015. Transactions on T2S settle on a gross basis. T2S offers advanced features such as settlement optimization, night cycles, and auto-collateralization, which deliver cost savings and improved liquidity management. T2S has transformed and optimized the European post-trading landscape.[2]

7. ENXC performs the central counterparty function by assuming the counterparty risk from both sides of a transaction. ENXC acts as the buyer to each seller and the seller to each buyer. Since the integration of Borsa Italiana Group by Euronext Group, ENXC has been the CCP of choice within the Euronext group for cash equity as well as for financial and commodity derivatives markets traded in Euronext's TVs. Details on cleared volumes for ENXC can be found in Annex II.

8. ENXC offers clearing service for derivative markets (including commodity derivatives)[3], cash or spot markets,[4] and repo markets.[5] The group is expanding its repo clearing services to cover sovereign debt from Italy, France, Germany, Spain, Portugal, Ireland, Netherlands, Belgium, Austria, and Finland as well as supranational bonds. In addition, in December 2024, ENXC extended its clearing services to equity instruments traded on the Luxembourg Stock Exchange. Data on ENXC's member composition can be found in Annex II. Data on clearing volumes per segment can be found in Euronext website.

9. ENXC provides clearing as a service to a third CCP, and interacts with different TVs, CCPs, TRs, securities settlement systems, and payment systems. Details can be found in Annex II. ENXC provides technology services for clearing to other European CCPs via a Software-as-a-Service (SaaS) model, managing the platform but not acting as a legal CCP. Clients handle all operational and legal responsibilities. ENXC only supplies the infrastructure and assumes no extra risk.

[1] Italian payments are also processed in the pan-European systems managed by EBA Clearing (STEP2-T, EURO1, RT1) and Mastercard Europe. In addition, Italian payments are also processed in the pan-European systems managed by EBA Clearing (STEP2-T, EURO1, RT1) and Mastercard Europe.

[2] Optimization through: Reducing fragmentation caused by diverse national settlement systems; Lowering costs and risks in cross-border transactions through Delivery versus Payment (DvP) and central bank money usage; Enhancing liquidity management by enabling banks to pool and mobilize collateral more effectively across borders.

[3] Through Euronext Amsterdam, Brussels, Lisbon, Milan, Oslo, and Paris.

[4] Through Euronext Amsterdam, Brussels, Growth Brussels, Access Brussels, Dublin, Growth Dublin, Access Dublin, Lisbon; Milan, MIV Milan, Global Equity Market (GEM Equity), Trading After Hours, ETF Plus, Paris, Growth Paris, Access Paris, Luxembourg Stock Exchange.

[5] Through MTS, BrokerTec, and expanding.

RESPONSIBILITIES OF THE AUTHORITIES – ENXC & ES-MIL

A. Description and Findings

10. BdI and CONSOB have formally adopted the PFMIs as standard supervisory tools since 2014. These principles are embedded in the laws governing CCPs and CSDs. Non-compliance with the PFMIs constitutes a legal breach and requires authorities to take prompt corrective action.

11. The applicable regulations for ES-MIL and ENXC are both European and Italian. The primary legislations are CSDR for ES-MIL, EMIR and regulation on CCP recovery and resolution (CCPRR) for ENXC, and provisions within the Italian Consolidated Law on Finance (TUF). Detailed information on the applicable regulations is provided in Annex III.

12. For ES-MIL, CONSOB acts as the lead supervisor. Under the Italian Consolidated Law on Finance (TUF), CONSOB and BdI are designated as national competent authorities for the authorization and supervision of CSDs established in Italy. Authorization is formally adopted by CONSOB, subject to the agreement of BdI. Both authorities exercise ongoing supervisory responsibilities: CONSOB oversees market integrity, transparency, and investor protection, whereas BdI focuses on financial stability and systemic risk containment.

13. For ENXC, BdI acts as the lead supervisor. Under the Italian TUF, BdI and CONSOB are designated as national competent authorities for CCPs' supervision. BdI is responsible for financial stability and containing systemic risk, while CONSOB focuses on transparency and investor protection. BdI has exclusive authority to grant and amend CCP authorizations and to validate significant model changes, while other supervisory decisions—such as qualifying holdings or outsourcing of critical activities—are taken by BdI in agreement with CONSOB.

14. For both FMIs, ongoing supervision is conducted on joint basis by BdI and CONSOB. This includes periodic reporting under the Italian Joint Regulation on Post-Trading as well as coordinated on-site and off-site reviews. The authorities share findings on on-going basis to ensure a unified supervisory approach and efficient use of resources, and coordinate to avoid sending duplicative requests. In addition, there is an annual Review and Evaluation (R&E) of ES-MIL and ENXC's activities by BdI and CONSOB. Further, ES-MIL and ENXC must annually update a recovery plan, subject to assessment by the authorities. Cooperation between the authorities is governed by MoUs for CCP and CSD, respectively.

15. As the central bank of issue for the euro, the Eurosystem exercises oversight over CCPs that clear EUR-denominated instruments through the ECB and the national central banks; for ENXC, BdI acts in a dual role as national authority and Eurosystem representative. When a college opinion is required, BdI assesses the relevant information and shares it within the Eurosystem, which may raise objections or issue recommendations relating to the currency it issues.

16. Both BdI and CONSOB have broad supervisory powers regarding ES-MIL and ENXC. The authorities may: request the submission of documents, records, and data (including periodic reports); conduct inspections and hearings; require the production of documents and the performance of acts deemed necessary; instruct the FMI to take corrective measures to ensure compliance with applicable regulations; impose sanctions; and withdraw CSD and CCP's authorization. In cases of necessity or urgency, only BdI may adopt any measures required to safeguard financial stability, including dissolving its board and acting temporarily in place of the CCP or CSD.

17. Between Q4 2024 and Q1 2025, the authorities conducted a thorough on-site inspection of ES-MIL focusing primarily on governance and risk management. The inspection report was delivered to the CSD in May 2025. The corrective measures outlined by ES-MIL are under joint evaluation by CONSOB and BdI.[1]

18. Authorities receive regular and structured reporting from ENXC. These reports include annual financial statements; agendas, minutes, and supporting documents from Board and committee meetings – along with CRO reports – typically provided four to five times per year; monthly updates on the investment portfolio; and annual results of model validations. In addition, minutes of risk committee meetings are shared when relevant changes occur or opinions are required. The CCP also provides advance notification to authorities regarding any planned changes to governance, risk management, or operating rules. To support real-time oversight, BdI operates an electronic monitoring system connected to ENXC, providing daily and intraday data on margins, exposures, and positions at both aggregate and participant levels. Authorities receive daily feeds on margins and default fund contributions. CONSOB and BdI may request additional information, conduct inspections, or hold meetings with management at any time to review compliance and risk management practices.

19. Authorities also receive regular reporting from ES-MIL. It includes the annual report on structure and activities, yearly financial statements, and documentation from Board and committee meetings, including CRO reports. Authorities also receive investment portfolio data and minutes from risk committee meetings. In addition, ES-MIL provides daily settlement data, enabling authorities to monitor operational performance and reliability. As with ENXC, CONSOB and BdI may request additional information, inspect and meet with ES-MIL management at any time.

20. The annual R&E process involves a detailed assessment of governance, operational resilience, and risk controls. During each review cycle, the authorities remain in close contact with ES-MIL and ENXC's management to ensure completeness, accuracy, and timeliness of the information provided. Annual reviews are approved by both BdI and CONSOB boards, with BdI coordinating for ENXC and CONSOB for ES-MIL. The resulting R&E is shared with the Eurosystem, with other relevant authorities in the College and with ESMA – as relevant.

[1] Authorities reported details on numerous engagements with ES-MIL since the inspection on how to address the findings.

21. Authorities' powers extend to gathering information not only from the FMIs but also from their participants. There is robust engagement between the authorities and FMI participants. As an example, ENXC participants indicated during mission interviews, regular checks that BdI and CONSOB engage in, such as actively requesting enhancements in transaction reporting. Similarly, CSD participants provide annual documentation to CONSOB regarding deposits and sub-deposit accounts, reflecting ongoing supervisory dialogue and information exchange.

22. Most outsourcing by ENXC and ES-MIL occurs within the Euronext Group and is governed by an internal agreement that complies with EMIR and CSDR requirements. The internal agreement recognized competent authorities the right to supervise outsourced functions, conduct on-site inspections and audits, and access all relevant business premises, systems, data, staff, financial information, and external auditors. When outsourcing involves third-party providers, the Italian authorities ensure that contractual arrangements include equivalent provisions guaranteeing supervisory access. Both entities are legally required to cooperate fully with the authorities, and any failure to do so may result in sanctions.

Resources

23. BdI and CONSOB have adequate personnel with diverse and updated expertise to supervise ENXC and ES-MIL. For specific tasks like inspections or cybersecurity, additional specialists (e.g. legal, cyber) can be drawn from other departments as needed. The Post-Trading Division at BdI and the Post-Trading Office at CONSOB lead regulatory and supervisory activities, with 5 FTEs from BdI and 2 FTEs from CONSOB for ENXC, and with 3 from BdI and 3 FTEs from CONSOB for ES-MIL. Ongoing training initiatives are available internally and externally to maintain and enhance staff capabilities. ES-MIL also provided training opportunities on new systems for CONSOB experts to attend. Similarly, BdI organized a one-week training "stage" at ENXC for training purposes.

24. Authorities consider the available resources sufficient to fulfil their regulatory, supervisory, and oversight roles. BdI uses a dedicated committee that assesses resource needs based on input from the Professional Development Directorate. This assessment covers a three-year horizon and considers evolving tasks, technology, and organizational changes. Flexible mechanisms exist for reallocating staff across directorates and making organizational adjustments. Consob follows a similar resource evaluation process managed by its Human Resources Division. Staff reallocation from lower-priority tasks is used to manage peak workloads. Consob's budget is primarily funded through fees with minimal state contribution.[1]

[1] The legal hiring limit is 700 employees, which Consob is close to, and hiring below this threshold doesn't require external approval. New regulatory powers adjust these limits. BdI operates with financial independence and acknowledges sufficient resources to meet its mandates.

Legal Protection

25. BdI and CONSOB employees, as well as the members of governing bodies, are only liable when exercising supervisory powers for gross negligence and for acts committed intentionally. Although the Italian Consolidated Banking Act and TUF provide such protection, the Law does not include protection to professional service providers engaged in supervisory tasks and, critically, does not mention coverage of defense costs incurred during legal proceedings. BdI and CONSOB have adopted internal rules for the reimbursement of legal expenses after the conclusion of the proceeding or for the provision of advance payments in the form of condition and collateralized loans.[1] However, these arrangements are insufficient to ensure timely and effective financial protection during lengthy legal processes, as coverage of legal defense costs should be comprehensive and available from the outset of proceedings. To ensure the effectiveness of legal protection in line with international standards and best practices, statutory provisions should explicitly provide for full coverage of legal defense costs in primary legislation.

Authorities' Cooperation

26. National and EU authorities collaborate closely to supervise Italian FMIs. The terms of CONSOB and BdI cooperation in the supervision of Italian post-trading infrastructures has been recently formalized through an MoU. ENXC and ES-MIL are also authorized FMIs by the Bank of England under Brexit transitional provisions, with ESMA developing a related MoU.

27. Colleges of Supervisors play a central role in EU supervisory cooperation. Under EU law, ENXC must have a college coordinating supervisory approaches and supporting national competent authorities in the supervision of CCP resilience and risk management. Soon, ES-MIL will also have a college with similar responsibilities coordinating with home and host authorities. It will be chaired by CONSOB.

28. ENXC's College of Supervisors is co-chaired by BdI and ESMA. Since EMIR 3 implementation, the co-chairs manage meeting agendas, opinions, and communications jointly. Collaboration between ESMA and BdI is active and includes Consob's input, enhancing supervisory alignment. Pre-college coordination and trilateral meetings between CCPs, ESMA, and national authorities enhance cooperation across member states.

29. ESMA and the EMIR College issue non-binding opinions on key supervisory matters. ESMA's role includes independent validations of model changes in tandem with BdI. Both BdI and CONSOB participate actively in the ESMA CCP Supervisory and Policy Committees.

[1] In particular, CONSOB financial support consists of (i) reimbursement of legal expenses afforded by staff (and former staff) after a final verdict exonerating a staff member from liability, and (ii) the possibility to provide monetary advances on such reimbursement at the end of each level of the proceeding if the total absence of liability is ascertained.

30. ESMA conducts periodic EU-wide stress tests assessing CCP resilience. BdI and CONSOB support all phases, with the latest test completed in July 2024. ENXC showed adequate resilience in the last test.

31. Ad hoc cooperation mechanisms exist for specific events. For instance, regarding ENXC, BdI cooperated with French authorities (AMF, BdF, ACPR) for the implementation of ENXC internalization project of clearing activities from LCH SA.[1] After extending ENXC's services to Euronext cash equity markets, this project involved extending ENXC's clearing services to commodity derivatives traded in the French market MATIF, and to financial derivatives that were previously cleared by LCH SA (France). BdI and French authorities engaged prior to the migration, French supervisors exchanged observations, and BdI prepared a contact list of the relevant contact persons during the transition weekend. As the migration proceeded smoothly, the contact list was not needed. The migration happened in two phases and was finalized in September 2024.[2]

32. The ECB participates in the Eurosystem CCP working group and ENXC's supervisory college. Cooperation also involves bilateral engagements, primarily with BdI. BdI represents the Eurosystem's central bank of issue in ENXC's College and coordinates Eurosystem views. For ES-MIL, the Eurosystem will participate in CSDR Colleges with a consultative role.

33. The Italian Ministry of Economy and Finance is charged with establishing fit-and-proper requirements for ENXC's management and has crisis powers. It can order compulsory liquidation of a CCP upon BdI's proposal and consultation with CONSOB. It is also a member of ENXC's resolution college.

34. ES-MIL engages effectively in European and international cooperation. CONSOB participates in ESMA groups and, together with BdI, in the T2S Cooperative Arrangement, coordinating supervision with the Eurosystem and other authorities. ES-MIL follows CSDR passporting when offering services in other EU countries and has secured authorization for twelve host countries.[3]

35. Cooperation intensifies during crises and emergencies. ESMA received continuous updates during events such as the COVID-19 pandemic and the invasion of Ukraine and has been empowered to coordinate crisis responses under EMIR 3. Major ICT incidents trigger immediate notifications as required by the Digital Operation Resilience Act (DORA). Notifications are shared

[1] The internalization project was announced by Euronext in November 2021. Its objective is to make ENXC Euronext's CCP of choice for all transactions initiated in Euronext's trading venues, including all cash equity, listed derivatives and commodities markets. This internalizes the clearing activity of Euronext's cash and derivatives flows, that before were operated by third-party providers, such as LCH SA. More information can be found here: Expansion of Euronext Clearing to derivatives markets in Q3 2024.

[2] During the migration of trades previously cleared through LCH SA, BdI and CONSOB cooperated with French authorities: Autorité de Marchés Financiers (French Capital Markets Supervisory Authority), Autorité de Contrôle Prudentiel et de Résolution (French Resolution Authority), and Banque de France.

[3] In Greece, Germany, Poland, Belgium, Spain, Austria, Czech Republic, Luxembourg, Malta, The Netherlands, France, Ireland.

within EU and G7 cyber networks, while national resolution authorities lead in resolution cases.[1] Emergency protocols detailed in the College of Supervisors agreements require authorities to promptly share crisis information with members for coordinated actions, supported by an updated contact list and annual emergency test calls. Although rarely activated, this protocol ensures swift communication within a day of an event with other college members, who can also initiate contact and organize calls. In addition, ESMA coordinates global CCP fire drills and default emergency simulations to prepare authorities for prompt and effective crisis management across regulatory frameworks such as EMIR, CSDR, and resolution processes. While the mission was undergoing, Italian authorities and ENXC participated in a fire drill organized by CCP Global.

36. Cross-border and multicurrency services are regulated and closely monitored. ENXC provides clearing in multiple currencies and across borders. ES-MIL offers services to foreign participants and holds foreign securities through authorized links. Risk management and controls for the link between ENXC and LCH SA are reviewed regularly by BdI and CONSOB.

Disclosure

37. Periodic assessments against the PFMIs are important. BdI and CONSOB assess FMIs regularly against PFMIs, with inputs from other authorities in colleges or specific reviews. EMIR and CSDR require detailed consultations for authorization, passporting, and periodic evaluation. In addition, ENXC and ES-MIL publish their self-assessment reports, as per the disclosure requirements in the PFMIs. While ENXC's is updated to 2025, ES-MIL's was last published in 2021.

B. Strengths

38. The mission identified several areas of strong performance:

- *Clear role of authorities*: roles and responsibilities of BdI and CONSOB are clearly established in the EU regulation, the Italian law and in the MoU.
- *Clear regulatory framework*: The PFMIs apply to CSDs and CCPs in Italy through a harmonized EU framework, with EMIR applying to CCPs and CSDR to CSDs.
- *Supervisory processes are documented:* At BdI, an internal manual documents the approach and procedures for supervising CCPs and CSDs, extending to other functions within the payments and market infrastructures directorate where post-trading functions reside. This manual is reviewed annually by a dedicated team.

[1] In February 2025, T2S stopped working, bringing down the entire TARGET system. This was an example of coordination between authorities in the T2S cooperative arrangement and ESMA. Following the event, ESMA issued a press release on March 2, 2025, suspending settlement penalties for the period the system was down. Authorities waived penalties for all EU participants— including non-T2S members. The ESMA statement can be found here.

- *Adequate supervisory tools:* Authorities have unrestricted supervisory tools to fulfil their duties.

- *Supervisory tools and powers are applied proportionally and with progressive escalation:* Authorities consider all feedback before final actions. During the mission, there were many examples in which the authorities illustrated how they use their supervisory powers proportionally. Starting from moral suasion, progressing to a written notification, or escalating to an on-site inspection when needed.

- *Adequate and frequent reporting from FMIs and participants:* Authorities have broad access to information from ES-MIL and ENXC – including documents, data, and on-site inspections – to assess their operations, risks, economic impact, and regulatory compliance. Strong information exchange exists with FMI participants.

- *Proactive engagement with FMIs and market participants:* There are many channels in which BdI and CONSOB are proactively engaging with FMIs and their participants. Communication is fluid and it is not limited to regulatory reporting. Indeed, engagements are continuous in formal set ups and working groups, as well as informal in bilateral calls and exchanges.

- *Effective cooperation between BdI and CONSOB – also with ESMA:* Governance clarity ensures effective collaboration. BdI and CONSOB also seek efficiency by minimizing duplicative communication with the CSD and the CCP. Cooperation with ESMA is increasingly important and highly effective. Italian authorities participate in the different technical groups at ESMA and have an active role.

- *Appropriate number of staff, adequate skills, and independence for recruitment:* BdI and CONSOB have sufficient resources to fulfill their duties and an adequate level of independence for hiring the expert profiles they require. BdI is financially independent. CONSOB funds its supervisory activities through fees charged to the FMIs*Cooperation with other authorities:* cooperation happens mainly through the colleges of supervisors, with ENXC fully functional and ES-MIL college soon to be set up. Additionally, there are ad-hoc collaborations with authorities.

C. Recommendations

39. Recommendations to improve ongoing practices include:

Enhance and formalize the cooperation among supervisors of the four Euronext CSDs and with other entities within the group. Euronext Group operates multiple interconnected entities, including CSDs in Oslo, Copenhagen, Porto, and Milan, as well as affiliated Trading Venues (TVs) linked to these CSDs. To effectively oversee this complex ecosystem, it is essential to strengthen and formalize cooperation between the supervisors of the four Euronext CSDs. This collaboration will be institutionalized once the CSD College of Supervisors is established. Meanwhile, Italian authorities should proactively deepen bilateral cooperation with the other CSD supervisors. Furthermore, Italian authorities should explore extending cooperation to other Euronext entities, such as TVs connected to ES-MIL. Currently, a voluntary college of supervisors exists for Euronext TVs, including Italian participation, but it does not focus on CSD supervision. It is recommended to expand this voluntary college to incorporate CSD supervision. This integration is important because the forthcoming CSD College of Supervisors will not include TVs' supervisors, and an expanded voluntary college could fill this gap.

- *Formalize cooperation arrangements with authorities supervising Euronext N.V.* ES-MIL and ENXC are ultimately owned by Euronext N.V., incorporated in the Netherlands, and headquartered in Paris. While the French authorities will participate in the future CSD college, the Dutch authorities will not. It is therefore important for BdI and CONSOB to explore formal mechanisms for cooperation and information exchange with all relevant supervisors of Euronext N.V.

- *Enhance regularity of on-site supervisory activities at ENXC.* Since ENXC's acquisition by Euronext Group, there have been no on-site inspections. The mission recommends that authorities plan regular on-site reviews, including targeted inspections where appropriate, to maintain effective oversight.[1]

- *Require ES-MIL to update its PFMI self-assessment.* The last PFMI self-assessment by ES-MIL dates to 2021, and significant changes have since occurred. Authorities should require ES-MIL to update this self-assessment promptly and establish a schedule for periodic reviews, at least every two years.

- *Improve legal protection of employees at BdI and CONSOB by ensuring full coverage of defense costs from the outset of proceedings.* Current provisions under Law No. 262/2005 limit liability for gross negligence or intentional acts but do not extend protection to external experts, or advance payment of legal expenses for staff as well as former staff. BdI reimburses costs only after proceedings conclude, with optional loans for upfront payments. CONSOB also provides for a similar mechanism of assistance to its staff. To guarantee certainty and enforceability, primary legislation should be amended to provide comprehensive protection, with detailed conditions set in secondary rules.

GOVERNANCE – ES-MIL

A. Description and Findings

Organizational structure

40. A legal and regulatory framework governs ES-MIL decision-making for safe management of financial instruments and to protect stakeholder interests. The ES-MIL

[1] At the close of the first FSAP mission, authorities indicated that an on-site inspection of ENXC was being launched.

rulebook or Service Regulation defines the framework, conditions, and procedures for accessing and using the CSD services. It establishes the rights and obligations of participants and ES-MIL.[1]

41. ES-MIL's governance arrangements aim to ensure clear strategic oversight and control. It has a Board of Directors (the Board) responsible for strategic guidance and a Board of Statutory Auditors overseeing control functions. The Board comprises a mix of independent, non-executive, and executive directors, appointed by shareholders.

42. Board accountability includes appointment and oversight of senior management. The Board appoints key officers including the Chairman, Deputy Chairman, CEO, General Manager, and directors with delegated powers. In ES-MIL the CEO is also the General Manager, and the CEO of the Euronext CSD in Porto.

43. ES-MIL has three board advisory committees. The internal risk committee, which advises the Board on risk aspects, shares members with the risk committees of all four Euronext CSDs, rotating the Chair to align with the CSD under discussion; the remuneration committee, whose members are also common across the four CSDs, agree compensation policies for staff, including fixed annual salary, bonus and equity; and the audit committee, also common for the CSDs in the group, oversees the internal audit function and reports to the Board.

44. The User Committee consists of participants and issuer representatives and provides non-binding advice to the Board on key issues such as membership criteria and pricing. If the Board chooses not to follow its advice, it is required to notify the authorities. The User Committee has proven a useful channel for participants to be heard. For instance, the committee formally requested that ES-MIL extend deadlines for technical upgrades in relation to ES-MIL's expansion plans. This request was formally submitted and accepted after being initially raised less successfully in less formal forums, such as the PTPC.

Role and Responsibilities of the Board

45. ES-MIL's Board of Directors defines the company's strategic guidelines, monitors their implementation, and retains ultimate responsibility for strategic direction and oversight. The Board approves the strategic, business, and financial plans, ensuring alignment with the Euronext Group's overall strategy. Performance against these objectives is assessed through formal risk and governance frameworks. ES-MIL's Risk Profile is the framework to identify and periodically evaluate operational risks. A governance control framework supports compliance with strategic goals and reports regularly to the Board, the Statutory Auditors, and senior management.[2]

[1] The Services Regulation is publicly accessible, and amendments undergo consultation before Board and authority approval. Service Regulation (Updated October 2024).

[2] The Board of Statutory Auditors is responsible for overseeing the internal control system in the interest of stakeholders. It stems from an Italian law requirement.

46. The Board responsibilities are documented in the company by-laws. The Board appoints and reviews the remuneration, roles, and responsibilities of the CEO, General Manager, CRO, CCO, IT head, and Internal Audit Head. It approves investment policies, recovery and winding-down plans, organizational structures, outsourcing arrangements, business continuity plans, new services, and significant financial transactions. Additional responsibilities of the Board include approving service regulations, corporate policies, gender diversity guidelines, and overseeing conflict of interest management.

47. One third of Board members are independent. The Board currently comprises six members, two of whom are independent. It was recently expanded to meet the 30 percent gender-balance requirement in Italian law. Managerial and representative powers are delegated to the Chairman, CEO, and Group CFO.[1]

48. The CEO oversees business performance and day-to-day operations, reporting to the Board. Regular risk, compliance, and audit updates help the Board ensure risks align with its appetite and strategy. The CEO also serves as General Manager; CRO, CCO, and Head of Internal Audit report directly to the Board and coordinate daily with the CEO.

Role and responsibilities of Management

49. ES-MIL has established dual reporting lines for key functions to both Euronext Group and ES-MIL management. Management roles and responsibilities are clearly documented in the organizational chart and internal manual. Key organizational functions, including the CRO and COO, report both to ES-MIL's CEO and to the respective Euronext CSD group heads, such as the Head of Risk Management and Compliance.

50. Corporate functions within ES-MIL like HR, Finance, Legal, and Internal Audit are outsourced under formal agreements within the Euronext Group. Some of these outsourcing arrangements require regulatory authorization. Staff sharing arrangements allow personnel to hold roles across multiple Euronext CSDs and group functions for all four CSDs. A recent staff-sharing request relating to core CSD services across all group CSDs is under review by BdI and Consob at the time of the mission.

51. An escalation procedure exists for resolving misalignments between the group and ES-MIL. An escalation procedure is in place to address potential misalignments between the group and ES-MIL. While the CSD considers that ES-MIL and the other CSDs within the group are aligned, the procedure provides a framework for managing any misalignments should they arise. Experience, skills, and integrity of management.

52. ES-MIL appoints Board members based on defined professional criteria. Board members typically require at least three years of relevant senior experience in CSD topics. Additional

[1] Composition is determined by CSDR, which requires at least a third of independent board members.

expertise is recommended for committee chairs, and suitability is assessed at appointment and upon relevant changes.

53. Compensation of Board members is determined at the shareholders' meeting. For independent directors, remuneration does not depend on business performance. Executive members receive performance-linked remuneration in cash or equity. Executives holding roles within the broader group receive related compensation from those entities.

54. There are procedures in place to encourage the management to safeguard stakeholders' and general interests. For instance, fixed and variable remuneration for the CRO, CCO, Chief Technology Officer (CTO), and Head of Internal Audit are approved annually by the Board upon CEO proposal and are not directly related to the performance or risk taking of ES-MIL.

Policies on potential conflicts of interest

55. ES-MIL has established policies to manage potential conflicts of interest, which include its specific Conflict of Interest policies, the Euronext Code of Business Conduct, and the Board's Terms of Reference. These policies aim to prevent discretionary decisions that could adversely affect the market or stakeholders. In practice, at the start of each Board meeting, the secretary or chair asks members to declare any interest. Board members abstain from conflicted matters. Interests are recorded in a register maintained by the CCO. However, the register is not shared with the supervisory authorities, and there are no formal follow-up procedures for declared conflicts.

56. Certain aspects of the policy's implementation remain unclear, particularly regarding conflicts within the Euronext Group. The current framework primarily addresses conflicts outside the group and does not consistently consider potential conflicts between different CSDs within the group or between Euronext itself and ES-MIL. For instance, the CEO at ES-MIL is the same person as the CEO at Euronext's CSD in Porto. This requires adequate treatment of conflicts of interest.

57. An ad-hoc conflict of interest policy was recently introduced in ES-MIL. This policy restricts ES-MIL CEO from independently approving bilateral contracts affecting both ES-MIL and the Porto CSD, requiring instead Board approval—even for contracts below established thresholds—to mitigate conflicts related to the CEO's dual positions.

Authority and independence of risk management and audit functions

58. ES-MIL has dedicated CRO, CCO, Internal Audit, and Technology functions. They report directly to the Board and have separate reporting lines for the CEO for operational matters. The Technology Function manages Board-approved IT strategy implementation, controls, and vendor relationships. The Head of Internal Audit, outsourced to Borsa Italiana, has direct Board reporting and unrestricted access to personnel and records.

59. The CCO and CRO report to the Head of Group Compliance and Risk and have access to the Board. The CCO reports to the Board minimum twice yearly or more frequently as needed;

the CRO reports quarterly and may access the Board at any time. However, without a direct reporting line to a Board member, urgent access by the CRO could be procedurally unclear.

Disclosure mechanisms and engagement with participants

60. ES-MIL key governance arrangements can be found online. Publicly available information includes the group structure, ES-MIL By-Laws, Board and committee composition, Services Regulation, and remuneration policy. Additional governance documents are provided to authorities during R&E.

61. The last disclosure framework from ES-MIL dates from February 2021. This self-assessment against the PFMIs is outdated and does not account for changes after Monte Titoli joined the Euronext group.

62. Stakeholder views are gathered through different venues. This includes through public consultations, the company website, seminars, and regular meetings during amendments to the Services Regulation, regulatory implementations, or new service introductions.

63. The PTPC Steering Committee engages clients and stakeholders, with authorities. Originally set up for the launch of T2S, PTPC addresses settlement and post-trading issues. It gathers participant feedback through bilateral discussions and banking association input. Dedicated workstreams handle specific projects, such as change management and the transition to T+1.

B. Strengths

64. The mission identified several areas of strong performance:

- *Established participant engagement:* ES-MIL maintains well-established venues for discussion with market participants, including the PTPC Steering Committee, the PTPC subgroups and the User Committee.

- *Strong modernization efforts and strategic expansion plans:* Euronext has invested significantly in improving and modernizing ES-MIL's operational processes. This is reflected in changes in its governance structure to align with ambitious plans to evolve from an Italian infrastructure into a "hub-like CSD" broadly serving the European market.

- *Innovative governance solutions:* ES-MIL has implemented innovative approaches to optimize governance by maintaining consistent committee compositions across the group while allowing tailored setups for discussions specific to each CSD.

- *Skilled board with ongoing training:* Board members possess appropriate skills and participate in ongoing training programs at both group and CSD levels.

C. Recommendations

65. Recommendations to strengthen practices and mitigate emerging risks include:

- *Require ES-MIL to address potential competing priorities between different CSDs and the group,* including clarifying responsibilities related to dual reporting lines. Authorities could consider requesting the specific responsibilities for the double reporting line, including those of the group Head of Compliance and Risk and the group CRO for CSDs.

- *Ensure participants continue playing an active role in ES-MIL project implementation,* with working groups promoting two-way discussions and timely, effective communication. Going forward, it is important to maintain meaningful participant engagement and ensure forums such as the PTPC are used for genuine two-way discussions on operational changes or new initiatives. Participants should be involved in project design from the early stages and ES-MIL should prioritize communicating clearly on technical and operational specifications. This involvement is essential given the number of projects ES-MIL plans in the coming years and the significant effort and investment these projects require from participants.

- *Continuously monitor that ES-MIL maintains adequate staff levels.* This is important for effective governance, particularly as some employees now hold two or three roles concurrently, whereas they previously had full-time focus on a single role. This shift, occurring across ES-MIL, the Group, and other Euronext CSDs under staff-sharing arrangements, calls for careful oversight to ensure workload remains manageable and performance standards are upheld.

- *Require ES-MIL to strengthen its board performance evaluation policy* by increasing the frequency of overall board evaluations, establishing a formal policy for individual member assessments, and preparing an independent evaluation report.

- *Require ES-MIL to establish an additional reporting line for the CRO directly to a non-executive director on the Board.* This will facilitate the CRO's access to the Board and comply with the PFMIs.

- *Require ES-MIL to enhance its conflict-of-interest policy* by implementing a process to review potential conflicts and sharing the internal conflict register with the relevant authorities.

GOVERNANCE – ENXC

A. Description and Findings

Organizational structure

66. ENXC's governance arrangements aim to ensure clear strategic oversight and control. ENXC's governance follows a traditional management and control system, with a Board of Directors (the Board) responsible for strategic guidance and a Board of Statutory Auditors overseeing control

functions. The Board comprises a mix of independent, non-executive, and executive directors, appointed by shareholders.

67. Board accountability includes appointment and oversight of senior management. The Board appoints key officers including the Chairman, Deputy Chairman, CEO, General Manager, and directors with delegated powers. It assesses their integrity, professional qualifications, and independence and holds them accountable for implementing corporate strategy and risk management.

68. ENXC has two advisory board committees to facilitate its functioning, the risk committee, and the remuneration committee:

- The risk committee consists of clearing member representatives, independent board members, and client representatives, ensuring no group has a majority. While the CCP must seek the committee's advice on certain risk management issues, its recommendations are non-binding.[1] Nonetheless, the CCP has consistently adopted the committee's suggestions, often revising proposals accordingly.

- The remuneration committee includes at least three members, two of whom are independent non-executive directors. The committee meets at least once a year. Further details for both committees are publicly available in [Committees | Euronext Clearing](#).

69. In addition, there are internal executive advisory committees to the CEO: the risk committee, operational risk committee, investment committee, membership committee, default management committee. The executive internal committees assist the CEO in operational decisions, and their scope is detailed in Terms of References.

Roles and Responsibilities of the Board

70. The Board of Directors defines the CCP's strategic direction and oversees its governance and risk framework. It sets the institution's objectives and ensures activities comply with applicable laws, regulations, and by-laws. The Board manages organizational structure, business strategy, and risk arrangements to align risks with strategic objectives and risk appetite, holding full authority over ordinary and extraordinary management, including stress situations.

71. The Board approves major corporate plans and policies and oversees risk management and control frameworks, including business continuity. This includes strategic, industrial, and financial plans, annual budgets, and significant business initiatives. It approves and oversees the RAF, ensuring alignment with the strategic plan, and establishes policies on risk management, investments, liquidity, and internal controls, reviewing them regularly.

[1] The risk committee advises, amongst others, on risk models, liquidity planning, default policies, and recovery planning.

72. The Board oversees the CCP's operational resilience and information-security framework. The board is responsible for the implementation and maintenance of the Business Continuity Management System and the Information Security Management System in line with ISO standards.[1] The Board designates the officers responsible for these areas and oversees their activities.

73. Financial and recovery arrangements are Board responsibilities. The Board sets the framework for calculating default fund sizes, reviewing it annually with Risk Committee input. It approves recovery plans under relevant regulations and evaluates major strategic and financial transactions.[2]

74. Governance and control functions fall under Board supervision. The Board appoints and monitors key officers including the CRO, CCO, Head of Internal Audit, and General Manager, defining their duties and remuneration. It establishes advisory committees and determines the scope of delegated powers and reporting frequency. The Board also defines a general remuneration policy and clarifies reporting lines.

75. Board member independence and expertise are ensured through formal annual assessments. Members must show integrity, relevant skills, and undergo yearly independence reviews with public disclosure of independent directors. Ongoing training covers operations, technology, cybersecurity, and AI.

76. The Board conducts regular self-assessments of its overall and individual performance. Surveys cover governance, decision-making, committee effectiveness, and risk management, with aggregated responses discussed internally and followed up to ensure continuous improvement.

Role and Responsibilities of Management

77. Management roles and responsibilities are well defined in the organizational chart and internal manual. The CEO and General Manager roles are combined in Mr. Mottola, who leads daily operations, executes Board resolutions, manages risk and compliance, and coordinates key functions. Senior management includes Heads of first line of defense Risk Management, Strategy & Product Development, Sales & Relationship Management, and Investment & Liquidity Management, as well as the Chief Technology Officer and the Chief Operating Officer, ensuring comprehensive operations and reporting.

78. Overall, the new structure of ENXC shows a clear decision-making authority for effective execution. The Board holds all key powers for company management, defining strategy,

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[1] ISO 22301:2019, ISO 27001:2013, and ISAE 3402.

[2] A more detailed assessment of the risk management framework can be found in the next section (Risk management framework) of this Technical Note.

risk appetite, budgets, and policies. The CEO manages operational execution, client relations, risk, investments, and institutional communication under Board oversight.

Risk Management Framework

79. Recent changes enhanced risk management governance and introduced a new position to coordinate clearing operations. Separate teams for the first line of defense (reporting to the CEO) and second line of defense (reporting to the CRO, who is independent from business lines) were established to reinforce the CRO's independence. The creation of the Chief Operating Officer (COO) role improved operational coordination, efficiency, and support for the CCP's long-term strategy. The COO centralizes project coordination, oversees business expansion, and ensures day-to-day operations align with strategic objectives.

80. Internal control framework enhances governance and risk oversight. ENXC's system enables management to govern and operate efficiently and stay compliant with the risk appetite defined by the Board. It features second-level controls, Internal Audit, and a Surveillance Body that oversees compliance with Italian law.[1]

Experience, Skills and Integrity of Management

81. ENXC has a thorough recruitment and retention of skilled management. Since the acquisition by Euronext, the overall size of the CCP staff has doubled in 4 years. New joiners have also reinforced quantum and AI skills. The CCP has its own staff, which is not shared with the rest of the group's functions. In addition, there is limited outsourcing. HR services are outsourced with final hiring approvals maintained within ENXC.

82. Compensation policies for management are approved by the Board and incentivize safety. ENXC's remuneration framework aligns incentives with prudent risk-taking and business strategy fulfillment, governed by the CCP's own remuneration committee and subject to external compliance standards. For instance, the salaries of the CCO and the CRO are not dependent on the CCP's returns. Compensation includes fixed annual salary, bonus, and equity.

Conflict of Interest

83. The CCP governs conflicts of interest according to:

- the CCP's Code of Business Conduct and Ethics,
- the Conflicts of Interest policy of the Euronext Group,
- the CCP's By-Laws,

[1] According to Legislative Decree 231/2001, under Italian law, if an individual commits an offense in the interest of a company, both the individual and the company may be held liable, unless the company can demonstrate that it had an effective compliance and oversight body in place to prevent such conduct – the Surveillance body. This framework covers offenses such as corruption, market abuse, and insider trading.

- and ENXC's Policy for the CCP Conflicts of interest management (drafted in line with the ESMA Guidelines on the management of conflicts of interest of CCPs).

While By-Laws are publicly disclosed, the other documents mentioned are disclosed to the authorities only.

84. The CCP has a framework in place to identify, manage, and monitor conflicts of interest. ENXC's policies consider conflict of interest within and outside Euronext group. According to internal policies, the CCP defines potential or actual situations that may give rise to conflicts of interest, sets measures to prevent them, and establishes procedures for their reporting and management. The policy is reviewed annually. Board members are required to disclose to the Board any circumstance that may create a conflict of interest or affect their independence or objectivity. The CCO maintains a register of identified conflicts based on self-declaration, which remains active for one year and is reassessed during the subsequent annual review. The CCO may escalate to the Board any conflict reported to them and provide information on potential conflicts involving the CEO or new management appointments.

85. The CCP maintains internal policies on staff conduct, personal trading, and insider information. These policies cover gifts, hospitality, personal investments, and conflicts of interest—addressing both group-wide and local EMIR-related requirements. Some roles are restricted from personal trading to avoid conflicts. An appendix requires prior approval from management and the CCO for personal trades, which must be logged and executed within two days.

Escalation mechanism in case of misalignments with Euronext group

86. The CCP has an escalation process to maintain ENXC's board independence. If there is disagreement between group views and ENXC, the matter goes to the ENXC board, which makes the final decision after receiving a recommendation from Euronext's supervisory board. The board is split, with three group members and three independents, plus the CEO and a non-executive member.

Disclosure Mechanisms and Engagement with Participants

87. The CCP maintains communication channels with market participants and authorities. Engagement takes place through different channels including the clearing PTPC, a forum for discussion with authorities and market participants and input from the banking association. In the meetings, ENXC presents its project roadmap and collects participant views. It is not integrated with the Steering PTPC.

88. There are other channels for engaging with participants, such as the international participants committee and public consultations. The International Participants Committee mirrors the PTPC but focuses on non-domestic participants. When amendments to the rulebook are proposed, the CCP conducts consultations with participants and industry groups and market associations. Participants may also raise related matters through the Risk Committee.

89. ENXC keeps an up-to-date disclosure framework. The most recent self-assessment against the PFMIs was in 2025.[1]

B. Strengths

90. The mission identified several areas of strong performance:

- *Strong commitment to continuous improvement:* ENXC actively addresses supervisory requests and demonstrates dedication to enhancing its processes and practices. Significant improvements include the separation of first and second lines of defense and the appointment of a new Chief Operating Officer. This commitment was reflected in their openness and constructive collaboration with the mission.

- *Effective participant communication:* Communication channels are established through the Clearing PTPC and the Risk Committee.

- *Limited outsourcing with strong internal IT investment:* ENXC relies minimally on outsourcing while investing substantially in in-house IT development.

- *Clearly defined governance roles:* Roles and responsibilities for the CCP board, management, and staff are well documented and clearly assigned. The CRO maintains an appropriate level of independence, with no identified conflicts arising from competing priorities within the Euronext group.

- *Growth in skilled staff:* The organization has increased staff numbers significantly, doubling it in recent years. This growth comes with appropriate expertise to meet operational needs.

- *Board conflict of interest policies:* Comprehensive policies and procedures are in place to identify, prevent, and manage potential conflicts of interest.

C. Recommendations

91. Recommendations to strengthen practices:

- *Maintain strong engagement with participants and explore integrating the Clearing PTPC within the PTPC steering structure.* This integration would support comprehensive discussions on implementation priorities across Euronext FMIs in Italy. Considering the effort required by participants, it is essential to ensure that discussions on new initiatives and operational changes provide participants with a clear understanding of overall priorities.

[1] ENXC's self-assessment can be found here.

- *Require ENXC to enhance its board performance evaluation policy.* This should include increasing the frequency of overall board evaluations, introducing a formal policy for assessing individual board members, and preparing an independent evaluation report.

ES-MIL & ENXC - FRAMEWORK FOR MANAGEMENT OF RISKS, INCLUDING MARGIN[1]

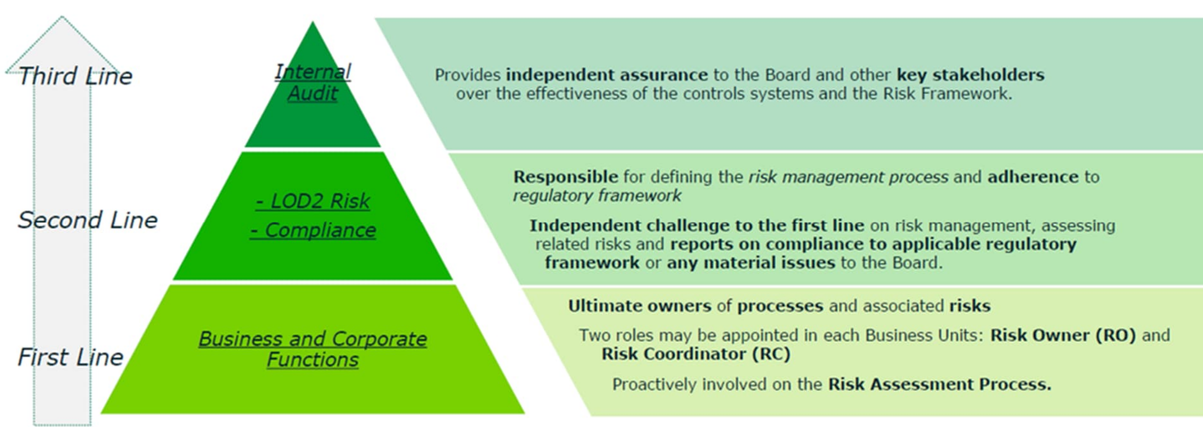
A. Description and Findings

Common Risk Management Framework Methodology

92. Euronext group has a unified methodology for risk assessment and management. This methodology is used by all CSDs in the group and also by the CCP. It covers the assessment of risks and also different procedures on how to manage these risks. For instance, there are common procedures on how to monitor incidents that apply to all Euronext entities, including the CSDs and the CCP. Euronext has set up a common and unified Risk Framework to support the identification and assessment of risks affecting the company.

93. Risk management at ES-MIL and ENXC is structured around three Lines of Defense. The first line (LOD1) includes business and corporate functions responsible for direct risk management and control implementation and is considered the risk owner. The second line (LOD2) comprises independent risk and compliance functions, led by the CRO and CCO, providing challenge and oversight. The third line (LOD3) is the Internal Audit function, which delivers independent assurance on internal controls and risk governance.

Figure 2. Italy: Three Lines of Defense Diagram



Source: ENXC.

[1] More granular details can be found in Annex V.

94. ES-MIL and ENXC's Board of Directors hold ultimate responsibility for risk oversight, including approval of the RAF. The RAF defines acceptable risk levels consistent with organizational strategy. Several internal and external committees contribute to risk governance, including risk committees, operational risk groups, membership and investment committees, and the Board of Statutory Auditors. These bodies engage in review, challenge, and approval processes across risk domains. In the case of ES-MIL, the same risks are considered at the group level across all four Euronext CSDs, sharing a common base RAF. Additionally, ES-MIL can incorporate specific risks unique to its operations. ES-MIL can tighten the risk appetite for particular risks but cannot make it more lenient. Then ES-MIL Risk Committee reviews the proposed framework and recommends it for approval, the BoD evaluates the Committee's advice and holds responsibility.

95. ES-MIL and ENXC operate under a risk management framework designed to identify, assess, manage, monitor, and report a broad spectrum of risks. For ENXC, the framework is aligned with regulatory requirements in EMIR, CCPRR, DORA, and ESG considerations.[1] For ES-MIL the framework aligns with CSDR, and the focus is more on operational risks.

96. The risk management framework follows a continuous cycle of communication, risk identification, assessment, treatment, and monitoring in line with the RAF. Risks are scored by likelihood and impact to prioritize actions, with clear responsibilities and regular reviews. ENXC maintains and updates a quarterly risk register.

ES-MIL Specific Risks and Risk Mitigation Procedures

97. Risk categories for ES-MIL are mainly operational. This is because ES-MIL does not provide credit facilities, does not bear credit risks from participants, and is not exposed to losses from participant defaults. Moreover, ES-MIL settlement system is outsourced to T2S that operates gross settlement in central bank money.

98. ES-MIL has procedures in place to manage specific risks:

- Risks associated with links to other CSDs, according to the risk management measures in CSDR.
- Risks from service providers through risk assessments and due diligence during selection and ongoing oversight, including regular monitoring of ICT services.
- Operational risks ES-MIL may pose to other entities are tracked daily with real-time monitoring tools that detect delays and anomalies, logging incidents, and escalating issues when necessary.

[1] The ENXC's Enterprise Risk Management Framework (ERMF) comprises: a Risk Register tracking strategic, financial, and operational risks mapped against Board-approved RAF; Key Risk Indicators (KRIs) that provide early warning signals in case a risk deviates from appetite; an IT incident repository documenting problems, including near misses, with active monitoring of corrective measures; an operational Risk Committee that regularly reviews business unit risk assessments and advises the CEO; redundant infrastructure supporting business continuity and cyber resilience (for instance, a two-tiered model with data centers in different locations).

- ES-MIL conducts regular Business Continuity and Disaster Recovery tests and participates in BdI's simulations to assess crisis management coordination.

99. ES-MIL supports participants in managing risks through regular communication, reporting, and engagement. Participants receive updates on regulations, and operational changes through reports, training, and the user committees. A test platform allows participants to verify system readiness, and participants take part in Business Continuity tests and receive incident alerts.

100. ES-MIL uses monetary penalties to encourage risk management and penalize settlement failures. Participants with frequent failures join targeted improvement plans. The ES-MIL Service Regulation permits suspension for unmet criteria, service disruption, or serious rule breaches, with clear procedures for consistently poor performers.

101. ES-MIL manages insolvency risk via a dedicated Insolvency Procedure, activated for direct or indirect participant insolvency in settlement. This procedure is tested annually with participants and Italian authorities, with communications and actions detailed in the Services Rules.

102. The effectiveness of ES-MIL's risk management tools is assessed by the Internal Audit function (LOD3), through targeted audits conducted according to the annual Internal Audit Plan.

103. ES-MIL reviews and updates its risk management Framework, RAF, and related procedures annually. It continuously monitors shifts in risk exposure and environmental factors. Quarterly, ES-MIL prepares a Risk Profile report for the Board, detailing key risks and corresponding mitigation plans.

ENXC's Specific Risks and Risk Mitigation Procedures

104. Risk categories addressed within the ENXC's framework include: credit, market, liquidity, settlement, operational (including cyber), investment, systemic, legal, climate risks and interoperability risks (through the link with LCH SA).[1] Detailed information can be found in Annex IV.

105. ENXC's risk models are subject to daily monitoring, backtesting, sensitivity analysis, and governance reviews. Daily operations leverage systems that integrate trades in real-time, net positions, and aggregate risk exposures across portfolios, accounts, clearing members, and banking group levels as needed for risk management purposes. This includes margin calculations, default fund sizing, liquidity assessments, interoperability risks with linked CCPs (LCH SA), and stress testing conducted by independent functions and reported regularly to senior management and the Board.

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[1] ENXC employs a "no-spillover" design for its interoperability link with LCH SA. Under this arrangement, the two CCPs do not contribute to each other's default funds but do exchange margins on open positions, along with an additional non-mutualistic margin buffer. More details can be found in Annex IV (last bullet point).

106. ENXC's interdependencies are assessed and incorporated into risk management governance and recovery planning. ENXC maps dependencies across related entities and identifies critical interdependency risks such as:

- Interoperability risks with linked CCPs like LCH SA, including model discrepancies and liquidity strains.
- Disruptions in settlement/payment infrastructures such as CSDs, ICSDs, T2, and T2S.
- Liquidity shortfalls due to simultaneous defaults or credit unavailability.
- Member concentration and default contagion risk at banking group level.
- Counterparty and investment risks in treasury portfolios.
- Outsourcing and cyber risks from critical service providers.
- Legal, regulatory, and general business risks including loss of participants or interoperability termination.
- Failure or recovery actions at ENXC, which can transfer risks to markets and participants through default fund erosion and assessments.

ES-MIL Recovery Plans

107. In its recovery plan ES-MIL identifies its critical services and outlines stress scenarios to assess its ability to maintain services. These scenarios consider exceptional but plausible events reflecting ES-MIL business nature, size, interconnections, funding model, and organizational structure. Key risks include general business, operational, custody, and investment risks.

108. The Plan aims to enable effective response to extreme and comprehensive scenarios. The plan includes descriptions of scenarios; triggering events; preventive controls; financial and operational impacts on ES-MIL and participants; specific recovery measures such as capital raising, asset sales, dividend postponement, contract renegotiation, service closures, and staff cost reductions.[1] Scenarios account for both independent and related risks.

109. The Recovery and Winding-Down Plan undergoes annual reviews or updates after significant developments, with submissions to competent authorities before and after Board approval to ensure compliance with CSDR and Joint Regulation on Post-Trading requirements.

[1] ES-MIL recovery capabilities are expected to expand with the ECB-led T2S Recovery project. This recovery project is a response to incidents on the T2S platform, to ensure rapid recovery from major disruptions and minimize their impact on participants like CSDs. The project began in June 2024 with the activation of a functional workstream, in which ES-MIL participates.

ENXC Recovery and Resolution Planning

110. Preparing the recovery plan requires close coordination across ENXC's departments. The default management committee reviews the plan at the CCP, considers input from the risk committee, and submits it to the Board for approval. The plan includes a master procedure document that outlines implementation steps. Both documents are then submitted to the authorities.

111. Recovery plans identify critical services and incorporate analyses of material risk scenarios and set out procedural responses to maintain critical service continuity. ENXC has set a wind-down period according to contract maturities, expenses, and operations, and may close services, suspend trading, and cash-settle positions to manage risk. ENXC key scenarios are comprehensive and count with Italian authorities' approval.

112. ENXC distinguishes between independent risks (like single defaults or cyber-attacks) and related or correlated risks where multiple events interact or propagate losses. Examples include simultaneous clearing member defaults or combined operational-financial shocks. This holistic analysis makes recovery planning comprehensive.

113. The recovery tools are identified for default and non-default events that trigger recovery. Recovery tools are adequate and mirror requirements in CCPRR, including, among other, requests for additional resources from non-defaulting participants and loss allocation of excessive losses to non-defaulting participants.

114. ENXC has assessed alternative arrangements as part of its recovery plan. Some substitution options exist, such as clearing members directly clearing trades via the interoperability link with LCH SA, though onboarding takes time. However, some services currently lack a clear substitute as no other CCP clears them.

115. ENXC's Recovery Plan is regularly reviewed and updated, with approval by regulators. As ENXC's business expands, critical services in the plan will need to evolve.

Resolution

116. The Resolution College for ENXC was established in September 2024 and is chaired by BdI in its resolution authority role. Currently, there is an overlap between this College and the pre-existing Crisis Management Group, which represents a sub-group of the college itself.

117. The resolution plan, approved in July 2025, aligns critical services with the recovery plan and specifies resolution tools consistent with EU regulations. While the resolution plan remains confidential with only a summary shared with ENXC, the resolution authority works with the CCP to develop scenarios covering defaulting, non-defaulting, and combined situations, including extreme market conditions beyond those in the recovery plan. Unlike the recovery plan, BdI as resolution authority can mutualize non-defaulting losses.

118. A multi-year workplan, starting in 2025, sets out ongoing improvements to the resolution plan. The initial cycle focused on the identification of critical functions and the elaboration of resolution scenarios. Subsequent cycles will aim to expand coverage to all critical services and enhance scenario plausibility. The mid-term aim is to further operationalize resolution tools to ensure continuity in case of resolution and to move to a testing phase.

119. To promote awareness of CCP's participants, the CCP rulebook will be updated to include references to the resolution powers that the resolution authority could apply. In line with international best practices, the mission discussed the appropriateness of communicating with CCP's stakeholders on resolution preparedness, including the development of a communication plan containing key contacts and flows of information needed in case of resolution.

B. Strengths – ES-MIL Risk Management Framework

120. The mission identified several areas of strong performance:

- *Consistent framework:* ES-MIL applies consistent framework for risk identification, assessment, and management, as well as a consistent RAF setting. The framework allows risks to be assigned, measured, monitored, and reported effectively, supporting informed mitigation and decision-making.

- *Procedures for risk mitigation:* Procedures exist for continuous risk monitoring and remediation. Processes are in place to track risks outside the RAF and implement necessary remediation plans.

C. Recommendations – ES-MIL Risk Management Framework

121. Recommendations to strengthen practices:

- *Ensure adequate independence of the CRO and the Board at ES-MIL.* Currently, the CRO's independence is unclear because the RAF is uniform across all four Euronext CSDs, and ES-MIL can only tighten risk appetites rather than relax them. Given the group's generally low risk appetite, only one risk classified as medium can currently be adjusted. While low risk appetite may be appropriate now, this recommendation aims to secure sufficient independence for the CRO and ES-MIL board to identify, assess, and manage risks specific to ES-MIL, independently of the broader Euronext Group or other group CSD interests.

- *Initiate coordinated recovery planning with other CSDs owned by Euronext group.* As ES-MIL is part of the Euronext group, which owns three other CSDs, joint recovery planning is recommended. This is important due to strong synergies among the four CSDs and the group's expansion efforts that blur operational boundaries between entities.

- *Joint recovery exercises with authorities supervising other Euronext CSDs.* We encourage CONSOB and BdI to coordinate with authorities supervising the other 3 CSDs (in Porto, Copenhagen, and

Oslo) to test the recovery plan of ES-MIL in combination with contingency plans of other entities belonging to the Euronext group. The Euronext Group organizes joint fire drill exercises where different entities within the group or critical services providers default. The Italian and the rest of the authorities should participate in these exercises in the future.

- *Ensure that the ES-MIL Board maintains ultimate responsibility for all outsourced activities.* This is important for the currently outsourced ancillary functions and will be even more critical for any potential outsourcing of core services.

D. Strengths – ENXC Risk Management Framework

122. The mission identified several areas of strong performance:

- *Comprehensive risk management framework with incentive mechanisms:* ENXC implements an integrated governance, risk management, and monitoring system supporting CCP operations, regulatory compliance, and resilience. The system covers communication, strategy, risk identification, analysis, treatment, and monitoring across strategic, financial, and operational risks using detailed taxonomies and risk scoring. Continuous monitoring and remediation address risks beyond the RAF, including root cause analysis of recurring incidents. Margin and default fund contributions embed incentives encouraging clearing members to manage risks responsibly.

- *Adequate independence of the CRO:* While the group has a unified methodology for the assessment of risks and for the procedures, the CRO has sufficient independence for the identification and assessment of specific risks impacting the CCP. Risk management procedures for ENXC's own risks are designed by ENXC. The CRO also has a direct reporting line to the Board, supporting effective risk identification and oversight.

- *Commitment to continuous improvement:* ENXC actively addresses authorities' feedback and upgraded its organizational structure through the recent separation of LOD1 and LOD2 in 2025. The entity is focused on enhancing its capabilities by hiring new profiles, improving risk management models, and making significant IT investments.

- *Comprehensive recovery planning:* ENXC has developed a comprehensive recovery plan that has been enhanced incrementally over time, with a variety of scenarios and description of tools.

- *Developed resolution framework:* The first resolution plan for ENXC was adopted in 2025, it is structured and includes scenario analyses and resolution tools. Coordination among supervisors and the resolution authority is in place, with BdI also leveraging banking resolution expertise to support the process.

E. Recommendations – ENXC Risk Management Framework

123. Recommendations to strengthen practices:

- *Continue to enhance the resolution plan:* Including all critical services and transition to testing phases, defining testing methodology for different resolution approaches, including portability.

- *Prioritize developing a resolution communication plan:* The resolution authority should prioritize raising awareness of the work it is doing, communicating with CCP shareholders on resolution preparedness. The resolution authority should develop a communication plan containing key contacts and flows of information needed in case of resolution, to ensure efficiency and preparedness in resolution events.

- *Dissolve the Crisis Management Group:* Maintain the Resolution College as the sole resolution coordination body. This will eliminate duplication and streamline resolution governance.

F. Description and Findings – ENXC Margins

124. The CCP uses a multi-model margining system suited to each market and instrument. Since 2022, ENXC has shifted from SPAN-like to VaR-based models[1] for most trades—over 90% now use VaR, which has become the industry trend for efficient, predictable margining across varying market conditions.

Disclosure

125. ENXC reports on its margining practice regularly to the Board and to authorities. ENXC reports quarterly to the Board and shares detailed information on margin methodology and ongoing risk management with authorities. This information is compiled in the Risk Journal.[2]

126. ENXC publicly discloses the essential elements of its margin methodology, while other pieces of information are accessible only to participants. Margin methodologies and parameter updates are publicly disclosed.[3] Margin add-on methods are not fully published but are available to participants upon request. ENXC offers simulation tools to help participants and their clients

[1] A SPAN-like margin model sets initial margin as the maximum loss of a portfolio under a predefined set of stress scenarios for prices and volatilities. A VaR-based margin model sets initial margin using statistical estimates of potential portfolio losses over a given horizon at a specified confidence level, based on historical or simulated data.

[2] It is an internal document providing an overview of key risks, market conditions, clearing members' profiles and creditworthiness, margins, default fund sizes, and backtesting confidence levels. The journal also tracks the CCP's link with LCH, liquidity reserves, stress liquidity ratios, risk appetite status for the investment policy, and management plans for risks outside the risk appetite. Additionally, it records incidents from the past quarter.

[3] Operational documentation available covers default management, auction procedures, collateral segregation, and portability options. Information can be found in the *relevant website sections*.

manage risk. Participants found these tools valuable for replicating portfolio margins and running what-if scenarios on hypothetical portfolios.[1]

Initial Margin (IM) Model

127. ENXC uses VaR-based models for Initial Margins, with some exceptions. These margins, calculated daily, cover potential losses from defaulting clearing members over a hypothesized liquidation period (*holding period*). The models use filtered historical simulation to revalue portfolios across past scenarios, considering correlations and diversification. They apply Exponentially Weighted Moving Average (EWMA) scaling to adjust for changing market volatility. The risk measure used is Expected Shortfall (ES), with specific model settings and backup methods for each case.

128. Several specialized margin models are implemented with distinct characteristics:

Fixed income: Historically the most important segment for the CCP.

- MVP: a SPAN-like margin interval model for corporate bonds requires periodic recalibration and it does not auto-update with new data. Will be discontinued soon. Margin interval is calculated from hypothetical scenarios. Margin calculation on MVP is limited as most calculations for fixed income happen through FIRE.

- FIRE (Fixed Income Risk Engine): a VaR-like margin model for sovereign bonds, cash and for repo positions issued by Portugal, Italy, Ireland and Spain.[2] IMs in the FIRE model come from the higher of two components: a baseline model with a lookback window from 2004 applying EWMA scaling, and a floor model without scaling to meet EMIR anti-procyclicality requirements. A review of this model has been recently validated by BdI and ESMA. The FIRE model allows for portfolio margining, offering offsetting advantages. FIRE has add-ons for decorrelation, concentration, liquidity, and settlement risks.

Equity and Derivatives[3]

- EQDER: a VaR-like model covering primarily equity cash and equity derivatives, expanding to fixed income futures (validated in August 2025). It shares lots of features with the FIRE model,

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[1] There is ongoing work on transparency for margins at international and European level to improve simulation tools. According to the authorities, ENXC is working to be compliant with the new requirements from their entry into force.

[2] To calculate the margin for a position, the model first performs "cash-flow mapping," breaking the position into an equivalent portfolio of zero-coupon bonds (ZCB), focusing on relevant yield curve tenors. Margins are then calculated on this ZCB portfolio.

[3] POWDER is an upcoming VaR model for cash-settled energy derivatives. At the time of the mission, this model is under review by the authorities, pending authorization. It should be used to margin energy derivatives – future contracts on provision of power with deliveries ranging from daily to yearly. No physical delivery is foreseen, with contracts cash settled. It is similar to EQDER, with some particularities. It incorporates a cascading mechanism that converts contracts into shorter term ones when entering the delivery period. For instance, a contract with a year maturity, once started the year of maturity will be converted into three quarterly contracts, and progressively into monthly contracts.

with filtered historical scenarios. The model incorporates both ordinary events (5-year rolling lookback period and EWMA scaling) and an array of stressed events. The expected shortfall is calculated for both the ordinary and the stressed options, and margins are calculated assigning a weight of 75% to results from the ordinary component, and 25% for the stressed component. EQDER has add-ons for decorrelation, concentration, liquidity, settlement, wrong way risk, and stressed add-ons.

- COMDER: A VaR-like model for commodity derivatives (options and futures on wheat, rapeseed and corn and futures on farmed salmon). The model accounts for physical delivery-related risks with portfolio segmentation based on contract expiry stages.[1] The model has been in place since July 2024. The methodology is consistent with the EQDER model, with the same approach on filtered historical simulation. The most relevant risk factors taken into consideration by the model are futures prices, retrieved from the market.

129. Key assumptions guide margin models according to international standards. ENXC often uses longer lookback periods than required by regulations calibrated to different asset classes. Other assumptions involve calibrated liquidation horizons (MPOR), asset pricing formulas, add-ons for concentrated or illiquid risks, and ES calculations using actual P&L data. Margin models also allow for longer liquidation times for portfolios with higher concentration or physical commodity deliveries.

Table 2. Italy: Summary of Core Parameters of the VaR IM Models

Margin Model	Confidence level (%)	Holding period	Lookback period	Cross-margining
FIRE	99.7% (99.5% for unscaled floor)	5 days	Fixed, anchored to 2004	Allowed
EQDER	99.5%	2 days	Ordinary: 5 years rolling Stressed: stress array	Allowed
COMDER	99.5%	2 days	Ordinary: 5 years rolling Stressed: stress array	Allowed within same product group

130. ENXC allows cross-margining. Only between equity cash and financial derivatives within the same asset class, calculating IMs on integrated portfolios that share common underlying risk factors.[2] Cross-margining between CCPs is not permitted.

[1] The portfolio is split in three sub-portfolios for positions either cash settled or physically settled but far from delivery, approaching delivery and with physical delivery triggered.

[2] Portfolio margining is applied across instruments with different underlyings, subject to limited exceptions, notably for farmed salmon futures, which are margined separately, and fixed-income futures, which are not offset against equity derivatives. Margin offsets under the historical simulation approach reflect historically observed correlations and volatilities, including in stressed scenarios. For bonds margined under the MVP model, positions are offset by duration or time-to-expiry classes using predefined priorities and factors, with margins calculated on the resulting unbalanced positions.

131. ENXC manages wrong-way risk. It limits specific risk by not accepting collateral issued by its own clearing members and controls generic risk by applying higher haircuts based on issuer credit quality. About 90% of posted collateral is cash.

132. ENXC manages procyclicality using APC tools required by EU regulation. ENXC selects different tools based on asset class, model type, and data availability. The FIRE model, with long data history applies a 10-year lookback floor, while EQDER and COMDER use ordinary and stressed scenario components weighted 75% and 25%, adjustable during volatile periods with EWMA scaling. Margins are calculated by weighing 75% of ordinary and 25% of stressed components, with flexible adjustments during volatile periods, supported by EWMA scaling to refine model responsiveness. In cases where historical data is limited, such as with the MVP model, ENXC applies a 25% margin buffer per regulatory requirements. ENXC's models have not shown excessive procyclicality during recent stress events, and APC policies are regularly reviewed and updated as needed.

Variation Margin

133. Variation margin keeps collateral in line with market values. ENXC makes intraday margin calls across all segments. ENXC calculates intraday variation margins at least once daily with real-time data, triggering extra calls if exposures exceed thresholds. Normally, two intraday calls are made each day, with more possible in volatile markets using the same end-of-day margining approach.

Effective Assessment and Review of Risk Tools

134. ENXC evaluates the effectiveness of its risk management tools daily. Detailed information can be found in Annex V.

135. In addition, ENXC uses the REPLICA model to support the development and validation of margin models by performing step-by-step checks to ensure the accuracy of historical data and models. The models are broken down into three components—input, validation, and output—all subject to the validation process. REPLICA allows running dummy portfolios to detect misalignments and inconsistencies and requires regular updates to maintain testing flexibility. LOD2 uses REPLICA to assist LOD1 in evaluating the significance of risk model findings.

Back Testing and Sensitivity Analysis

136. Backtesting is performed daily at both instrument and portfolio levels. At the instrument level, P&L over the holding period (HP) is compared with the IM for long and short positions. Breaches occur when actual P&L exceeds the margins calibrated on that *HP*-day window. At the portfolio level, initial margins for a clearing member's portfolio are compared with the worst-case P&L from closing positions over a set horizon, and when losses exceed margins, it is considered a breach. The number of breaches is expected to align with the confidence level over a rolling one-year lookback. Breaches' impacts are further analyzed relative to affected clearing members' contributions to the default fund.

137. Margin coverage levels consistently exceed regulatory standards. Backtesting confirms model performance maintains coverage above 99%, which is the EMIR minimum for Exchange-Traded Derivatives. Indeed, from the data reported to the authorities in 2024, the overall coverage levels considering all asset classes, was around 99.9% for equity and equity derivative asset classes, 99.98% for fixed income, and 99.74% for commodity derivatives.

138. ENXC performs sensitivity analysis at least monthly. It does so by recalculating margins and stressed margins using historical and hypothetical market data across all clearing members' portfolios, divided by section. The tests focus on key model parameters such as confidence level, holding period, and price changes for securities from the most exposed clearing members. ENXC's Risk Management selects stress scenarios to combine with these parameters, varying by portfolio section. The analysis calculates the absolute and percentage difference in margins before and after sensitivity testing and computes risk measures based on asset class.

139. The CRO presents backtest results to the internal risk committee at least monthly to assess if margin parameters need adjustment. After CEO approval, updated parameters are communicated to clearing members and published online. In urgent cases, the committee is notified immediately to support prompt decisions. Additionally, the CRO regularly provides the Risk Committee with confidential backtesting analyses to seek advice on margin model reviews.

140. ENXC's risk management prepares periodic sensitivity test reports. These reports compare margins and risk measures before and after sensitivity tests across sections, preserving confidentiality by excluding member identities. The results are presented to the internal risk committee for evaluation of margin parameters such as confidence intervals and holding periods. The Risk Committee reviews these reports and can recommend adjustments. If changes are needed, they are communicated to clearing members, updated publicly, and when significant, submitted to competent authorities and ESMA for validation and College opinions.

G. Strengths

141. The mission identified several areas of strong performance:

- *Margin model designed to provide a high level of coverage:* ENXC applies a margin model with coverage levels that consistently exceed regulatory standards. Authorities and market participants agree on its comprehensiveness and its conservative calibration.

- *Adequate disclosure of information:* Information is sufficiently disclosed publicly, to risk committee members, and to participants. There are many different channels used by the CCP to engage its participants, including the PTPC Clearing.

- *Sufficient disclosure to authorities:* ENXC provides comprehensive information in a timely manner to supervisory authorities.

- *Margin replication by clearing members:* Clearing members have the capability to replicate CCP margin requests and consider the CCP acts transparently on its calculations. Market participants consulted confirmed this point. Documentation on add-ons is provided to clearing members upon request.

- *Availability of simulation tools:* Simulation tools are accessible to both clearing members and clients for risk management purposes. Market participants referred that the tools available are useful.

- *Ongoing replica model validation:* ENXC uses a replica model as a validation tool. With the replica model the CCP undergoes regular decomposition and rebuilding of the margin model to identify data gaps and potential bugs across all cleared segments. It is also used as a testing environment.

- *Adequate risk measurement and oversight:* ENXC maintains a rigorous surveillance program with intraday monitoring, daily model evaluations, and periodic comprehensive risk reviews.

- *Performance in regulatory stress tests:* ENXC has demonstrated strong outcomes in ESMA's stress testing exercises.

H. Recommendations

142. Recommendations to improve ongoing practices

- *Continue to ensure that all procedures related to ENXC's risk management are well-documented,* including new products to be cleared, internal participant scoring processes and add-ons.

- *Require ENXC to share sensitivity analysis* results with all participants to enhance transparency.

Annex I. Additional Details on the Clearing and Settlement Landscape Overview in Italy

Regulated Markets and MTFs Operating in Italy:

1. Several regulated markets and multilateral trading facilities (MTFs) operate in Italy across financial instruments:

- Borsa Italiana (part of Euronext Group) manages five regulated markets and seven MTFs for equities, equity-like instruments, bonds, structured products, and equity derivatives.
- Euronext Group, through MTS S.p.A., manages and owns MTS Italy, the regulated market for inter-dealer government bonds for cash and repo; as well as MTS Depo, a multilateral trading platform for euro-denominated money deposits; and three other MTFs for trading of government bonds (ExtraMOT PRO, EuroMTF and ExtraMOT).

ES-MIL membership:

2. ES-MIL has 238 participants as of October 2025 most of which are domestic, alongside twenty-eight foreign participants. Among these, forty are banks and 10 FMIs, while the remainder consist of other types of institutions, including asset managers and funds.

Annex I. Table 1. Italy: ES-MIL membership

Number of Participants (2025)	Domestic	Foreign	Total
ES-MIL total	210	28	238
of which			
Central Banks	1		1
Banks	30	10	40
FMIs	1	9	10
Other	178	9	187

ES-MIL Links

3. ES-MIL has links with 13 CSDs. Through these links, a CSD connects to a foreign CSD to allow its participants to hold and settle foreign securities (this is the role of an investor CSD). A link can also allow a CSD to make its issuers' securities available to foreign investors through a foreign CSD (this is the role of the issuer CSD). In addition to CSD links, ES-MIL is connected to CCPs and TVs: Borsa Italiana, MTS, Icap, and Vorvel.

Annex I. Table 2. Italy: ES-MIL CSD Links (2025 Q2)

ES-MIL CSD Links			
2025Q2			
CSD	T2S In/Out	ES-MIL Investor	ES-MIL Issuer
Bank of Greece Securities Settlement System	In	Yes	No
Clearstream Banking A.G.	In	Yes	Yes
Clearstream Banking S.A.	Out	Yes	Yes
Depository Trust Company	Out	Yes	No
Euroclear Bank	Out	Yes	Yes
Euroclear Belgium	In	Yes	No
Euroclear France	In	Yes	Yes
Euroclear Nederland	In	Yes	No
Euroclear UK and International Ltd.	Out	Yes	No
Iberclear	In	Yes	Yes
National Bank of Belgium – Securities Settlement System	In	Yes	No
OeKB CSD GmbH	In	Yes	No
Six Sis Ltd.	In	Yes	No

Annex I. Table 3. Italy: Values of assets held by ES-MIL

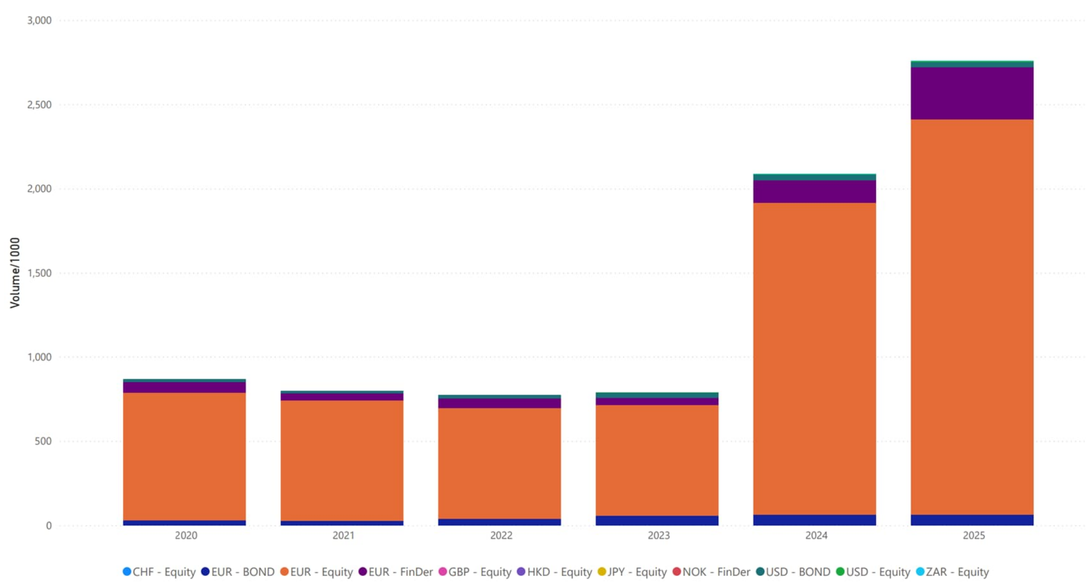
ES-MIL	2020		2021		2022		2023		2024		2025 June	
	Volume thousands	*Value millions*	*Volume thousands*	*Value millions*	*Volume thousands*	*Value millions*	*Volume thousands*	*Value millions*	*Volume thousands*	*Value millions*	*Volume thousands*	*Value millions*
Securities held (YE)	28,01	3.402.164	28,81	3.663.149	34,14	3.675.744	38,82	3.804.404	42,31	4.081.029	46,06	4.292.197
Debt Securities	10,33	2.704.999	9,33	2.817.542	9,10	2.867.937	8,91	2.936.855	8,86	3.054.109	8,73	3.144.864
Equities	1,94	523.687	1,93	637.814	2,00	599.792	2,04	642.773	2,07	753.478	2,16	839.837
Other	15,75	173.478	17,55	207.794	23,05	208.015	27,87	224.776	31,38	273.442	35,16	307.496
Total	28,01	3.402.164	28,81	3.663.149	34,14	3.675.744	38,82	3.804.404	42,31	4.081.029	46,06	4.292.197
Delivery instruction (daily average)	108,35	414.884,60	115,67	408.809,16	114,71	436.164,7	128,21	476.083,88	165,84	589.630,15	182,60	648.673,93
Delivery instruction types												
Free of Payment	22,592	103425,9	25,315	110925,3	26,659	124323,5	29,26	132762	41,061	163009,6	46,188	184095,9
Delivery vs Payment	85,758	311458,7	90,357	297883,9	88,049	311841,2	98,949	343321,9	124,783	426620,6	136,412	464578,1
Asset types												
Debt securities	29,65	398.099,92	29,24	389.530,25	34,54	413.850,83	46,73	456.001,66	47,32	558.129,10	47,14	608.699,94
Equities	47,13	11.099,59	49,99	13.869,93	44,07	13.972,58	45,78	15.313,76	68,64	25.585,67	77,88	32.379,61
Other	31,58	5.685,10	36,44	5.408,99	36,10	8.341,29	35,70	4.768,46	49,88	5.915,38	57,58	7.594,37
Total	108,35	414.884,60	115,67	408.809,16	114,71	436.164,7	128,21	476.083,88	165,84	589.630,15	182,60	648.673,93

Annex II. ENXC's Cleared Volumes, Membership and Connected Entities

ENXC Membership

1. As of October 2025, ENXC has eighty-two participants, comprising forty-seven domestic and thirty-five foreign participants. The participant base is predominantly composed of banks (63 participants), with one participant classified as an FMI.

Annex II. Figure 1. Italy: ENXC's clearing volumes



**FinDer also includes Commodities - starting from 2024*

Annex II. Table 1. Italy: Details on ENXC's membership composition

Number of Participants (2025)	Domestic	Foreign	Total
Euronext Clearing total	47	35	82
of which			
Central Banks	1	0	1
Banks	42	21	63
FMIs	0	1	1
Other	4	14	18

Annex II. Table 2. Italy: Details on ENXC interacts with			
Categories of system	System	Type	Note
Payment system	T2	Central bank	Account in Bankit Used for the settlement of initial margins and Variation margins, premium and cash settlement in euro
Payment system	Norge Bank	Central bank	Account in Norge Bank Used for the settlement of variation margins, premium and cash settlement in NOK
Settlement system	T2S, Euronext Securities Milan (ESM), ESES FR, ESES NL, NBB	CSD	Account in ESM Settlement of cleared trades
Settlement system	T2S, Euronext Securities Porto (ESP)	CSD	Account in ESP Settlement of cleared trades
Settlement system	EB, Bridge with CBL	CSD	Account in EB Settlement of cleared trades
Settlement system	Euronext Securities Oslo	CSD	Account in ES-Oslo Account operator Citibank Settlement of underlying of Euronext Oslo derivatives markets
CCP	LCH SA	CCP	Interoperability for Italian wholesale bond and repos traded in MTS and Brokertec
Trade repositories	DTCC	TR	CCP reports derivatives and repo transaction to the DTCC
Market	Euronext markets	TV	Equity markets; financial derivatives markets; retail bond markets; commodities markets.
Market	Bourse du Luxembourg	TV	Equity market
Market	MTS	TV	Bond/repo market (limited to Italy)
Market	Brokertec MTS	TV	Bond/repo market (limited to Italy)
Market	Vorvel	TV	Bond retail market

Annex III. Details on Applicable Regulations to ENXC and ES-MIL

Overview of the Applicable Regulation to ES-MIL and ENXC

1. The regulatory framework governing Euronext Securities Milan (ES-MIL) is defined by EU law and Italian national legislation.

- At the European level, the main legal basis is Regulation (EU) No. 909/2014 (Central Securities Depositories Regulation – CSDR) and its Level 2 measures, which establish a single market framework for securities settlement and CSDs across the EU, including harmonized authorization requirements. At the national level, Legislative Decree No. 58/1998 (TUF) provides the foundation for authorization, supervision, and regulation by CONSOB and BdI, whose respective responsibilities are further detailed in the Joint Regulation on Post-Trading (2008, revised 2018).

- Under national law, each CSD must define in its services regulation how its services are provided. Any amendments to this regulation require prior approval from CONSOB and BdI, which may also request changes to address deficiencies identified in supervisory activities.

- Authorization to operate as a CSD is required under CSDR, which covers the operation of a securities settlement system and at least one core CSD service (notary or central maintenance). ES-MIL was authorized under CSDR on 18 December 2019 by CONSOB, in agreement with BdI. Authorization is also required for outsourcing core services; on 13 November 2024, ES-MIL received approval to outsource certain ICT activities to intra-group providers as part of Euronext's group-wide SWIFT platform integration project.

- CSDR mandates a recurring review and evaluation (R&E) process of CSDs' activities. Before the CSDR Review (Refit), the R&E was conducted annually.[1] The revised regulation (Article 22) now requires that the R&E be performed at least every three years, with the frequency and scope determined by the competent authorities based on the CSD's size, systemic importance, risk profile, and complexity. Following the 2023 R&E, the Italian authorities reassessed ES-MIL's classification, concluding that it is of medium relevance, given its medium size, high systemic importance for Italian government debt settlement, and low overall risk profile. As a result, the R&E will henceforth be conducted every two years.

- Another key outcome of the CSDR Review is the creation of colleges of authorities for CSDs operating significantly in at least two host EU countries. ES-MIL is expected to qualify as such, given its significant settlement activity involving participants from France, Belgium, and Ireland.

[1] CSDR Refit entered into force in January 2024. CSDR Refit introduced changes to the passporting framework for CSDs, revised the conditions under which CSDs may access and provide banking-type services, and adjusted the settlement discipline regime by clarifying the distinction between penalties and mandatory buy-ins, limiting the circumstances in which buy-ins may apply, and introducing exemptions. It also granted ESMA new mandates to (i) assess measures to improve settlement efficiency (report expected in 2025), (ii) evaluate a potential move to a shorter settlement cycle, which resulted in a November 2024 recommendation for a transition to T+1 in the EU by Q4 2027, and (iii) review the technical standards on mandatory buy-ins should they be activated by the European Commission.

The future college on ES-MIL will include: (i) CONSOB and BdI as home authorities (with CONSOB as chair), (ii) the Eurosystem as the relevant authority, (iii) ESMA, (iv) the competent authorities of significant host countries (France, Belgium, Ireland), and (v) where relevant, the EBA if the CSD holds a banking license (not applicable to ES-MIL). Authorities from other Euronext group CSDs and from non-significant host countries may also participate.

- The college will meet at least annually and as needed, serving as a platform for information exchange and coordination among authorities. It may issue non-binding recommendations related to the CSD's R&E, extensions or outsourcing of activities, and the provision of services in host countries.

2. The regulatory framework governing ENXC is defined by both EU law and Italian legislation:

- For ENXC, the main legal basis is Regulation (EU) No. 648/2012 (EMIR), Regulation (EU) No. 2021/23 (CCP Recovery and Resolution Regulation – CCP RRR), and their Level 2 measures. At the national level, Legislative Decree No. 58/1998 (known as TUF for its Italian name) establishes the framework for authorization, supervision, and regulation by BdI and CONSOB, whose respective roles are further detailed in the Joint Regulation on Post-Trading (2008, revised 2018).

- Under EMIR, the authorization of EU CCPs, including extensions to offer new services or activities and interoperability arrangements, requires prior approval from national competent authorities. ENXC was authorized on May 20, 2014, by BdI, together with its interoperability link to LCH SA. Subsequent amendments in 2024 and 2025 expanded ENXC's scope to include agricultural, equity, and fixed income derivatives traded on Euronext markets. Currently, ENXC has submitted a request for extension of services to freight derivatives, and at the time of the FSAP visit, the authorization process is undergoing.

- Outsourcing of major activities linked to risk management is also subject to authorization. In late 2024, ENXC received approval to outsource certain ICT activities to intra-group providers as part of Euronext's SWIFT platform integration project. However, the majority of ENXC's IT infrastructure is in-house.

3. The latest review of EMIR introduced important procedural changes. It established accelerated processes for authorizing extensions of activities (Article 15) and validating model changes (Article 49), though these remain partially operational pending the development of level 2 regulation (ESMA's Regulatory Technical Standards, RTS). EMIR 3 also mandates annual on-site inspections of EU CCPs (with the possibility for ESMA to participate), replacing the previous risk-based approach, and strengthens transparency and participation requirements, whose impact will become clearer once implementing standards are finalized.

Overview of the Major Changes and Reforms to Regulation or Supervision

4. CSDR Review (CSDR refit). These reforms introduced significant changes to the review and evaluation (R&E) process and established CSD colleges, aiming to streamline supervisory practices, enhance cross-jurisdictional coordination, and adjust oversight intensity according to the size, systemic importance, and risk profile of each CSD.

5. Transition to T+1. EU markets will migrate to a T+1 settlement cycle on 11 October 2027, shortening the time between trade execution and settlement. This change requires technical and procedural adjustments from CSDs, although ES-MIL expects limited impact since most settlement functions operate on the T2S platform.

6. TUF review. The review aims to simplify procedures and increase competitiveness. The key amendment for CSDs replaces the prior approval requirement for service regulation changes with a non-objection regime, allowing authorities to oppose proposals within about twenty working days or request post-implementation modifications, as necessary.

7. Digital Operational Resilience (DORA). Since January 2025, Regulation (EU) No. 2022/2554 (DORA) applies to all financial institutions, including CCPs and CSDs. DORA introduces a harmonized framework for ICT risk management built around five functions—Identify, Protect, Detect, Respond, and Recover—and requires (i) annual reporting of critical ICT service providers, (ii) prompt notification of major ICT incidents, and (iii) at least one threat-led penetration test every three years under supervisory oversight. The European Supervisory Authorities (ESAs) are developing a coordination mechanism for systemic cyber incidents (the EU-SCICF), expected to encompass financial market infrastructures.

8. EMIR 3. In force since 2024, gradually implemented. It enhanced EU CCP regulation by granting ESMA co-chairing powers of CCP Colleges alongside national authorities like BdI, facilitating joint supervisory actions and decision-making. It strengthened ESMA's authority to coordinate crisis responses and participate in on-site inspections. The regulation also increased transparency obligations, mandating more frequent reporting and data sharing between ESMA, national authorities, and CCPs to support consistent supervision across the EU.

9. CCP Recovery and Resolution. The second major development concerns the implementation of the CCP Recovery and Resolution Regulation (CCP RRR). Following the designation of BdI as national resolution authority in January 2024, the first resolution plan for ENXC was finalized in 2025. Consistently with the regulatory requirements, the BdI as national resolution consult the BdI and Consob as supervisory authorities in the drafting phase of the resolution plan to ensure consistency between supervisory and resolution objectives.

Annex IV. Risk Management Framework

ENXC Risk Management Framework

1. An in-depth summary of the risk categories addressed within:

- *ENXC primarily faces credit risk stemming from participant defaults.* Its mitigation framework uses stringent membership criteria, mandating minimum supervisory capital and strict organizational standards.[1] Continuous capital reporting by clearing members triggers corrective actions and notifications if thresholds are breached, including margin increases or suspension as per ENXC's rules.
- *ENXC manages default risk through a margin system.* Default Fund contributions are adjusted based on daily stress tests of participants' positions and collateral, employing tailored scenarios across market segments. In a default event, the defaulting member's resources are used first, followed by CCP's own funds (skin-in-the-game) and then other members' contributions. Further, CCP Recovery and Resolution Regulation (CCP RRR) mandates an additional pre-funded skin-in-the-game layer (SSITG) which ENXC has in place.
- *ENXC's Liquidity Plan defines policies for monitoring and managing liquidity risks.* Liquidity needs are assessed daily for standard and stressed market conditions, considering exposures from the two banking groups with largest clearing exposure.
- *An automated system supports liquidity monitoring.* Liquidity limits within the RAF, approved by the Board, are calibrated using historic data to cover daily net cash flow variations with high confidence levels.
- *To mitigate settlement risk, ENXC settles cash transactions primarily in central bank money.* Settlement happens across major currencies, using TARGET2 (T2) and Norges Bank for NOK. Settlements in commercial bank money are limited to specific cases like Euroclear Bank operations, for payments of variation margin in currencies other than euro. Liquidity risks from settlement obligations are addressed through the dedicated Liquidity Plan.
- *Operational risk is mitigated, including cyber risks.* ENXC manages operational risk through risk registers, key risk indicators, incident tracking, and an Operational Risk Committee that supports risk decisions. Cyber risk is addressed via planned service restoration procedures and a redundant infrastructure including primary, backup, and disaster recovery sites at separate data centers.

[1] Entities seeking to join ENXC must meet legal, financial, and operational criteria that vary by counterparty risk factors such as size, activity type, number of clearing clients, and transaction volumes. The ENXC Rulebook governing membership is regularly reviewed and updated to align with legal and regulatory standards.

- *ENXC implements a documented Investment Policy.* It maintains a low-risk appetite prioritizing capital preservation and central bank deposits. Risk controls include segregation of treasury operations and independent oversight separating investment activities from treasury and reporting functions.

- *ENXC mitigates general business risk through a control system.* It comprises annual budgeting, multi-year planning, and quarterly reviews of performance versus plans by the Finance Department, ensuring strategy and financial assumptions remain valid.

- *ENXC has policies to manage legal risks.* ENXC relies on contractual frameworks to manage legal risks. Group-wide insurance policies cover associated losses, defense costs, and operational expenses arising from legal actions.

- *ENXC employs a "no-spillover" design for its interoperability link with LCH SA.* Under this arrangement, the two CCPs do not contribute to each other's default funds but do exchange margins on open positions, along with an additional non-mutualistic margin buffer. The link treats LCH SA as a general clearing member of ENXC, with reciprocal margin calls securing exposures.[2] A cash-settlement waterfall mechanism is also in place to ring-fence losses in the event of a default by the linked CCP. ENXC and LCH SA do not share default fund contributions, maintaining financial separation within the interoperability framework.

[2] This means ENXC holds an account at LCH SA to post collateral on behalf of its clients. For clients, a transaction processed through the LCH link is novated twice: first, replacing the original counterparty with ENXC, and second, replacing ENXC with LCH SA.

Annex V. Additional Details on ENXC Margining Practices

Annex V. Table 1. Italy: Summary of key different margin models at ENXC

Summary of Key Different Margin Models at ENXC				
Model	Asset Class	Methodology	Key Features	APC Measure
FIRE	Sovereign Bonds	VaR-like	Cash-flow mapping into zero-coupon bonds, EWMA scaling, add-ons for risks	10-year lookback floor
MVP	Corporate Bonds & Fixed Income	SPAN-like	Hypothetical scenario-based margins, bucketed positions	25% IM buffer with replenishment and IRC oversight
EQDER	Equity Cash & Derivatives	VaR-like	Ordinary + stressed components, multiple add-ons	Weighted ordinary/stressed (75%/25%)
COMDER	Soft-commodity futures/options	Similar to EQDER	Portfolio split by delivery status, physical delivery risk	Weighted ordinary/stressed (75%/25%)
POWDER	Nordic Power futures	Similar to EQDER	Price level adjustment, supervisory review before activation	Weighted ordinary/stressed (75%/25%)

Assessment of the Effectiveness of Risk Management Tools

2. Effectiveness assessment is ensured through:

- Margin coverage is monitored through daily backtesting at both instrument and portfolio levels.
- Daily stress tests assess combined shocks to positions and collateral and verify Default Fund sufficiency.
- Liquidity management tools are tested daily against soft and hard liquidity coverage ratio limits.
- Credit lines—both committed and uncommitted—are stress tested at least semi-annually.
- Collateral and sovereign risk frameworks undergo daily valuation, concentration monitoring, and inclusion in stress and sensitivity tests, with haircut grids and sovereign banding reviewed monthly or ad hoc if indicated.
- Default management tools undergo fire drills and targeted simulations, including auction software testing.
- Annual business continuity and cybersecurity exercises verify operational resilience and recovery readiness.

Additional Details on Backtesting Methodologies

- Instrument-level backtesting: Compares profit and loss (P&L) over a holding period (HP) with the estimated margins. Performed separately for long and short positions for each instrument. A breach occurs if actual P&L exceeds ES.
- Portfolio-level backtesting: Compares daily calculated initial margins (IM) for each clearing member portfolio against hypothetical worst-case P&L arising from complete portfolio closeout over the HP (i.e., from the day *t* of the margin calculation to *t+HP*). Breaches are counted when losses surpass IM.
- The backtesting sample applies a rolling observation window over a minimum 1-year lookback period. Breach frequency aligns with the confidence level adopted in margin models.
- Breach analyses include correlating breaches with concerned clearing members' Default Fund contributions.

Additional Details on Sensitivity Testing Methodology

- Scope: Monthly sensitivity tests conducted on all clearing members' portfolios, segregated by product sections, using both historical and hypothetical data to capture realized and stressed market conditions.
- Parameter Variation: Focus on core model parameters—confidence level (CL), holding period (HP), and percentage price changes (Δ%) for the most exposed securities identified via stress testing.
- Risk Management defines shock sizes and security scopes case-by-case, which affect derivatives pricing linked to these securities.
- Sensitivity scenarios may be combined with stressed scenarios relevant to the portfolio section under review.

Sensitivity Metrics Calculated per Portfolio

- Absolute and relative differences in IM before and after sensitivity tests at both section and clearing member levels.
- Non-Collateralized Exposure or Stress Loss Over Initial Margins (SLOIM), calculated per applicable asset class.

Breach Analysis and Response Procedures

- The Risk Management Department investigates breach causes, focusing on extreme market value fluctuations.
- Monthly backtesting results are presented to the Internal Risk Committee to consider parameter adjustments.

- Upon IRC recommendation and CEO approval, margin parameter changes are communicated to CMs and updated publicly. Urgent parameter changes trigger immediate internal risk committee consultation.

Sensitivity Test Review and Governance

- Risk Management prepares periodical reports on sensitivity outcomes presented to IRC and Risk Committee.
- CEO formally approves margin parameter changes after IRC recommendations.
- Significant parameter updates are submitted to competent authorities and ESMA for validation and College opinion.